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**TA54-PLAN-1307, R2
STORMWATER POLLUTION
PREVENTION PLAN
(SWPPP)**

For:

**TA-54 Maintenance Facility West
(TA-54 MFW)**

Los Alamos National Security, LLC (LANS)
Environmental Protection and Compliance (EPC)
Compliance Programs (CP)
PO Box 1663, Mail Stop K490
Los Alamos, NM 87545
(505) 667-0666

Preparation Date: January 2018

POINT OF CONTACT (POC) / INFORMATION

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SECTION 1: FACILITY DESCRIPTION AND CONTACT INFORMATION**1.1 Facility Description****Facility Information:**

Name of Facility: Los Alamos National Laboratory (LANL)

Street: Mesita Del Buey Road

City: Los Alamos State: NM ZIP Code: 87545

County or Similar Subdivision: TA-54 Maintenance Facility West (TA-54 MFW)

National Pollutant Discharge Elimination System (NPDES) ID: NMR 053195 (i.e., Permit No.)

Primary Industrial Activity SIC code: 4231

Sector (2015 MSGP, Appendix D and Part 8): Sector P

Subsector (2015 MSGP, Appendix D and Part 8): Subsector P1

Co-located Industrial Activity SIC code: Not Applicable (N/A)

Sector (2015 MSGP, Appendix D): N/A

Subsector (2015 MSGP, Appendix D): N/A

Latitude & Longitude:

Latitude: 35.837249 ° N (decimal degrees)

Longitude: -106.255215 ° W (decimal degrees)

Method for determining latitude/longitude (check one): ☐ USGS topographic map (scale: _____)

☐ GPS

☒ Other (specify): Google Earth

Horizontal Reference Datum (check one): ☐ NAD 27 ☐ NAD 83 ☒ WGS 84

Is the facility located in Indian country? ☐ YES ☒ NO

If *yes* to the above question then provide name of Reservation

If *no* to the above question then indicate "N/A"

N/A

Are you considered a “**Federal Operator**” of the facility? ☒ YES ☐ NO

Federal Operator – an entity that meets the definition of “operator” in this permit and is either any department, agency or instrumentality of the executive, legislative and judicial branches of the Federal government of the United States, or another entity, such as a private contractor, operating for any such department, agency, or instrumentality.

Estimated area of industrial activity at site exposed to stormwater: 0.93 acres

1.1 Facility Description (continued)

Discharge Information:

Does this facility discharge stormwater into a municipal separate storm sewer system (MS4)? ☐ YES ☒ NO

If yes, provide name of MS4 operator: _____ N/A

Name(s) of surface water(s) that receive stormwater from your facility:

Direction of stormwater flow on the site is primarily to the south into Pajarito Canyon.

Does this facility discharge industrial stormwater directly into any segment of "impaired water"? (Ref. 2015 MSGP, Appendix A definitions) ☒ YES ☐ NO

If yes, identify name of the impaired water(s) and segment(s), if applicable: Pajarito Canyon

Identify pollutant(s) causing impairment(s): Polychlorinated Biphenyls (PCBs), and Total Recoverable Aluminum.

Which pollutant(s) identified may be present in industrial stormwater discharges from this facility?

None

Has a Total Maximum Daily Load (TMDL) been completed for any of the identified pollutants? ☐ YES ☒ NO

If yes, list TMDL pollutants: _____ N/A

Does this facility discharge industrial stormwater into receiving water designated as a Tier 2, Tier 2.5 or Tier 3 water? (Ref. 2015 MSGP, Appendix A definitions) ☐ YES ☒ NO

Are any of your stormwater discharges subject to Effluent Limitation Guidelines (ELGs)? (Ref. 2015 MSGP Table 1-1) ☐ YES ☒ NO

If yes, which guidelines apply? _____ N/A

1.2 Contact Information/Responsible Parties

Facility (Site) Operator(s):

Name: Los Alamos National Security, LLC
 Address: P.O. Box 1663, Mail Stop K490
 Los Alamos, NM 87545
 Telephone Number: 505-667-0666 (Compliance Programs)

(aka): ➤ Los Alamos National Laboratory (LANL)
 ➤ Environmental Protection and Compliance (EPC)
 ➤ Compliance Programs (CP)

Address: Same as above

Facility Owner(s):

Name: Environmental & Waste Management Operations (EWMO)
 TA-54 Operations Center (505) 665-2735

Address: PO Box 1663, Mail Stop J593
 City, State, Zip Code: Los Alamos, NM 87545

Primary POC: Gail Helm
 Organization: EWMO – TA54 Operations Manager (OM)
 Work Phone: (505) 665-8682
 Work Email: gailw@lanl.gov

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 Organization: EWMO - Shift Operations Manager (SOM)
 Work Phone: (505) 606-1555
 Work Email: jguy@lanl.gov

Site SWPPP:

POC: Holly L. Wheeler
 Organization: EPC-CP MSGP Program Manager
 Work Phone : (505) 667-1312
 Work Email : hbenson@lanl.gov

Facility SWPPP:

Primary POC: Christine Bullock
 Organization: DESHS-EWMS: (SWPPP Team Leader)
 Work Phone : (505) 665- 8133
 Work Email : cbullock@lanl.gov

Secondary POC: Robert (Bob) Stokes
 Organization: DESHS-EWMS: ESH Manager
 Work Phone : (505) 606- 0947
 Work Email : rstokes@lanl.gov

1.3 Stormwater Pollution Prevention Plan / Team Members

Los Alamos National Laboratory (LANL) operates under the National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activities, which governs stormwater discharge from industrial activities.

Under this permit the Environmental Protection Agency (EPA) requires the implementation of a Stormwater Pollution Prevention Plan (SWPPP), which must be developed in accordance with the provisions of the Clean Water Act (33 U.S.C. 1251 et seq.), and the regulations established by the U.S. EPA for the NPDES MSGP for Stormwater Discharges Associated with Industrial Activity [Federal Register (FR) 73, 56572], herein referred to as the 2015 MSGP.

The purpose of this SWPPP is to ensure that all potential sources of stormwater pollution at the TA-54 MFW are documented. It also describes specific stormwater control measures, also known as Best Management Practices (BMPs) that are used to reduce or eliminate pollutants in stormwater discharges and identifies implementable processes and procedures in place to comply with the terms and conditions of the 2015 MSGP. Through potential pollutant reduction, environmental problems that result in lost resources and costly restoration activities may be averted. BMPs include maintenance activities, formalized work practice reviews, training, activity scheduling, stabilization, structural controls, and additional documentation to support eligibility considerations and to include Endangered Species and Historic properties.

This SWPPP is intended to be a *living document*, and as such updates may be necessary as the result of a corrective action, or when industrial activities or stormwater controls change. Accordingly, the 2015 MSGP requires prompt revision of the SWPPP to reflect such changes.

This SWPPP applies to stormwater discharges associated with industrial activities from vehicle and heavy equipment maintenance operations conducted at TA-54 MFW by Logistics Division, Heavy Equipment Maintenance Site Services (MSS) personnel at Los Alamos National Laboratory, Los Alamos County, New Mexico. This facility is under the control of the Environmental & Waste Management Facility Operations Director (EWMO-FOD). Operations conducted at this facility fall within the Multi-Sector General Permit requirements for Sector P, Land Transportation and Warehousing.

Team Members

The Facility has established a stormwater Pollution Prevention Team (PPT) who is responsible for (1) the development, implementation, maintenance, and revision of this SWPPP; and (2) the maintaining of control measures and taking corrective actions, as required. In addition, members receive Stormwater Pollution Prevention Plan (SWPPP) training as part of membership requirements. See Table 1.3-1, *Stormwater PPT Roles & Responsibilities*, and §4.5, *Employee Training* for a complete summary.

Stormwater PPT members are representatives of Environmental Protection & Compliance – Compliance Programs (EPC-CP) who serve in an advisory capacity, and were selected based on their knowledge of heavy equipment maintenance activities and the potential impact of these activities on stormwater runoff.

Duties include the collecting of samples, and the visual examination of stormwater run-off for compliance under the National Pollutant Discharge Elimination System (NPDES) permit / regulations.

Table 1.3-1: Stormwater PPT Roles & Responsibilities

Role / Name*	Responsibilities
PPT Leader (or Designee):	<ul style="list-style-type: none"> • Manages the environmental compliance program within the facility • Implements the SWPPP, and it's associated Best Management Practices (BMPs) • Oversees the assigned duties of PPT members • Ensures inspection problems are remedied /corrected • Ensures the SWPPP is maintained current (e.g., revised, etc.) • Assist or designates a representative to assist EPC-CP in performing a routine facility inspection in accordance with §4.6, <i>Facility Routine Inspections and Quarterly Visual Inspections</i> • Ensures that the appropriate facility and LANS personnel receive the training specified in §4.5, <i>Employee Training of the SWPPP</i> • Ensure training as required by 2015 MSGP is made available.
EPC-CP Stormwater Subject Matter Expert:	<ul style="list-style-type: none"> • Provides SWPPP technical guidance • Provides BMP guidance (selection and installation) • Aids in performing and documenting inspections and assessments • Performs Site Compliance Evaluations
Maintenance & Work Control Manager:	<ul style="list-style-type: none"> • Oversees good housekeeping practices • Oversees BMP maintenance • Ensures corrective actions are scheduled and implemented in a timely manner as required by the permit • Ensures operators and mechanics receive required training as specified herein, and by 2015 MSGP for stormwater pollution prevention • Notifies the Deployed Environmental Professional (DEP) whenever there is a development or change in facility operations that may require a revision to the SWPPP, or change to control measures
Waste Management Coordinator (WMC):	<ul style="list-style-type: none"> • Responsible for assisting with cleanup (i.e., spilled or released pollutants) • Responsible for directing the appropriate waste management of all resultant clean up materials
Deployed Environmental Professional (DEP):	<ul style="list-style-type: none"> • Responsible for SWPP training as applicable (i.e., PTT members, operational site workers, and supervisors) • Responsible for recordkeeping • Responsible for the oversight of the SWPPP (e.g., revisions, etc.) • Ensures inspection documents and other records relating to the SWPPP and stormwater pollution control measures are managed in accordance with the existing NPDES permit, and LANL records management

*Also see §1.2, *Contact Information/Responsible Parties*

1.4 Site Description

TA-54 MFW is located on Mesita del Buey approximately two miles east from the Pajarito and Rex Road intersection between Pajarito Canyon to the south and Cañada del Buey to the north. It is situated just south of Mesita del Buey Road between buildings 54-0533 to the west and 54-0247 to the east.

The industrial activities at the site are described as vehicle and heavy equipment maintenance and repair. Activities that are or may be conducted outdoors include fueling, vehicle and equipment maintenance and repair, vehicle and equipment storage and parking, loading/unloading, material storage, and waste storage. Materials stored on-site include vehicles and equipment awaiting maintenance, lubricating fluids, anti-freeze, cleaners, equipment parts, miscellaneous equipment designated for salvage or disposal, universal waste, used oil, recyclables, and trash. Operations at these facilities fall within the NPDES MSGP requirements for Sector P, Land Transportation and Warehousing. Vehicle and heavy equipment maintenance and repair activities at the TA-54 MFW are conducted by MSS personnel under the direction of the EWMO-FOD.

The average annual rainfall for Los Alamos is 18.51 inches. Intense thunderstorms are common in the Los Alamos area during August and September. The New Mexico Water Quality Control Commission (WQCC) standard for Limited Aquatic Life applies to the receiving water for this facility. Pajarito Canyon (within LANL below Arroyo de la Delfe) is listed as impaired for polychlorinated biphenyls (PCBs) and total aluminum.

1.5 General Location Map

A general location map identifying the location of the TA-54 MFW and all receiving waters for stormwater discharges is included as Attachment A, *General Location Map*.

1.6 Site Map

The industrial site is 0.93 acres. The location and extent of significant structures and percent imperviousness; directions of stormwater flow; locations of all existing structural control measures; the location of the receiving water in the immediate vicinity of the facility; and the locations of the vegetative swale and culverts, which are the only stormwater conveyances at the site are identified on Attachment B, *Site Map*.

In addition, locations of potential pollutant sources (e.g., fueling truck and recycle bins); the location of the stormwater monitoring station; inlet and outfall; and locations where industrial activities are exposed to precipitation (vehicle/equipment maintenance area for non-liquid repairs) are also identified on this map. There are no locations or sources of run-on to the site from adjacent property that contain significant quantities of pollutants.

SECTION 2: POTENTIAL POLLUTANT SOURCES

This section describes the TA-54 MFW areas where industrial materials or activities are exposed to stormwater, and allowable non-stormwater discharges are released.

2.1 *Potential Pollutants Associated with Industrial Activity*

Table 2.1-1, *Potential Pollutants Associated with Industrial Activity* identifies specific industrial activities and associated pollutants at TA-54 MFW that are potentially exposed to stormwater. The list of potential pollutants associated with the industrial activities includes all significant materials that have been handled, managed, or stored at the site.

Table 2.1-1: Potential Pollutants Associated with Industrial Activity

Industrial Activity	Associated Pollutants
Equipment and vehicle fueling	<ul style="list-style-type: none"> Fuel, oil, heavy metals
Equipment and vehicle maintenance	<ul style="list-style-type: none"> Chlorinated solvents, oil, hydraulic and transmission fluid, grease, heavy metals acid/alkaline wastes, ethylene glycol, fuel
Outdoor vehicle and equipment storage and parking	<ul style="list-style-type: none"> Oil, hydraulic fluid, heavy metals, fuel
Painting areas	<ul style="list-style-type: none"> Paint, spent chlorinated solvents
Liquid and chemical storage	<ul style="list-style-type: none"> Oil, grease hydraulic and transmission fluid, heavy metals, fuel, paint, materials being stored, salt
Loading and Unloading:	<ul style="list-style-type: none"> Oil, grease hydraulic and transmission fluid, heavy metals, fuel, materials being stored
Waste Storage	<ul style="list-style-type: none"> Oil, hydraulic and transmission fluid, heavy metals, fuel, scrap metal, trash, aerosol cans
Recycle bins	<ul style="list-style-type: none"> Oil and grease residues on metal for recycling

2.2 *Spills and Leaks*

Table 2.1-2, *Areas of Site where Potential Spills /Leaks Could Occur* is a description of areas where potential spills and leaks could occur at the TA-54 MFW that could contribute pollutants to stormwater discharges, and the outfall or location likely to be affected by such spills and leaks.

Table 2.1-2: Areas of Site Where Potential Spills/Leaks Could Occur

Location	Discharge Points
Receiving/Loading area on north side of the facility	<ul style="list-style-type: none"> Sheet flow northward from site into swale on north side of facility, eastward into a culvert leading to Pajarito Canyon.
Used Oil Storage area on southeast corner of the facility	<ul style="list-style-type: none"> Sheet flow south and eastward on site into an earthen berm on north and east sides of facility, retains stormwater on site.
Vehicle/equipment maintenance and repair area on concrete pad in the NW corner of the facility	<ul style="list-style-type: none"> Sheet flow north and eastward into the swale on the north side of the facility, eastward into a culvert leading to Pajarito Canyon.

2.2 *Spills and Leaks (continued)*

Description of Past Spills/Leaks

There have been no significant spills or leaks (releases of oil or hazardous substances in excess of quantities) that are reportable under CWA Section 311 (see 40 CFR 110.6 and 40 CFR 117.21), or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §9602) in an exposed area or a stormwater conveyance at the TA-54 MFW.

Minor spills or leaks (if they occur) are entered into the EPC-CP MSGP CAR database, and identified in the MSGP Annual Report.

2.3 *Unauthorized Non-Stormwater Discharges Documentation*

Table 2.1-3, *Unauthorized Non-Stormwater Discharges* is a description of the TA-54 MFW, Discharge Point 049, sampling automated sampling station 54-MFW-1 for impaired waters and quarterly visual assessments.

Table 2.1-3: Unauthorized Non-Stormwater Discharges

Facility	Evaluation Date	Evaluation Criteria	Outfalls / Onsite Drainage Points Observed	Non-Stormwater Discharge(s) & Source Locations	Control Measures *
TA-54 MFW	12/4/14	Visual	Discharge point 049 & swale to the north	N/A	N/A

* Control measures used to eliminate unauthorized discharge(s), if any were identified.

2.4 *Salt Storage*

Deicing salt is stored in small covered containers at various locations around the facility to deice walkways and small areas. It is not stored in piles for large scale road deicing.

2.5 *Sampling Data Summary*

Sampling of stormwater discharges associated with this industrial activity was not required by the 2008 NPDES MSGP as the facility was not in existence at that time.

FY 2014: In late May 2014, stormwater inspectors identified maintenance activities as needing coverage under the MSGP, and requiring a SWPPP.

FY 2015: Since this is a newly identified facility, stormwater monitoring will begin in FY 2015. Data required by the 2015 MSGP will included as Attachment H. MSGP stormwater monitoring data is also maintained in the Environmental Information Management (EIM) System.

CY 2016: Located at the northeast corner of the TA-54 MFW, Discharge Point 049, sampling is performed at automated sampling station 54-MFW-1 for impaired waters and quarterly visual assessments.

2.5 *Sampling Data Summary (continued)***Permitted Facility: TA-54 Maintenance Facility West****CY 2016**

Monitored Outfall	Discontinue Monitoring		Continue Monitoring				
	Average of four monitoring values did not exceed benchmark; quarterly monitoring discontinued per Section 6.2.1.2	Impaired water constituent was not detected in storm water discharge; annual monitoring discontinued per Section 6.2.4.1.	Fewer than four quarterly samples have been collected. Average concentration is not mathematically certain to exceed benchmark.	Average concentration mathematically certain to exceed benchmark.	Average of four quarterly monitoring values exceeded benchmark.	Impaired water constituent was detected, but did not exceed New Mexico Water Quality criterion	Impaired water constituent exceeded New Mexico Water Quality criterion.
049	N/A ¹	Total Aroclors	N/A	N/A	N/A	—	AI

¹N/A – No quarterly benchmark monitoring required.

2.5 Sampling Data Summary (continued)

CY 2017

Monitored Outfall	Discontinue Monitoring		Continue Monitoring				
	Average of four monitoring values did not exceed benchmark; quarterly monitoring discontinued per Section 6.2.1.2	Impaired water constituent was not detected in storm water discharge; annual monitoring discontinued per Section 6.2.4.1.	Fewer than four quarterly samples have been collected in current sequence. Average concentration is not mathematically certain to exceed benchmark.	Average concentration mathematically certain to exceed benchmark.	Average of four quarterly monitoring values exceeded benchmark.	Impaired water constituent was detected, but did not exceed New Mexico Water Quality criterion.	Impaired water constituent exceeded New Mexico Water Quality criterion.
049	N/A ¹	—	N/A	N/A	N/A	—	AI

¹N/A – No quarterly benchmark monitoring required.

SECTION 3: STORMWATER CONTROL MEASURES

3.1 *Non-Numeric Technology-Based Effluent Limits (BPT/BAT/BCT)*

TA-54 MFW personnel implement stormwater control measures designed to ensure operator safety, environmental protection, and proper use and maintenance of loading/unloading and waste management equipment. MSS-EWMO performs routine preventive and corrective maintenance work to ensure industrial equipment is in good working order. The operational procedures incorporate provisions for corrective, predictive and preventative maintenance. They also address appropriate adjustment and/or replacement of devices, equipment, and systems. This program allows for identification and corrections of conditions that have the potential to cause breakdowns or failures that could result in the release of pollutants to the environment.

The following sections describe the stormwater control measures installed at the TA-54 MFW to meet each of the permit's "non-numeric effluent limits" in Part 2.1.2 of the MSGP. Follow the Spill Prevention Control and Countermeasure (SPCC) Plan for the MSS-EWMO Refueling Truck (LA-UR-15-22845) to inspect the TA-54 tanker truck and recessed earthen catchment monthly.

3.1.1 Minimize Exposure

Structural controls and practices used to minimize the exposure of material storage areas and industrial activities to rain, snow, snowmelt, and runoff at the TA-54 MFW include:

- Maintenance activities are conducted indoors or under cover, when possible, or within a bermed area
- Fueling operations are conducted on an impervious surface or over a catch pan
- Fuel tanks are not "topped off"
- Spill cleanup/response materials are readily available
- Drip pans and/or secondary containment systems are placed under leaking or leak prone equipment
- Wet clean up practices that would result in the discharge of pollutants to stormwater drainage systems are prohibited.
- Prompt cleanup of releases with absorbent pads, biodegradable/bioremediation dry absorbents (Oil Sponge™ or equal), or dispersant/bioremediation liquid product (e.g., MicroBlaze® for stains)
- Procedures for material storage and handling (spill control) are current and in place
- Containers that could be susceptible to spillage or leakage are properly labeled to encourage proper handling and facilitate rapid spill response
- Equipment and vehicles that are decommissioned or that will remain unused for an extended period properly stored and fluids will be drained to prevent leaks
- Sweep or vacuum at regular intervals
- Cover all dumpsters or close with lid when not in use
- Proper control of lubricating fluids and cleaners
- Storage of all liquid products within a designated area either under cover and within secondary containment. Storage of used oil filters in designated covered bins under cover and within secondary containment

3.1.1 Minimize Exposure (continued)

- Procedures that specify appropriate methods for handling wastes (in accordance with IWD DESHS-EWMO-WMC-IWD) so that they are not exposed to stormwater.
- Routine Facility Inspections (RFI) and Quarterly Visual Assessments (QVA) to ensure that this SWPPP is properly followed and that no potential contaminants are present in exposed areas as addressed in §4.6.1, *Routine Facility Inspections*, and §4.6.2 *Quarterly Visual Assessment of Stormwater Discharges*.
- Leaking vehicles and equipment for repair will be parked on impervious surfaces under cover.

3.1.2 Good Housekeeping

Attachment I, *Standard Operating and Maintenance Procedures* lists EWMO division sites that are designed to minimize the potential for spills, releases, exposure of materials, or any other events that could adversely affect the quality of stormwater water that may be transported out of the area by runoff.

All areas will be maintained in a clean and orderly state in accordance with Good Housekeeping practices that have been implemented to keep exposed areas of TA-54 MFW clean, which include:

- Daily cleanup of outside area following completion of daily operations.
- Daily sweeping of shop, when the facility is active.
- Maintenance of operational areas in a clean and orderly state.
- Trash dumpsters are emptied on a monthly basis and lids are kept closed when not in use. For dumpsters and roll off boxes that do not have lids and could leak, ensure that discharges have control (e.g., secondary containment).
- Wastes within regulated waste storage areas are picked on an as needed basis, prior to the container reaching its capacity. Containers are in good condition.
- Routine Facility Inspections to ensure that no potential contaminants are present in exposed areas.
- Inspection of heavy equipment for leaks and potential problems prior to beginning daily operations.
- Minimize stormwater run on/runoff to maintenance areas.
- Placement of drip pans and/or secondary containment systems under leaking or leak prone equipment.
- Immediate cleanup of releases with absorbent pads or biodegradable dry absorbents (Oil Sponge™ or equal), or dispersant/bioremediation liquid product (e.g., MicroBlaze® for stains) on concrete or asphalt. Stained base course must be picked up, containerized and managed as New Mexico Special Waste (NMSW).
- Maintenance activities are conducted indoors or under cover, when possible.
- Storage of all liquid products within labeled containers in a designated area either under cover and on secondary containment.
- Prohibition of wet clean up practices that would result in the discharge of pollutants to stormwater drainage systems.
- Wastes are managed and disposed in accordance with LANL P409, *Waste Management Requirements*.

3.1.3 Maintenance

Industrial equipment (such as forklifts, loaders, ATVs, excavators, grader) must be regularly inspected, tested, maintained, and repaired to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater discharge to receiving waters. All control measures used to achieve effluent limits required by the MSGP must be maintained in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel, appropriately trained). If control measures need to be replaced or repaired, necessary repairs or modifications must be made as expeditiously as practicable. All corrective actions are identified and documented in accordance with ENV-RCRA-QP-022, *MSGP Stormwater Corrective Actions*. Every identified corrective action is entered into the EPC-CP Corrective Action Reporting database. This database is used to generate the MSGP Annual Report that is included in Attachment G, Annual Reports.

Operations at the TA-54 MFW are conducted in accordance with routine corrective and preventive work packages. MSS maintains a listing of all EWMO owned equipment. This listing identifies when a piece of equipment is due for Preventative Maintenance (PM) or inspection. The Computerized Maintenance Management System (CMMS) maintains a listing of the preventative maintenance required for vehicles and equipment and generates a Work Order to have the equipment serviced and inspected in accordance with the manufacturer's required specifications for that specific equipment. Heavy equipment and vehicle PM and inspections are tracked by CMMS.

3.1.4 Spill Prevention and Response

The application of good housekeeping procedures and regular visual inspections performed by operations personnel minimize the probability of a spill or release. Also, LANL's institutional procedures P409, *Waste Management*, and P101-14, *Chemical Management*, require labeling of wastes, used oils, and chemicals stored on-site to facilitate the proper handling and response if spills or leaks occur.

Operational controls are implemented to minimize the possibility of any accidents resulting in spills or releases off site. Regulatory environmental reporting requirements are described in LANL's Environmental Protection Division Procedure EPC-DO-QP-101, *Environmental Reporting Requirements for Releases or Events*. In general, the approach to spill clean-up of a known substance is to first contain the spill by securing the spill source and deploying spill containment materials. If secondary containment is being provided (e.g., secondary containment pallets for liquids) it will contain the spill. Small spills are responded to by the operator involved in the spill or by the operator located in the vicinity. For incidental releases, absorbents are used to pick up free liquids and the contaminated absorbents are properly disposed. Spill containment and clean up include the use of spill control kits, sorbent pillows, socks, sheets, and granules. Clean-up residues are managed as appropriate and as determined by the facility waste management coordinator and EPC-CP personnel depending on the material spilled. Larger spills or spills in watercourses require that EPC-CP personnel be notified, and that the Shift Operations Manager (SOM) notifies LANL's Security and Emergency Operations - Emergency Response (SEO-ER) Team.

The LANL SEO-ER office has been appointed by the Laboratory Director as the organization responsible for Emergency Management at the Laboratory. The LANL SEO-ER Office will be notified if (1) a spill cannot be easily controlled with materials on hand, (2) spill threatens to escape the facility and/or enter the environment, (3) additional resources needed, (4) unidentified hazard exists, (5) injuries have occurred, (6) fire protection is needed, and (7) operational or facility personnel are not adequately trained in the use of spill control equipment or are not confident in their ability to carry out spill response activities.

3.1.4 Spill Prevention and Response (continued)

Emergency Operations Support Center can be reached at 667-6211 or, after hours at 667-7080. If a fire or explosion is present, or if the potential for such exists, the situation must be reported by dialing 911 from a non-cellular phone or by activating a fire pull box. 911 should also be dialed in the event of an employee injury. In the event of a spill, the SEO-ER Office will notify the individuals or organizations responsible for the completion of spill reports or the fulfillment of regulatory reporting requirements.

The completion of a spill report may be required in the event of a spill at LANL. This determination will be made by the SEO-ER Office or EPC-CP in accordance with Environmental Protection Division Procedure EPC -DO-QP-101, *Environmental Reporting Requirements for Releases or Events*, Laboratory and DOE policies, and federal and state regulatory reporting requirements. In addition to fulfilling reporting requirements, spill reports will assist user groups and Laboratory management in assessing the cause of a spill and in executing corrective action.

There are two types of spill reporting are required at the Laboratory, which are identified as (1) internal spill record keeping, and (2) external agency notification. Copies of internal spill reports will be kept by the Stormwater PPT member, EPC-CP and the responsible organization. External agency notification (as determined by SEO-ER or EPC-CP personnel) may consist of verbal or written notification to the National Response Center, EPA Region VI, the New Mexico Environment Department, or Pueblos.

3.1.5 Erosion and Sediment Controls

Table 3.1-1, *Bordering Areas Runoff Stabilization* identifies the impervious surfaces at the TA-54 MFW. See §3.1.6, *Management of Runoff* for additional information.

Table 3.1-1: Bordering Areas Runoff Stabilization

Type of Erosion Control	Location of Control(s)
• Vegetative Swales	Attachment B, <i>Site Maps</i>
• Culverts	Attachment B, <i>Site Maps</i>
• Earthen Berms	Attachment B, <i>Site Maps</i>

3.1.6 Management of Runoff

The areas bordering the impervious surfaces at the TA-54 MFW are stabilized with established native vegetation. This vegetative buffer holds soil in place, increases infiltration, retards and filters runoff. An earthen berm is present on the south and east sides. A vegetated swale on the north side of TA-54 MFW directs stormwater runoff away from the facility.

3.1.7 Salt Storage Piles or Piles Containing Salt

Deicing salt is stored in covered containers at nearby structures and various locations around this facility. The deicing salt is applied conservatively to concrete, asphalt, and icy walk ways around the facility.

3.1.8 Dust Generation and Vehicle Tracking of Industrial Materials

The controls implemented at the TA-54 MFW to minimize the generation of dust and off-site tracking of raw, final, or waste materials debris includes:

- Parking vehicles and equipment on impervious surfaces
- Minimizing off road travel
- The areas surrounding the TA-54 MFW are covered with base course
- The areas bordering the base course is stabilized with established native vegetation

3.2 *Sector-Specific Non-Numeric Effluent Limits*

MSGP Sector P technology-based effluent limits include controls on industrial activities from hazardous waste treatment, storage or disposal facility areas.

Potential pollutant sources include contaminated stormwater:

- The recycling bins and dumpsters lids are to remain closed when not in use.
- For dumpster and rolloff boxes that do not have lids and could leak, ensure that discharges have control (e.g., secondary containment).

The location of the stormwater monitoring station, inlet and outfall and locations where industrial activities are exposed to precipitation are also identified on Attachment B, *Site Map*.

3.3 *Numeric Effluent Limitations Based on Effluent Limitations Guidelines*

The TA-54 MFW is not an industrial sector subject to any of the effluent limitations Guidelines identified in MSGP Part 6.2.2.1

3.4 *Water Quality-based Effluent Limitations and Water Quality Standards*

Sampling of stormwater discharges associated with this industrial sector was not required by the 2008 NPDES MSGP as the facility was not in existence at that time. In late May, 2014, stormwater inspectors identified maintenance activities as needing coverage under the MSGP and requiring a SWPPP. Since this is a newly identified facility, stormwater monitoring will begin in 2015. Data required by the 2015 MSGP will be included in Attachment H. MSGP stormwater monitoring data is also maintained in EIM.

SECTION 4: SCHEDULES AND PROCEDURES

The schedule of work is formalized using the Lock-in System, which is used to schedule work in advance and confirmed via Plan of the Day (POD) before work begins.

Waste pick up and disposal of waste is scheduled and tracked using the Waste Compliance and Tracking System (WCATS) with the exception of the trash dumpster, which are emptied monthly.

Waste inspections are scheduled and conducted based on the type of waste accumulation area that the waste is being managed. These inspections check for leaks and condition of containers, tanks, and packaging.

Back up practices for corrective actions requiring immediate attention is communicated directly to TA-54 Operations Center.

Procedures supporting the implementation of this SWPPP are summarized in Attachment I, *SOP and Maintenance Procedures*.

4.1 Good Housekeeping

All areas will be maintained in a clean and orderly state. Attachment I, EWMO division sites are designed to minimize the potential for spills, releases, exposure of materials, or any other events that could adversely affect the quality of stormwater that may be transported out of the area by runoff.

Good housekeeping practices implemented to keep exposed areas of TA-54 MFW clean include:

- Daily cleanup of outside area following completion of daily operations.
- Daily sweeping of shop, when the facility is active.
- Maintenance of operational areas in a clean and orderly state.
- Trash dumpsters are emptied on a monthly basis and lids are kept closed when not in use. For dumpsters and roll off boxes that do not have lids and could leak, ensure that discharges have control. (e.g., secondary containment)
- Wastes within regulated waste storage areas are picked on an as need basis, prior to the container reaching its capacity. Containers are in good condition.
- Routine Facility Inspections to ensure that no potential contaminants are present in exposed areas.
- Inspection of heavy equipment for leaks and potential problems prior to beginning daily operations.
- Minimize stormwater run on/runoff to maintenance areas.
- Placement of drip pans and/or secondary containment systems under leaking or leak prone equipment.
- Immediate cleanup of release with absorbent pads or biodegradable dry absorbents (Oil Sponge™ or equal), or dispersant/bioremediation liquid product (e.g., MicroBlaze® for stains) on concrete.
- Stained base course must be picked up, containerized and managed as New Mexico Special Waste (NMSW).
- Maintenance activities are conducted indoors or under cover, when possible.
- Storage of all liquid products within labeled containers in a designated area either under cover and on secondary containment.
- Prohibition of wet clean up practices that would result in the discharge of pollutants to stormwater drainage systems.
- Wastes are managed and disposed in accordance with LANL P409, Waste Management, requirements.

4.2 Maintenance

All industrial equipment must be regularly inspected (e.g., preventative maintenance, and before use), tested, maintained, and repaired to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater discharge to receiving waters.

All control measures used to achieve effluent limits required by the MSGP must be maintained in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel, appropriately trained).

If control measures need to be replaced or repaired, necessary repairs or modifications must be made as expeditiously as practicable.

All corrective actions are identified and documented in accordance with ENV-RCRA-QP-022, *MSGP Stormwater Corrective Actions*., and entered into the EPC-CP Corrective Action Reporting Database. This database is used to generate the MSGP Annual Report that is included in Attachment G, *Annual Reports and Corrective Action Documentation*.

The Integrated Work Document (IWD) used to conduct operations at the TA-54 MFW describes the work activities, identifies the hazards, and links them to specific controls. MSS-EWMO maintains a listing of all EWMO owned equipment. This listing identifies when a piece of equipment is due for preventative maintenance (PM) or inspection. The CMMS maintains a listing of the preventative maintenance required for vehicles and equipment and generates a Work Order to have the equipment serviced and inspected per the manufacturer's required specifications for that specific equipment. Heavy equipment and vehicle PM and inspections are tracked by CMMS.

The maintenance schedule or frequency for maintaining control measures is documented in the Facility Service Request (FSR) system. Additionally, the Engineering Service Request (ESR) system tracks controls requiring engineering evaluation and or verification.

4.3 Spill Prevention and Response Procedures

Spills or releases are minimized by the application of exposure minimization and good housekeeping procedures, best management practices, and engineering and administrative controls. Examples of spill prevention measures include:

- Storage of all liquid products within labeled containers in a designated area under cover and within secondary containment for preventing spills that can contaminate stormwater.
- Placement of drip pans and/or secondary containment systems under leaking or leak prone equipment.
- Prompt cleanup of releases with absorbent pads or biodegradable/bioremediation dry absorbents (Oil Sponge™ or equal), or dispersant/bioremediation liquid product (e.g., MicroBlaze® for stains on concrete and asphalt). Stained base course must be picked up and managed as NMSW.
- Spill cleanup/response materials are readily available.

NOTE: Also see §3.1.4, *Spill Prevention and Response*.

4.4 Erosion and Sediment Control

The areas surrounding the TA-54 MFW, including material and waste storage locations are covered with structures, concrete, and base course.

The areas bordering this area are stabilized with established native vegetation. A vegetated swale on the north side of TA-54 MFW directs stormwater runoff away from the facility.

4.5 Employee Training

Employee training is essential for effective implementation and maintenance of the TA-54 SWPPP. The objective of the training program is to cover all required training topics identified in the most current version of the MSGP, review the most current SWPPP with employees and managers and understanding all sections in SWPPP, help employees recognize situations that could lead to stormwater contamination, assist employees in recognizing issues that may require corrective action and identifying appropriate corrective actions, and train personnel in proper spill response and control procedures.

All employees who work in areas where industrial materials or activities are exposed to stormwater or who are responsible for implementing activities necessary to meet the conditions of the 2015 MSGP, receive training annually. This includes all operational site workers, managers, and supervisors at TA-54, and all Stormwater PPT members: Annual employee training ensures that personnel are aware of the regulatory requirements in the 2015 MSGP, monitoring results, control measures, and some components of the SWPPP. After training, the employees are able to recognize and avoid situations that could lead to stormwater contamination, prevent spills and releases, and respond safely and effectively to a spill or release. Another resource for BMP installation and maintenance information is the LANL BMP Guidance Document located at: <http://permalink.lanl.gov/object/tr?what=info:lanl-repo/lareport/LA-UR-11-10371>.

The TA-54 MSGP training includes Annual MSGP slide presentation and reviewing all sections of this SWPPP to address the following topics, at a minimum:

- Review all sections of the SWPPP
- Specific control measures used to achieve the effluent limits in Part 2 of the MSGP
- Stormwater monitoring results
- Inspections
- Planning
- Reporting
- Spill prevention, response and cleanup
- Good housekeeping and material management practices to prevent stormwater pollution
- Site-specific structures, equipment, and procedures designed to minimize stormwater pollution and soil erosion
- Documentation requirements
- Recognition of pollutant sources
- Be aware of endangered species and historical buildings

Training activities are documented in accordance with P781-1 *Conduct of Training Manual*.

Training records (inclusive of SWPPP training) are maintained in UTRAIN, LANL's official training database.

4.6 Facility Routine Inspections and Quarterly Visual Assessments

This section describes procedures for performing the two types of inspections required by the 2015 MSGP permit including 1) Routine facility inspections, and 2) Quarterly visual assessments of stormwater discharges at the TA-54 MFW and the method for addressing required corrective action identified during the inspections.

4.6.1 Routine Facility Inspections

Routine facility inspections will be conducted by a qualified individual, typically the EWMO Deployed Environmental Professional or EPC-CP Water Quality SME. The inspection will include all areas of the facility where industrial materials or activities are exposed to stormwater, and all stormwater control measures. The SWPP team member performing the inspection will document the inspection on the form provided in Appendix F of this SWPPP and obtain an authorized signature. The completed inspection report will become a quality record in Appendix F of this plan.

One routine facility inspection must be conducted during a period when a stormwater discharge is occurring.

Routine facility inspections will record and evaluate the following, at a minimum:

- Inspection date and time
- Name(s) and signature(s) of inspector(s)
- Weather information and a description of any discharge(s) occurring at the time of the inspection
- Any previously unidentified discharges of pollutants from the site
- Any control measures needing maintenance or repairs
- Any failed control measures that need replacement
- Must describe any discharges occurring at the time of the inspection
- Any unidentified discharges and/or pollutants from the site
- Any evidence of, or potential for, pollutants entering the drainage system
- Observations regarding the condition of the outfalls
- Any incidents of noncompliance observed
- Any additional control measures needed to comply with the MSGP

Specific areas of the facility to be inspected include:

- Storage areas for vehicles/equipment awaiting maintenance
- Fueling areas
- Indoor and outdoor vehicle/equipment maintenance areas
- Material storage areas
- Vehicle/equipment cleaning areas
- Loading/unloading areas
- Used oil storage area
- Waste storage area (e.g., solid waste dumpster)

4.6.1 Routine Facility Inspections (continued)

NOTE: All documentation shall be included in this SWPPP.

Routine facility inspections occur on the following schedule for each Calendar Year (CY):

CY Routine Facility Inspections		
• January 1 st	-	March 31 st
• April 1 st	-	June 30 th
• July 1 st	-	September 30 th
• October 1 st	-	December 31 st

Any required corrective actions identified during the inspection will be addressed in accordance with §6, *Corrective Actions and Deadlines*, Parts 3.1 & 3.2 of 2015 MSGP, and ENV-RCRA-QP-022, MSGP *Stormwater Corrective Actions*.

4.6.2 Quarterly Visual Assessment of Stormwater Discharges

The quarterly visual assessments are conducted at the single outfall for TA-54 MFW by qualified stormwater sampling personnel procedures. Visual assessments will:

- Be conducted on a representative sample of a measurable discharge
- Use a clean clear glass sample container in a well-lit area
- Be collected in the first 30 minutes of a discharge from a storm event or document why it could not be collected during the specified time frame (adverse conditions, snowmelt, etc.)
- Be conducted at least 72 hours since the last storm event or document why it was collected sooner
- Include documentation of rationale if a visual assessment is unable to be collected in a quarter (no precipitation event or adverse conditions)
- Perform an additional assessment during the next qualifying storm event if unable to perform it in a particular quarter

NOTE: All documentation shall be included in this SWPPP.

Collection of quarterly visual assessments occurs on the following schedule for each CY in accordance with EPC-CP-QP-064, *MSGP Storm Water Visual Assessments*:

CY Quarterly Visual Assessments		
• April 1 st	-	May 31 st
• June 1 st	-	July 31 st
• August 1 st	-	September 30 th
• October 1 st	-	November 30 th

The visual assessment will evaluate stormwater for the following water quality characteristics:

- color
- odor
- clarity
- floating solids
- settled solids
- suspended solids
- foam
- oil sheen
- other (i.e., obvious indicators of stormwater pollution)

4.6.2 Quarterly Visual Assessment of Stormwater Discharges (continued)

Individual(s) performing a visual assessment will document potential stormwater pollution problems observed using the Quarterly Visual Assessment form in accordance with MSGP Storm Water Visual Assessments, EPC-CP-QP-064.

Required corrective actions identified during the assessment will be addressed in accordance with §6, *Corrective Actions and Deadlines*, Part 3 of the 2015 MSGP and MSGP Stormwater Corrective Actions, and ENV-RCRA-QP-0022. The results of the Quarterly Visual Assessments are to be included in Attachment E, *Quarterly Visual Assessments*.

4.7 Monitoring

Monitoring activities applicable to your facility include:

- Impaired waters monitoring and Quarterly Visual Assessment

NOTE: There are no quarterly benchmarks for Sector P.

Located at the N/E corner of the TA-54 MFW & Discharge Point 049, sampling is performed at automated sampling station number 54-MFW-1 for impaired waters and quarterly visual assessments.

Other EPC-CP procedures followed during the sampling, analysis, and reporting process include:

- ENV-RCRA-QP-045, *Installing, Setting up, and Operating ISCO Samplers for the MSGP*
- EPC-CP -QP-047, *Inspecting Stormwater Runoff Samplers & Retrieving Samples for the MSGP*
- EPC -CP-QP-048, *Processing MSGP Stormwater Samples*
- EPC -CP-QP-064, *Multi-Sector General Permit Stormwater Visual Assessments*

Sampling of stormwater discharges associated with this industrial activity was not required by the 2008 NPDES MSGP, as the facility was not in existence at that time. In late May 2014, stormwater inspectors identified maintenance activities as needing coverage under the MSGP and requiring an SWPPP. Since this was a newly identified facility, quarterly and impaired water stormwater monitoring began in 2015. Impaired water constituents associated with the Pajarito Canyon are Polychlorinated biphenyls (PCBs) and total aluminum (see Table 4.7-1). Data required by the 2015 MSGP will be included in Attachment H, *Sampling Data*. The MSGP stormwater monitoring data is also maintained in EIM. There are no Substantially Identical Outfalls (SIOs) associated with the TA-54 MFW.

Table 4.7-1: Control Values - Outfall 049 (54-MFW-1)

Monitoring Requirement	Industrial Sector	Assessment Unit	Analyte	Filtered/ Unfiltered	Regulatory Standard	Units	Regulatory Standard Type	Regulatory Standard Reference
Impaired Waters	-	NM-128.A_08	Al	F10u ¹	1699	ug/L	NM 2010 Aquatic Acute 60 mg	20.6.4.900 NMAC Subpart I
Impaired Waters	-	NM-128.A_08	Total Aroclors	UF	0.2	ug/L	2007 EPA R6 MQL	20.6.4.900 NMAC Subpart J/ 20.6.4.12 NMAC Subpart E
Quarterly Benchmark	P	No Benchmark Monitoring Required						

¹F10u – 10 µm filter

SECTION 5: DOCUMENTATION TO SUPPORT ELIGIBILITY CONSIDERATIONS UNDER OTHER FEDERAL LAWS

5.1 *Documentation Regarding Endangered Species*

The LANL LA-UR-15-28610, *Threatened and Endangered Species Habitat Management Plan* (HMP) was prepared to provide for the protection of federally listed threatened and endangered species and their habitats at LANL. The HMP was designed to be a comprehensive landscape-scale management plan that balances the current operations and future development needs of LANL with the habitat requirements of threatened and endangered species. It also facilitates DOE compliance with the Endangered Species Act and related federal regulations. The HMP received concurrence from the U.S. Fish and Wildlife Service (USFWS), and was first implemented in 1999. All changes to the HMP, such as adding new species or changing requirements, are assessed in a new consultation with the USFWS before being implemented. The HMP provides guidance by species for different types of activities allowed without further review by the USFWS.

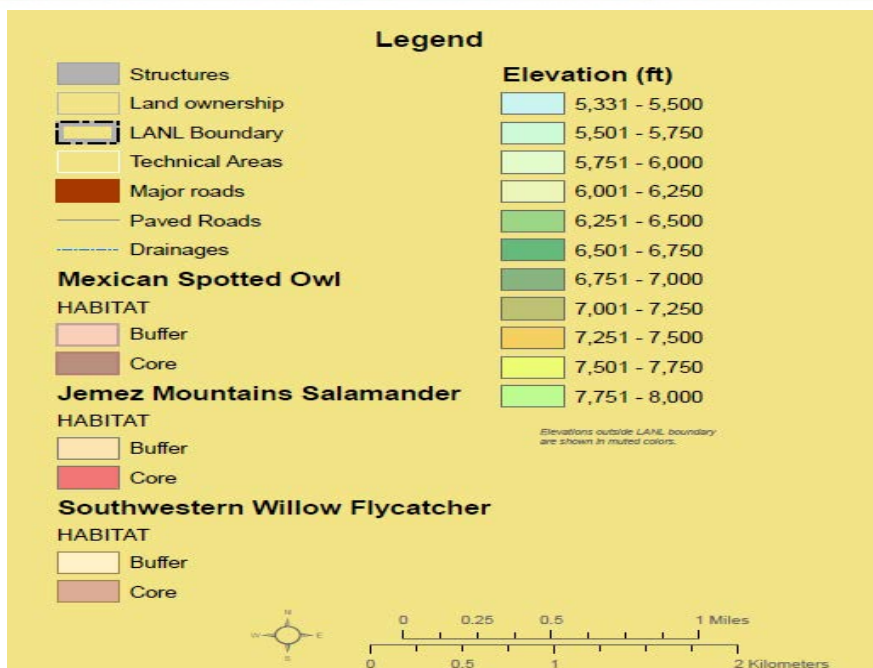
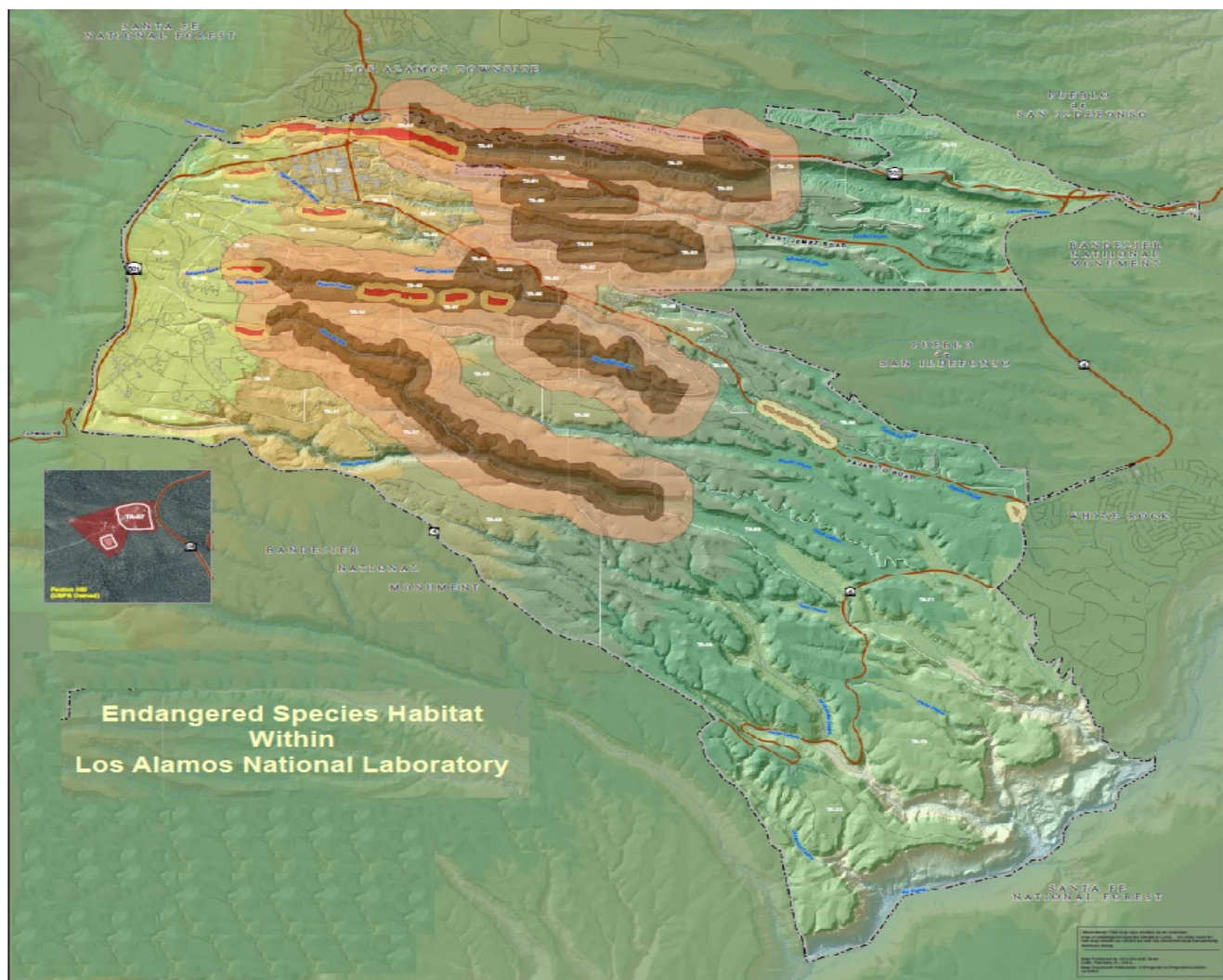
Currently, the only federally-listed species that have habitat or occur at LANL are the Southwestern Willow Flycatcher (*Empidonax trailii extimus*), Jemez Mountains Salamander (*Plethodon neomexicanus*), and Mexican Spotted Owl (*Strix occidentalis lucida*). Suitable habitats for these species, along with a protective buffer area surrounding the habitats, have been designated as Areas of Environmental Interests (AEIs). An AEI consists of a core area that contains important breeding or wintering habitat for a specific species and a buffer area around the core area. The buffer protects the core area from disturbances that would degrade the value of the core area to the species.

The HMP includes ecorisk analyses which account for any industrial facility's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities. In addition, the Site-wide Environmental Impact Statement (SWEIS) biological assessment (BA) covered the continuation of Laboratory operations and included outfalls.

As determined by earlier evaluations, stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities from LANL MSGP locations are not likely to adversely affect any species that is federally-listed as endangered or threatened under Criterion D Section iii, the ESA, and will not result in the adverse modification or destruction of habitat that is federally-designated as "critical habitat" under the ESA. New activities are evaluated to determine if they will have an impact to any species. If an activity can be completed within the guidelines of the HMP it can go forward as scheduled; however, if the activity cannot comply with the guidelines, the HMP requires that a project-specific BA be prepared for the action and go through the consultation process with the USFWS.

New Mexico waters of the state and watersheds harbor endangered and threatened species and their critical habitat. The LANL SWEIS excerpt Map 5-1 shows the locations of endangered species and their associated waters of the state and watersheds. Although there is no areas of designated critical habitat and or threatened species on the MFW map (Attachment B, *Site Map*), the storm water run-off may affect endangered species downstream from TA-54 as illustrated by Figure 5.1-1, *Endangered Species Habitat Within LANL*.

Figure 5.1-1: Endangered Species Habitat Within LANL



5.2 *Documentation Regarding Historic Properties*

TA-54 MFW facility is not building or installing control measures that cause less than one (1) acre of subsurface disturbance, therefore, discharge-related activities do not have the potential to have an effect on historic properties.

In December 2008 and August 2015, the Cultural Resources Team (using GPS spatial data as well as conducting visual inspections) reviewed LANL industrial sites (see list below), their associated outfalls and monitoring stations subject to the 2015 MRGP (Permit #NMR050000) for effects on historic properties. All noted sites were found to be undertakings of no effect, and in compliance with §106 of the National Historic Preservation Act (i.e., Criterion B).

LANL Industrial Sites

- TA-3-22 Power and Steam Plant
- TA-3-38 Metals Fabrication Shop
- TA-3-38 Wood Shop
- TA-3-39 and 102 Metal Shop
- TA-3-66 Sigma Complex
- TA-60 Material Recycle Facility
- TA-60 Roads and Grounds
- TA-60-2 Warehouse
- TA-60 Asphalt Batch Plant
- TA-60-1 Heavy Equipment Yard
- TA-54 Area L
- TA-54 Area G
- TA-54 MFW
- TA-54 RANT

SECTION 6: CORRECTIVE ACTIONS AND DEADLINES

6.1 Immediate Actions

Upon discovery of any of the following conditions, the condition must be documented within 24 hours of the discovery in the EPC-CP MSGP CAR database maintained by EPC-CP Stormwater Permitting and Compliance team, in accordance with the ENV-RCRA-QP-022, MSGP Stormwater Corrective Actions, and provided to the TA-54 Operations Center for initiation of Corrective Actions, if necessary:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or other NPDES permit) occurs at the facility
- A discharge violates a numeric effluent limit (currently there is no numeric effluent limits for TA-54)
- Control measures are not stringent enough for the discharge to meet applicable water quality standards
- An inspection or evaluation of the facility determines that modifications to the to the control measures are necessary to meet the non-numeric effluent limits in this permit
- Routine facility inspection or quarterly visual inspection identifies that control measures are not being properly operated and maintained

6.2 Subsequent Actions

If additional actions are necessary beyond those implemented pursuant to Part 4.3.1, one must complete the corrective actions (e.g., install a new or modified control and make it operational, complete the repair) before the next storm event if possible, and within 14 calendar days from the time of discovery of the corrective action condition. If it is infeasible to complete the corrective action within 14 calendar days, one must document why it is infeasible to complete the corrective action within the 14-day timeframe. One must also identify your schedule for completing the work, which must be done as soon as practicable after the 14-day timeframe but no longer than 45 days after discovery. If the completion of corrective action will exceed the 45 day timeframe, one may take the minimum additional time necessary to complete the corrective action, provided that you notify the EPA Regional Office of your intention to exceed 45 days, your rationale for an extension, and a completion date, which you must also include in your corrective action documentation (MSGP Part 4.4). Where your corrective actions result in changes to any of the controls or procedures documented in your SWPPP, the SWPPP must be modified accordingly within 14 calendar days of completing corrective action work.

NOTE: *If the EPA was notified regarding an extension of the 45 day timeframe (see §6.2, Subsequent Actions), then rationale for extension should also be summarized/documented.*

These time intervals are not grace periods, but are schedules considered reasonable for documenting your findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements do not persist indefinitely.

6.3 *Corrective Action Documentation*

Condition

Within 14 days of discovery of the identified condition, the corrective action(s) to eliminate or further investigate the condition or documentation that no corrective actions is needed will be documented by the Deployed Environmental Professional or Stormwater PPT member in the EPC-CP MSGP CAR database.

This is required to track the status of all issues in a report (the MSGP Annual Report) that will be generated and submitted to EPA as part of the Annual Site Compliance Evaluation Reporting from EPC-CP.

Spills or Leaks

For spills or leaks, additional notifications will be made to EPC-CP via an unplanned Release Report (e.g., Spill Report), which will summarize the following:

- Response actions
- Date and time clean-up was completed
- Notifications made
- Staff involved
- Measures taken to prevent the reoccurrence of such releases

The report certifying officials should be restricted to:

- EPC-CP On-Call staff
- DESHS Deployed Manager
- Environmental Professionals
- Project Managers
- Subcontractors (if applicable, managers with environmental compliance responsibilities)

SECTION 7: SWPPP CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated information submitted.

Based on my inquiry of the person(s) who manage the system, or person(s) directly responsible for information gathering, the information received is to the best of my knowledge true, accurate, and complete.

I understand and acknowledge the implications and penalties for submitting false information, including the possibility of a fine and/or imprisonment.

SIGNATURE OF CERTIFICATION:

Printed Name: Gail Helm **Title:** EWMO Operations Manager

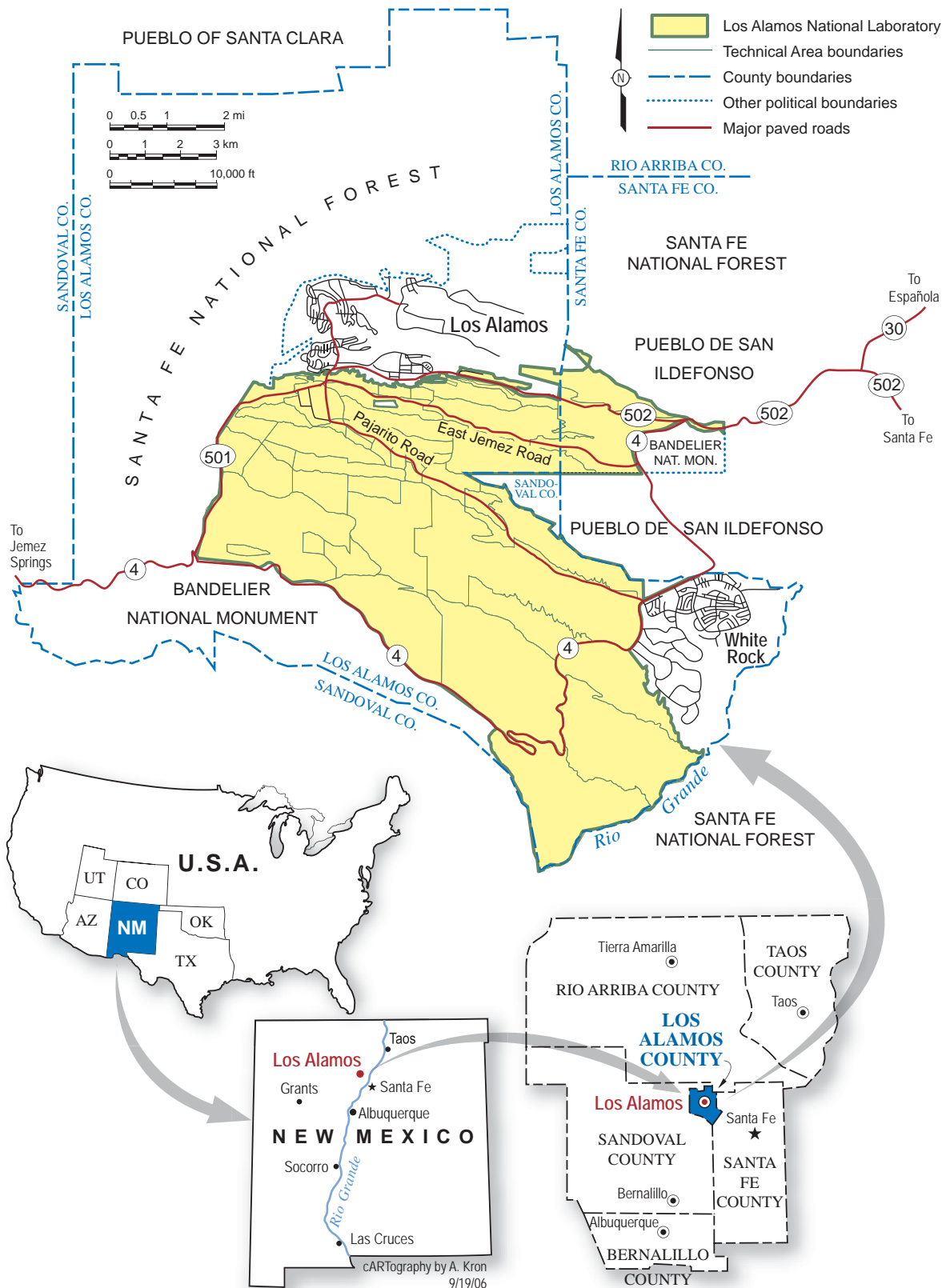
Signature: _____ **Date:** _____

SECTION 8: SWPPP MODIFICATIONS

Modification to address any of the triggering conditions for corrective actions listed in §6, *Corrective Actions and Deadline* will be addressed as follows:

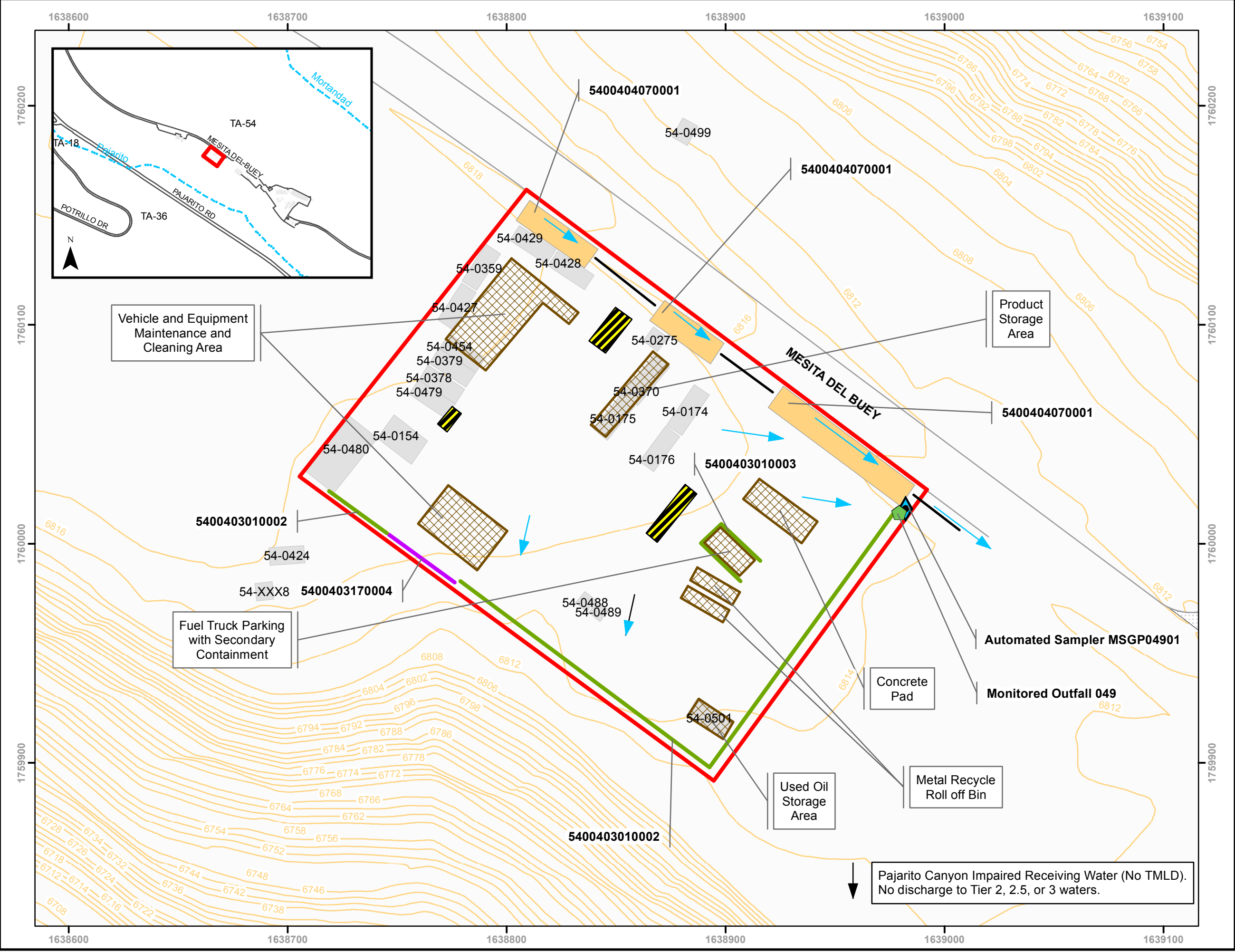
- Performed by PPT members
- Reviewed by EPC-CP (Project Lead)
- Signed & dated in accordance with Appendix B, Subsection 11 (Signatory Requirements) 2015 MSGP.
- A record of modifications (amendments) will be tracked using Appendix D, SWPP Amendments

ATTACHMENT A: GENERAL LOCATION MAP



ATTACHMENT B: SITE MAP

TA-54-MFW
FIGURE C2 SITE MAP



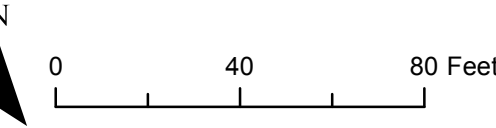
- Automated Sampler
- Monitored Outfall
- Earthen Berm
- Jersey Barriers
- Drainage
- Paved Roads
- 2 ft Contour
- Boundary of Industrial Activity
- Vegetated Swale
- Industrial Activity Areas
- Loading/Unloading Areas
- LANL Structures
- Flow Direction
- Culvert

0.88 Acres, 91% Impervious Surface.
Note - No Critical Habitat Areas.

Map number: 16-0015-TA-54-MFW
Map created by: Ben Sutter, ADBI-SI-DO
Date: June 1, 2016
Version 1

New Mexico State Plane Coordinate System Central Zone
(3002)
North American Datum, 1983 (NAD 83)
US Survey Ft

DISCLAIMER: This map was created for work processes associated with the Multi-Sector General Permit. All other uses for this map should be confirmed with LANL EPC-CP staff.



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ATTACHMENT C: 2015 MULTI-SECTOR GENERAL PERMIT

MSGP

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA)
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
MULTI-SECTOR GENERAL PERMIT FOR STORMWATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITY (MSGP)**

In compliance with the provisions of the Clean Water Act (CWA), as amended (33 U.S.C. 1251 *et seq.*), operators of stormwater discharges associated with industrial activity located in an area identified in Appendix C where EPA is the permitting authority are authorized to discharge to waters of the United States in accordance with the eligibility and Notice of Intent (NOI) requirements, effluent limitations, inspection requirements, and other conditions set forth in this permit. This permit is structured as follows:

- General requirements that apply to all facilities are found in Parts 1 through 7;
- Industry sector-specific requirements are found in Part 8; and
- Specific requirements that apply in individual states and Indian country are found in Part 9.

The Appendices (A through P) contain additional permit conditions that apply to all operators covered under this permit.

This permit becomes effective on June 4, 2015. For areas in the State of Washington (except for Indian country) subject to industrial activity by a Federal Operator, this permit becomes effective on July 21, 2015. For the State of Idaho (except for Indian country), and for industrial activities on Spokane Tribe of Indians lands, this permit becomes effective August 12, 2015.

This permit and the authorization to discharge shall expire at midnight, June 4, 2020.

Signed and issued this 4th day of June, 2015

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Acting Regional Administrator, EPA Region 1

Signed and issued this 4th day of June, 2015

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Signed and issued this 4th day of June, 2015

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Signed and issued this 4th day of June, 2015

Nancy Woo
Acting Director, Water Division, EPA Region 9

Signed and issued this 4th day of June, 21st day of July,
and 12th day of August, 2015

Daniel D. Opalski
Director, Office of Water and Watersheds, EPA Region 10

NPDES MULTI-SECTOR GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY

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1. Coverage Under this Permit.**1.1 Eligibility.****1.1.1 Facilities Covered.**

To be eligible to discharge under this permit, you must (1) have an allowable stormwater discharge or an allowable non-stormwater discharge associated with industrial activity from your primary industrial activity, as defined in Appendix A, provided your primary industrial activity is included in Appendix D, or (2) be notified by EPA that you are eligible for coverage under Sector AD of this permit. Your facility must also be located in an area where EPA is the permitting authority (see Appendix C).

1.1.2 Allowable Stormwater Discharges.

Unless otherwise made ineligible under Part 1.1.4, the following discharges are eligible for coverage under this permit:

1.1.2.1 Stormwater discharges associated with industrial activity for any primary industrial activities and co-located industrial activities, as defined in Appendix A, except for any stormwater discharges specifically prohibited in Part 8;

1.1.2.2 Discharges designated by EPA as needing a stormwater permit as provided in Sector AD;

1.1.2.3 Discharges that are not otherwise required to obtain NPDES permit authorization but are mixed with discharges that are authorized under this permit; and

1.1.2.4 Stormwater discharges from facilities subject to any of the national stormwater-specific effluent limitations guidelines listed in Table 1-1.

Table 1-1. Stormwater-Specific Effluent Limitations Guidelines

Regulated Discharge	40 CFR Section	MSGP Sector	New Source Performance Standard (NSPS)	New Source Date
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	Part 429, Subpart I	A	Yes	1/26/81
Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874)	Part 418, Subpart A	C	Yes	4/8/74
Runoff from asphalt emulsion facilities	Part 443, Subpart A	D	Yes	7/28/75
Runoff from material storage piles at cement manufacturing facilities	Part 411, Subpart C	E	Yes	2/20/74
Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	Part 436, Subparts B, C, and D	J	No	N/A
Runoff from hazardous waste and non-hazardous waste landfills	Part 445, Subparts A and B	K, L	Yes	2/2/00
Runoff from coal storage piles at steam electric generating facilities	Part 423	O	Yes	11/19/82 (10/8/74) ¹

¹ NSPS promulgated in 1974 were not removed via the 1982 regulation; therefore wastewaters generated by Part 423-applicable sources that were New Sources under the 1974 regulations are subject to the 1974 NSPS.

Regulated Discharge	40 CFR Section	MSGP Sector	New Source Performance Standard (NSPS)	New Source Date
Runoff containing urea from airfield pavement deicing at existing and new primary airports with 1,000 or more annual non-propeller aircraft departures	Part 449	S	Yes	6/15/12

1.1.3 Allowable Non-Stormwater Discharges.

Below in Part 1.1.3.1 are the only non-stormwater discharges authorized under this permit for all sectors provided that all discharges comply with the effluent limits set forth in Parts 2 and 8. In addition to the authorized non-stormwater discharges in Part 1.1.3.1 applicable to all sectors, for Sector A, there is an additional non-stormwater discharge in Part 1.1.3.2 below, and for the mining sectors (Sectors G, H, and J), there are additional authorized non-stormwater discharges in Part 1.1.3.3 below. The additional allowable non-stormwater discharges for Sectors G, H, and J apply only to discharges from earth-disturbing activities conducted prior to active mining activities as defined in Part 8.G.3.2, 8.H.3.2, and 8.J.3.2 provided that, with the exception of water used to control dust and to irrigate areas to be vegetatively stabilized, these discharges are not routed to areas of exposed soil and all discharges comply with the permit's effluent limits.

Also allowed for all sectors are discharges of stormwater listed above in Parts 1.1.2 or authorized non-stormwater discharges in Part 1.1.3, mixed with a discharge authorized by a different NPDES permit and/or a discharge that does not require NPDES permit authorization. All other non-stormwater discharges requiring NPDES permit coverage except those specifically listed in Part 1.1.3 are not authorized by this permit. If non-stormwater discharges requiring NPDES permit coverage other than those specifically authorized in Part 1.1.3, including sector-specific non-stormwater discharges that are listed in Part 8 as prohibited (a non-exclusive list provided to raise awareness of contaminants or sources of contaminants characteristic of certain sectors), will be discharged, such non-stormwater discharges are not authorized by this permit and must either be eliminated or covered under another NPDES permit.

1.1.3.1 Allowable Non-Stormwater Discharges for all Sectors of Industrial Activity:

- Discharges from emergency/unplanned fire-fighting activities;
- Fire hydrant flushings;
- Potable water, including water line flushings;
- Uncontaminated condensate from air conditioners, coolers/chillers, and other compressors and from the outside storage of refrigerated gases or liquids;
- Irrigation drainage;
- Landscape watering provided all pesticides, herbicides, and fertilizers have been applied in accordance with the approved labeling;
- Pavement wash waters where no detergents or hazardous cleaning products are used (e.g., bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols), and the wash waters do not come into contact with oil and grease deposits, sources of pollutants associated with industrial activities (see Part 5.2.3), or any other toxic or hazardous materials, unless residues are first cleaned up using dry clean-up methods (e.g., applying absorbent materials and sweeping, using hydrophobic mops/rags) and you have implemented

appropriate control measures to minimize discharges of mobilized solids and other pollutants (e.g., filtration, detention; settlement);

- Routine external building washdown / power wash water that does not use detergents or hazardous cleaning products (e.g., those containing bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols);
- Uncontaminated ground water or spring water;
- Foundation or footing drains where flows are not contaminated with process materials; and
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of your facility, but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown; drains).

1.1.3.2 Additional Allowable Non-Stormwater Discharge for Sector A: Discharges from the spray down of lumber and wood product storage yards where no chemical additives are used in the spray-down waters and no chemicals are applied to the wood during storage (applicable only to Sector A facilities provided the non-stormwater component of the discharge is in compliance with the non-numeric effluent limits requirements in Part 2.1.2).

1.1.3.3 Additional Allowable Non-Stormwater Discharges for Earth-Disturbing Activities Conducted Prior to Active Mining Activities for Sectors G, H and J:

- Water used to wash vehicles and equipment, provided that there is no discharge of soaps, solvents, or detergents used for such purposes;
- Water used to control dust; and
- Dewatering water that has been treated by an appropriate control under Parts 8.G.4.2.9, 8.H.4.2.9, or 8.J.4.2.9.

Note: These non-stormwater discharges are only authorized for earth-disturbing activities conducted prior to active mining activities, as defined in Part 8.G.3.2, 8.H.3.2, and 8.J.3.2. Once the earth-disturbing activities conducted prior to active mining activities have ceased, the only allowable non-stormwater discharges for Sectors G, H, and J are those listed in Part 1.1.3.1.

1.1.4 Limitations on Coverage.

Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under Clean Water Act (CWA) section 402(k) by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the Stormwater Pollution Prevention Plan (SWPPP), or during an inspection.

1.1.4.1 For Discharges Mixed with Non-Stormwater. Stormwater discharges that are mixed with non-stormwater discharges, other than those mixed with allowable non-stormwater discharges listed in Part 1.1.3 and/or those mixed with a discharge authorized by a different NPDES permit and/or a discharge that does not require NPDES authorization, are not eligible for coverage under this permit.

1.1.4.2 For Stormwater Discharges Associated with Construction Activity. Stormwater discharges associated with construction activity disturbing one acre or more, or that are part of a larger common plan of development or sale if the larger common plan will ultimately disturb one acre or more, are not eligible for coverage

under this permit, unless in conjunction with mining activities or certain oil and gas extraction activities as specified in Sectors G, H, I, and J of this permit.

1.1.4.3 For Discharges Currently or Previously Covered by Another Permit. Unless you have received written notification from EPA specifically allowing these discharges to be covered under this permit, you are not eligible for coverage under this permit for any of the following:

- Stormwater discharges associated with industrial activity that are currently covered under an individual NPDES permit or an alternative NPDES general permit;
- Discharges covered within five years prior to the effective date of this permit by an individual permit or alternative general permit where that permit established site-specific numeric water quality-based limitations developed for the stormwater component of the discharge; or
- Discharges from facilities where any NPDES permit has been or is in the process of being denied, terminated, or revoked by EPA (this does not apply to the routine reissuance of permits every five years).

1.1.4.4 For Stormwater Discharges Subject to Effluent Limitations Guidelines. For discharges from facilities subject to stormwater effluent limitation guidelines under 40 CFR, Subchapter N, only those stormwater discharges identified in Table 1-1 are eligible for coverage under this permit.

1.1.4.5 Endangered and Threatened Species and Critical Habitat Protection. Coverage under this permit is available only if your stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities were the subject of an Endangered Species Act (ESA) consultation or an ESA section 10 permit, or if your stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities are not likely to adversely affect any species that are federally listed as endangered or threatened ("listed") and are not likely to adversely affect habitat that is designated as "critical habitat" under the ESA. You must meet one of the criteria below, following the procedures in Appendix E:

Criterion A. No federally listed threatened or endangered species or their designated critical habitat(s) are likely to occur in the "action area" as defined in Appendix A. To certify your eligibility under this criterion, you must use the *Criterion Selection Worksheet* in Part E.4 of Appendix E. You must also provide a description of the basis for the criterion you selected on your NOI form and provide documentation supporting your eligibility determination in your SWPPP.

Criterion B. Your industrial activity's discharges and discharge-related activities were already addressed in another operator's valid certification of eligibility for your action area under this permit, and there is no reason to believe that federally listed species or designated critical habitat not considered in the prior certification may be present or located in the "action area" (e.g., due to a new species listing or critical habitat designation). To certify your eligibility under this criterion, you must use the *Criterion Selection Worksheet* in Part E.4 of Appendix E. There must be no lapse of NPDES permit coverage in the other operator's certification. You must also comply with any additional measures that formed the basis of the other operator's valid certification of eligibility to ensure that your discharges and discharge-related

activities are protective of listed species and/or critical habitat. You must include in your NOI the NPDES ID (i.e., permit tracking number) assigned to the other operator's authorization under this permit, and a description of the basis for the criterion selected on your NOI form, including the eligibility criterion selected by the other operator's certification. You must also provide any documentation in your SWPPP that supports the other operator's eligibility determination, including any additional measures that formed the basis of the other operator's eligibility determination.

Criterion C. Federally listed threatened or endangered species or their designated critical habitat(s) are likely to occur in or near your facility's "action area," and your industrial activity's discharges and discharge-related activities are not likely to adversely affect listed threatened or endangered species or critical habitat. To certify your eligibility under this criterion, you must use the *Criterion Selection Worksheet* in Part E.4 of Appendix E, including completion of the *Criterion C Eligibility Form*, which you must submit to EPA at least 30 days prior to filing your NOI for permit coverage. After evaluation of your *Criterion C Eligibility Form*, EPA may require additional measures that you must implement to avoid or eliminate likely adverse effects on listed species and critical habitat from discharges and discharge-related activities. You may submit your NOI for permit coverage 30 days after submitting to EPA your completed *Criterion C worksheet*. You must also provide a description of the basis for the criterion you selected on your NOI form and provide documentation supporting your eligibility determination in your SWPPP.

Criterion D. Consultation between a Federal Agency and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the ESA has been concluded. Consultations can be either formal or informal, and would have occurred only as a result of a separate federal action (e.g., during application for an individual wastewater discharge permit or the issuance of a wetlands dredge and fill permit), and consultation must have addressed the effects of the industrial activity's discharges and discharge-related activities on federally listed threatened or endangered species and designated critical habitat. The result of this consultation must be one of the following:

- i. A biological opinion that concludes that the action in question (taking into account the effects of your facility's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat;
- ii. A biological opinion that concludes that the action is likely to jeopardize listed species or to result in the destruction or adverse modification of critical habitat, and any recommended reasonable and prudent alternatives or reasonable and prudent measures are being implemented; or
- iii. Written concurrence from the applicable Service(s) with a finding that the facility's discharges and discharge-related activities are not likely to adversely affect listed species or critical habitat.

To certify your eligibility under this criterion, you must use the *Criterion Selection Worksheet* in Part E.4 of Appendix E. You must verify that the consultation does not warrant reinitiation under 50 CFR §402.16. If reinitiation of consultation is required, in order to be eligible under this Criterion you must ensure consultation is reinitiated and the result of the consultation must be consistent with (i), (ii), or (iii) above.

If eligible, you must also provide supporting documentation for your determination in your NOI and SWPPP, including the Biological Opinion (or PCTS tracking number) or concurrence letter.

Criterion E. Your industrial activities are the subject of a permit under section 10 of the ESA, and this authorization addresses the effects of your facility's discharges and discharge-related activities on federally listed species and designated critical habitat. To certify your eligibility under this criterion, you must use the *Criterion Selection Worksheet*. You must also provide supporting documentation for your determination in your NOI and SWPPP, including a copy of the permit from the Services.

You must comply with any measures that formed the basis of your eligibility determination in Part 1.1.4.5 to be in compliance with the permit. These measures become permit requirements per Part 2.3. Documentation of these measures must be kept as part of your SWPPP (see Part 5.2.6.1).

1.1.4.6 Historic Properties Preservation. Coverage under this permit is available only if your stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities meet one of the eligibility criteria below, following the procedures in Appendix F:

Criterion A. Your stormwater discharges and allowable non-stormwater discharges do not have the potential to have an effect on historic properties and you are not constructing or installing new stormwater control measures on your site that cause subsurface disturbance; or

Criterion B. Your discharge-related activities (i.e., construction and/or installation of stormwater control measures that involve subsurface disturbance) will not affect historic properties; or

Criterion C. Your stormwater discharges, allowable non-stormwater discharges, and discharge-related activities have the potential to have an effect on historic properties, and you have consulted with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other tribal representative regarding measures to mitigate or prevent any adverse effects on historic properties, and you have either (1) obtained and are in compliance with a written agreement that outlines all such measures, or (2) been unable to reach agreement on such measures; or

Criterion D. You have contacted the SHPO, THPO, or other tribal representative and EPA in writing informing them that you have the potential to have an effect on historic properties and you did not receive a response from the SHPO, THPO, or tribal representative within 30 days of receiving your letter.

If you have been unable to reach agreement with a SHPO, THPO, or other tribal representative regarding appropriate measures to mitigate or prevent adverse effects, EPA may notify you of additional measures you must implement to be eligible for coverage under this permit.

1.1.4.7 Eligibility for New Dischargers and New Sources: Based on Water Quality Standards. If you are a new discharger or a new source (as defined in Appendix A), you are ineligible for coverage under this permit if EPA determines prior to your authorization to discharge that your discharges will not meet an applicable water

quality standard (i.e., your discharges will cause or contribute to an exceedance of a water quality standard). In such case, EPA may notify you that an individual permit application is necessary per Part 1.2.3, or, alternatively, EPA may authorize your coverage under this permit after you implement additional control measures so that your discharges will meet water quality standards.

1.1.4.8 Eligibility for New Dischargers and New Sources to Water-Quality Impaired Waters. If you are a new discharger or a new source (as defined in Appendix A), you are ineligible for coverage under this permit to discharge to an "impaired water" (as defined in Appendix A) unless you do one of the following:

- a. Prevent all exposure to stormwater of the pollutant(s) for which the waterbody is impaired, and retain documentation of procedures taken to prevent exposure onsite with your SWPPP;
- b. Prior to submitting your NOI, provide to the appropriate EPA Regional Office technical information or other documentation to support your claim that the pollutant(s) for which the waterbody is impaired is not present at your site, and retain such documentation with your SWPPP; or
- c. Prior to submitting your NOI, provide information to the appropriate EPA Regional Office, either data or other technical documentation, to support a conclusion that the discharge is expected to meet applicable water quality standards (i.e., that pollutants of concern will not be discharged at levels that will cause or contribute to an exceedance of a water quality standard), and retain such information with your SWPPP. The information to be submitted must be sufficient to demonstrate:
 - i. For discharges to waters without an EPA-approved or established total maximum daily load (TMDL), that the discharge of the pollutant for which the water is impaired will meet water quality standards at the point of discharge to the waterbody; or
 - ii. For discharges to waters with an applicable EPA-approved or established TMDL, that there are, in accordance with 40 CFR 122.4(i), sufficient remaining wasteload allocations in the TMDL to allow your discharge and that existing dischargers to the waterbody are subject to compliance schedules designed to bring the waterbody into attainment with water quality standards (e.g., a reserve allocation for future growth).

You are eligible under Part 1.1.4.8.c if you receive a determination from the EPA Regional Office that your discharge will meet applicable water quality standards (i.e., will not cause or contribute to an exceedance of a water quality standard), and you document the Region's determination in your SWPPP. If the EPA Regional Office fails to respond to you within 30 days after submission of data, you are considered to be eligible for coverage.

Note: For the purposes of this permit, your project is considered to discharge to an impaired water if the first water of the U.S. to which you discharge is identified by a state, tribe, or EPA as not meeting an applicable water quality standard, and:

- *Requires development of a TMDL (pursuant to section 303(d) of the CWA);*
- *Is addressed by an EPA-approved or established TMDL; or*

- *Is not in either of the above categories but the waterbody is covered by pollution control requirements that meet the requirements of 40 CFR 130.7(b)(1).*

For discharges that enter a separate storm sewer system² prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system.

1.1.4.9 Eligibility for New Dischargers and New Sources to Waters with High Water Quality.

For new dischargers and new sources to Tier 2 or Tier 2.5 waters:

If you are a new discharger or a new source (as defined in Appendix A), you are eligible to discharge to a Tier 2 or Tier 2.5 water only if your discharge will not lower the water quality of the applicable water. See a list of Tier 2 and Tier 2.5 waters in Appendix L.

For new dischargers and new sources to Tier 3 waters:

If you are a new discharger or a new source (as defined in Appendix A), you are not eligible for coverage under this permit for discharges to waters designated by a state or tribe as Tier 3 (outstanding national resource waters) for antidegradation purposes under 40 CFR 131.13(a)(3). Instead, you must submit an application for an individual permit. See a list of Tier 3 waters in Appendix L.

Note: For the purposes of this permit, your project is considered to discharge to a Tier 2, Tier 2.5, or Tier 3 water if the first water of the U.S. to which you discharge is identified by a state, tribe, or EPA as a Tier 2, Tier 2.5, or Tier 3 water. For discharges that enter a separate storm sewer system² prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system.

1.1.4.10 For Discharges to a Federal CERCLA Site. If you discharge to a federal CERCLA Site listed in Appendix P, you are ineligible for coverage under this permit, unless you notify the EPA Regional Office in advance and the EPA Regional Office determines that you are eligible for permit coverage. In determining eligibility for coverage under this Part, the EPA Regional Office may evaluate whether you are implementing or plan to implement adequate controls and/or procedures to ensure that your discharge will not lead to recontamination of aquatic media at the CERCLA Site such that your discharge will cause or contribute to an exceedance of a water quality standard. If it is determined that your facility discharges to a CERCLA Site listed in Appendix P after you have obtained coverage under this permit, you must contact the EPA Regional Office and ensure that you either have implemented or will implement adequate controls and/or procedures to ensure that your discharges will not lead to recontamination of aquatic media at the CERCLA Site such that it will to cause or contribute to an exceedance of a water quality standard.

For the purposes of this permit, a permittee discharges to a federal CERCLA Site if the discharge flows directly into the site through its own conveyance, or a through

² Separate storm systems do not include combined sewer systems or sanitary sewer systems. Separate storm systems include both municipal storm sewer systems (MS4s) and non-municipal separate storm sewers.

a conveyance owned by others, such as a municipal separate storm sewer system (MS4).

1.2 Authorization Under this Permit.

1.2.1 How to Obtain Authorization.

To obtain authorization under this permit, you must:

- Be an operator of a primary industrial activity in a sector covered by this permit (see Appendix D);
- Be located in a state, territory, or Indian country, or be a federal operator identified in Appendix C where EPA is the permitting authority;
- Meet the Part 1.1 eligibility requirements;
- Select, design, install, and implement control measures in accordance with Part 2.1 and Part 8 to meet numeric and non-numeric effluent limits;
- Develop a SWPPP per Part 5 of this permit or update your existing SWPPP consistent with Part 5 prior to submitting your NOI for coverage under this permit; and
- Submit a complete and accurate NOI in accordance with this Part.

1.2.1.1 Submitting Your NOI. To be covered under this permit, you must submit to EPA a complete and accurate NOI by the deadline applicable to your facility presented in Table 1-2. The NOI certifies to EPA that you are eligible for coverage according to Part 1.1, and provides information on your industrial activities and related discharges.

You must complete the development of a SWPPP or update your existing SWPPP consistent with Part 5 prior to submitting your NOI for coverage under this permit. If you choose to post your SWPPP on the Internet per Part 5.4.1, you must include the URL on your NOI form and this URL must directly link to the SWPPP (not just the corporate or facility homepage). If you do not post your SWPPP online, you must enter additional facility information from your SWPPP, per Part 5.4.2.

1.2.1.2 How to Submit Your NOI. You must submit your NOI electronically per Part 7.1, unless you have received a waiver from electronic reporting per Part 7.1, in which case you may use the paper NOI form in Appendix G.

1.2.1.3 Deadlines for Submitting Your NOI and Your Official Date of Permit Coverage. Table 1-2 provides the deadlines for submitting your NOI and your official start date of permit coverage.

Table 1-2. NOI Submittal Deadlines and Discharge Authorization Dates

Category	NOI Submission Deadline	Discharge Authorization Date^{1, 2}
Operators of industrial activities that were authorized for coverage under the 2008 MSGP.	No later than September 2, 2015 unless EPA notifies you that your deadline is extended. ³	30 days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization has been denied or delayed. <i>Note: You must review and update your SWPPP to ensure that this permit's requirements are addressed prior to submitting your NOI.</i> Provided you submit your NOI in accordance with the deadline, your authorization under the 2008 MSGP is automatically continued until you have been granted coverage under this permit or an alternative permit, or coverage is otherwise terminated.
Operators of industrial activities that commenced discharging between September 30, 2013 and September 2, 2015 and have been operating consistent with EPA's no action assurance for the NPDES Stormwater Multi-Sector General Permit for Industrial Activities.	As soon as possible, but no later than September 2, 2015, unless EPA notifies you that your deadline is extended. ⁴	30 days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization has been denied or delayed.
Operators of industrial activities that commence discharging after September 2, 2015, or operators seeking coverage for discharges previously covered under an individual permit or an alternative general permit.	A minimum of 30 days prior to commencing discharge in accordance with the terms of the 2015 MSGP. ⁵	30 days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization has been denied or delayed.
New operators of existing industrial activities with discharges previously authorized under the 2015 MSGP.	A minimum of 30 days prior to the date of transfer of control to the new operator.	30 days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization has been denied or delayed.
Other eligible operators – Operators of industrial activities that commenced discharging prior to September 2, 2015, but not covered under the 2008 MSGP or another NPDES permit and not operating consistent with EPA's no action assurance for the NPDES Stormwater Multi-Sector General Permit for Industrial Activities.	Immediately, to minimize the time discharges from the facility will continue to be unauthorized.	30 days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization has been denied or delayed.

¹ If you have missed the deadline to submit your NOI, any and all discharges from your industrial activities will continue to be unauthorized under the CWA until they are covered by this or a different NPDES permit. EPA may take enforcement action for any unpermitted discharges that occur between the commencement of discharging and discharge authorization.

² Discharges are not authorized if your NOI is incomplete or inaccurate or if you are ineligible for permit coverage.

³ For federal operators of industrial activities located in the State of Washington (except Indian country) that were authorized for coverage under the 2008 MSGP, you must submit your NOI no later than October 19, 2015, unless EPA notifies you that your deadline is extended. For operators of industrial activities located in the State of Idaho (except Indian country) or on Spokane Tribe of Indians lands that were authorized for coverage under the 2008 MSGP, you must submit your NOI no later than November 10, 2015, unless EPA notifies you that your deadline is extended.

⁴ For federal operators of industrial activities located in the State of Washington (except Indian country) that commence discharging between September 30, 2013 and October 19, 2015, you must submit your NOI as soon as possible, but no later than October 19, 2015, unless EPA notifies you that your deadline is extended. For operators of industrial activities located in the State of Idaho (except Indian country) or on Spokane Tribe of Indians lands that commence discharging between September 30, 2013 and November 10, 2015, you must submit your NOI as soon as possible, but no later than November 10, 2015, unless EPA notifies you that your deadline is extended.

⁵ For federal operators of industrial activities located in the State of Washington (except Indian country) that commence discharging after October 19, 2015, or operators seeking coverage for discharges previously covered under an individual permit or an alternative general permit, you must submit your NOI a minimum of 30 days prior to commencing discharge in accordance with the terms of the 2015 MSGP. For operators of industrial activities located in the State of Idaho (except Indian country) or on Spokane Tribe of Indians lands that commence discharging after November 10, 2015, or operators seeking coverage for discharges previously covered under an individual permit or an alternative general permit, you must submit your NOI a minimum of 30 days prior to commencing discharge in accordance with the terms of the 2015 MSGP.

1.2.2 Continuation of Coverage for Existing Permittees After the Permit Expires.

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedure Act and 40 CFR 122.6 and remain in force and effect for discharges that were covered prior to expiration. If you obtain authorization to discharge under this permit prior to the expiration date and this permit is administratively continued, any discharges authorized under this permit will automatically remain covered by this permit after its expiration date until the earliest of:

- Your authorization for coverage under a reissued permit or a replacement version of this permit following your timely submittal of a complete and accurate NOI for coverage under the new permit; or

Note: If you fail to submit a timely NOI for coverage under the reissued or replacement permit, your coverage will terminate on the date that the NOI was due.

- Your submittal of a Notice of Termination (NOT); or
- Issuance of an individual permit for the facility's discharges; or
- A formal permit decision by EPA not to reissue this general permit, at which time EPA will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. Coverage under this permit will cease at the end of this time period.

EPA reserves the right to modify or revoke and reissue this permit under 40 CFR 122.62 and 63, in which case you will be notified of any relevant changes or procedures to which you may be subject.

1.2.3 Coverage Under Alternative Permits.

EPA may require you to apply for and/or obtain authorization to discharge under an alternative permit, i.e., either an individual NPDES permit or an alternative NPDES general permit, in accordance with 40 CFR 122.64 and 124.5. If EPA requires you to apply for an alternative permit, the Agency will notify you in writing that a permit application or NOI is required. This notification will include a brief statement of the reasons for this decision and will contain alternative permit application or NOI requirements, including deadlines for completing your application or NOI.

1.2.3.1 Denial of Coverage for New or Previously Unpermitted Facilities. For new or previously unpermitted facilities, following the submittal of your NOI, you may be denied coverage under the 2015 MSGP and must apply for and/or obtain authorization to discharge under an alternative permit, per Part 1.2.3.

1.2.3.2 Loss of Authorization Under the 2015 MSGP for Existing Permitted Facilities. If your stormwater discharges are covered under this permit, you may receive a written notification that you must either apply for coverage under an individual NPDES permit or submit an NOI for coverage under an alternative general NPDES permit, per Part 1.2.3. In addition to the reasons for the decision and alternative permit application or NOI deadlines, the notice will include a statement that on the effective date of your alternative permit coverage, your coverage under the 2015 MSGP will terminate. EPA may grant additional time to submit the application or NOI if you request it. If you fail to submit an alternative permit application or NOI as required by EPA, then your authorization to discharge under the 2015 MSGP is terminated at the end of the day EPA required you to submit your alternative

permit application or NOI. EPA may take appropriate enforcement action for any unpermitted discharge.

1.2.3.3 Operator Requesting Coverage Under an Alternative Permit. You may request to be covered under an individual permit. In such a case, you must submit an individual permit application in accordance with the requirements of 40 CFR 122.28(b)(3)(iii), with reasons supporting the request, to the applicable EPA Regional Office listed in Part 7.9.1 of this permit. The request may be granted by issuance of an individual permit if your reasons are adequate to support the request. When you are authorized to discharge under an alternative permit, your authorization to discharge under the 2015 MSGP is terminated on the effective date of the alternative permit.

1.3 Terminating Coverage.

1.3.1 Submitting a Notice of Termination (NOT).

To terminate permit coverage, you must submit a complete and accurate NOT. Your authorization to discharge under this permit terminates at midnight of the day that you are notified that your complete NOT has been processed. If you submit a NOT without meeting one or more of the conditions identified in Part 1.3.3, then your NOT is not valid. You are responsible for meeting the terms of this permit until your authorization is terminated.

1.3.2 How to Submit Your NOT.

You must submit your NOT electronically per Part 7.2, unless you have received a waiver from electronic reporting per Part 7.1, in which case you may use the paper form in Appendix H.

1.3.3 When to Submit Your NOT.

You must submit a NOT within 30 days after one or more of the following conditions have been met:

- A new owner or operator has taken over responsibility for the facility; or
- You have ceased operations at the facility, there are not or no longer will be discharges of stormwater associated with industrial activity from the facility, and you have already implemented necessary sediment and erosion controls per Part 2.1.2.5; or
- You are a Sector G, H, or J facility and you have met the applicable termination requirements; or
- You obtained coverage under an individual or alternative general permit for all discharges required to be covered by an NPDES permit.

1.4 Conditional Exclusion for No Exposure.

If you are covered by this permit, and become eligible for a “no exposure” exclusion from permitting under 40 CFR 122.26(g), you may file a No Exposure Certification. You are no longer required to have a permit upon submission of a complete and accurate No Exposure Certification to EPA. If you are no longer required to have permit coverage because of a no exposure exclusion and have submitted a No Exposure Certification form to EPA, you are not required to submit a NOT. You must submit a No Exposure Certification form to EPA once every five years.

You must submit your No Exposure Certification electronically per Part 7.2, unless you have received a waiver from electronic reporting per Part 7.1, in which case you may use the paper form in Appendix K.

1.5 Permit Compliance.

Any noncompliance with any of the requirements of this permit constitutes a violation of this permit, and thus is a violation of the CWA. As detailed in Part 4 (Corrective Actions) of this permit, failure to take any required corrective actions constitutes an independent, additional violation of this permit, in addition to any original violation that triggered the need for corrective action. As such, any actions and time periods specified for remedying noncompliance do not absolve parties of the initial underlying noncompliance.

Where corrective action is triggered by an event that does not itself constitute permit noncompliance, such as an exceedance of an applicable benchmark, there is no permit violation provided you take the required corrective action within the relevant deadlines established in Part 4.3.

1.6 Severability.

Invalidation of a portion of this permit does not necessarily render the whole permit invalid. EPA's intent is that the permit is to remain in effect to the extent possible; in the event that any part of this permit is invalidated, EPA will advise the regulated community as to the effect of such invalidation.

2. Control Measures and Effluent Limits.

In the technology-based limits included in Parts 2.1 and 8, the term “minimize” means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice. The term “infeasible” means not technologically possible or not economically practicable and achievable in light of best industry practices. EPA notes that it does not intend for any permit requirement to conflict with state water rights law.

2.1 Control Measures.

You must select, design, install, and implement control measures (including best management practices) to minimize pollutant discharges that address the selection and design considerations in Part 2.1.1, meet the non-numeric effluent limits in Part 2.1.2, meet limits contained in applicable effluent limitations guidelines in Part 2.1.3, and meet the water quality-based effluent limitations in Part 2.2. The selection, design, installation, and implementation of these control measures must be in accordance with good engineering practices and manufacturer’s specifications. Note that you may deviate from such manufacturer’s specifications where you provide justification for such deviation and include documentation of your rationale in the part of your SWPPP that describes your control measures, consistent with Part 5.2.4. If you find that your control measures are not achieving their intended effect of minimizing pollutant discharges to meet applicable water quality standards or any of the other non-numeric effluent limits in this permit, you must modify these control measures per the corrective action requirements in Part 4. Regulated stormwater discharges from your facility include stormwater run-on that commingles with stormwater discharges associated with industrial activity at your facility.

Effluent limit requirements in Part 2.1.2 that do not involve the site-specific selection of a control measure or are specific activity requirements (e.g., “Cleaning catch basins when the depth of debris reaches two-thirds (2/3) of the sump depth and keeping the debris surface at least six inches below the lowest outlet pipe”) are marked with an asterisk (*). When documenting in your SWPPP, per Part 5, how you will comply with the requirements marked with an asterisk, you have the option of including additional information or you may just “cut-and-paste” those effluent limits verbatim into your SWPPP without providing additional documentation (see Part 5.2.4).

2.1.1 Control Measure Selection and Design Considerations.

You must consider the following when selecting and designing control measures:

- Preventing stormwater from coming into contact with polluting materials is generally more effective, and less costly, than trying to remove pollutants from stormwater;
- Using control measures in combination may be more effective than using control measures in isolation for minimizing pollutants in your stormwater discharge;
- Assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;
- Minimizing impervious areas at your facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches) can reduce runoff and improve ground water recharge and

stream base flows in local streams, although care must be taken to avoid ground water contamination;

- Attenuating flow using open vegetated swales and natural depressions can reduce in-stream impacts of erosive flows;
- Conserving and/or restoring riparian buffers will help protect streams from stormwater runoff and improve water quality; and
- Using treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

2.1.2 Non-Numeric Technology-Based Effluent Limits (BPT/BAT/BCT).

You must comply with the following non-numeric effluent limits (except where otherwise specified in Part 8) as well as any sector-specific non-numeric effluent limits in Part 8:

2.1.2.1 Minimize Exposure. You must minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff in order to minimize pollutant discharges by either locating these industrial materials and activities inside or protecting them with storm resistant coverings. Unless infeasible, you must also:

- Use grading, berming or curbing to prevent runoff of contaminated flows and divert run-on away from these areas;
- Locate materials, equipment, and activities so that potential leaks and spills are contained or able to be contained or diverted before discharge;
- Clean up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants;
- Store leaky vehicles and equipment indoors or, if stored outdoors, use drip pans and absorbents;
- Use spill/overflow protection equipment;
- Perform all vehicle and/or equipment cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray; and
- Drain fluids from equipment and vehicles that will be decommissioned, and, for any equipment and vehicles that will remain unused for extended periods of time, inspect at least monthly for leaks.

Note: Industrial materials do not need to be enclosed or covered if stormwater runoff from affected areas does not discharge pollutants to receiving waters or if discharges are authorized under another NPDES permit.

2.1.2.2 Good Housekeeping. You must keep clean all exposed areas that are potential sources of pollutants. You must perform good housekeeping measures in order to minimize pollutant discharges, including but not limited to, the following:

- Sweep or vacuum at regular intervals or, alternatively, wash down the area and collect and/or treat, and properly dispose of the washdown water;
- Store materials in appropriate containers;

- Keep all dumpster lids closed when not in use. For dumpsters and roll off boxes that do not have lids and could leak, ensure that discharges have a control (e.g., secondary containment, treatment). Consistent with Part 1.1.3 above, this permit does not authorize dry weather discharges from dumpsters or roll off boxes;*
- Minimize the potential for waste, garbage and floatable debris to be discharged by keeping exposed areas free of such materials, or by intercepting them before they are discharged.

Plastic Materials Requirements: Facilities that handle pre-production plastic must implement best management practices to eliminate discharges of plastic in stormwater. Examples of plastic material required to be addressed as stormwater pollutants include plastic resin pellets, powders, flakes, additives, regrind, scrap, waste and recycling.

2.1.2.3 Maintenance. You must maintain all control measures that are used to achieve the effluent limits in this permit in effective operating condition, as well as all industrial equipment and systems, in order to minimize pollutant discharges. This includes:

- Performing inspections and preventive maintenance of stormwater drainage, source controls, treatment systems, and plant equipment and systems that could fail and result in contamination of stormwater.
- Diligently maintaining non-structural control measures (e.g., keep spill response supplies available, personnel appropriately trained).
- Inspecting and maintaining baghouses at least quarterly to prevent the escape of dust from the system and immediately removing any accumulated dust at the base of the exterior baghouse.*
- Cleaning catch basins when the depth of debris reaches two-thirds (2/3) of the sump depth and keeping the debris surface at least six inches below the lowest outlet pipe.*

If you find that your control measures are in need of routine maintenance, you must conduct the necessary maintenance immediately in order to minimize pollutant discharges. If you find that your control measures need to be repaired or replaced, you must immediately take all reasonable steps to prevent or minimize the discharge of pollutants until the final repair or replacement is implemented, including cleaning up any contaminated surfaces so that the material will not be discharged during subsequent storm events. Final repairs/replacement of stormwater controls should be completed as soon as feasible but must be no later than the timeframe established in Part 4.3 for corrective actions, i.e., within 14 days or, if that is infeasible, within 45 days. If the completion of stormwater control repairs/replacement will exceed the 45 day timeframe, you may take the minimum additional time necessary to complete the maintenance, provided that you notify the EPA Regional Office of your intention to exceed 45 days, and document in your SWPPP your rationale for your modified maintenance timeframe. If a control measure was never installed, was installed incorrectly or not in accordance with Parts 2 and/or 8, or is not being properly operated or maintained, you must conduct corrective action as specified in Part 4.

Note: In this context, the term "immediately" requires you to, on the same day you identify that a control measure needs to be maintained, take all reasonable steps

to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational. However, if a problem is identified at a time in the work day when it is too late to take action, the initiation of action must begin no later than the following work day. "All reasonable steps" means that the permittee has undertaken initial actions to assess and address the condition causing the corrective action, including, for example, cleaning up any exposed materials that may be discharged in a storm event (e.g., through sweeping, vacuuming) or making arrangements (i.e., scheduling) for a new best management practice (BMP) to be installed at a later date. "All reasonable steps" for purposes of complying with Part 4.2 Conditions Requiring SWPPP Review to Determine if Modifications Are Necessary, when you conclude a corrective action is, in fact, not necessary, could include documenting why a corrective action is unnecessary.

2.1.2.4 Spill Prevention and Response. You must minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur in order to minimize pollutant discharges. You must conduct spill prevention and response measures, including but not limited to, the following:

- Plainly label containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides") that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;*
- Implement procedures for material storage and handling, including the use of secondary containment and barriers between material storage and traffic areas, or a similarly effective means designed to prevent the discharge of pollutants from these areas;
- Develop training on the procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. As appropriate, execute such procedures as soon as possible;
- Keep spill kits on-site, located near areas where spills may occur or where a rapid response can be made; and
- Notify appropriate facility personnel when a leak, spill, or other release occurs.

Where a leak, spill or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurs during a 24-hour period, you must notify the National Response Center (NRC) at (800) 424-8802 or, in the Washington, DC, metropolitan area, call (202) 267-2675 in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302 as soon as you have knowledge of the discharge. State or local requirements may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be in locations that are readily accessible and available.

2.1.2.5 Erosion and Sediment Controls. You must minimize erosion by stabilizing exposed soils at your facility in order to minimize pollutant discharges and placing flow velocity dissipation devices at discharge locations to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points. You must also use structural and non-structural control measures to minimize the discharge of sediment. If you use polymers and/or other chemical treatments as part of your controls, you must identify the polymers and/or chemicals used and

the purpose in your SWPPP. There are many resources available to help you select appropriate BMPs for erosion and sediment control, including EPA's Stormwater Discharges from Construction Activities website at:

<http://water.epa.gov/polwaste/npdes/stormwater/EPA-Construction-General-Permit.cfm>.

2.1.2.6 Management of Runoff. You must divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff to minimize pollutants in your discharges. In selecting, designing, installing, and implementing appropriate control measures, you are encouraged to consult with EPA's Internet-based resources relating to runoff management, including the sector-specific *Industrial Stormwater Fact Sheet Series*, (<http://water.epa.gov/polwaste/npdes/stormwater/EPA-Multi-Sector-General-Permit-MSGP.cfm>), *National Menu of Stormwater BMPs* (<http://water.epa.gov/polwaste/npdes/swbmp/index.cfm>), and *National Management Measures to Control Nonpoint Source Pollution from Urban Areas* (<http://water.epa.gov/polwaste/nps/urban/>), and any similar state or tribal resources.

2.1.2.7 Salt Storage Piles or Piles Containing Salt. You must enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces, in order to minimize pollutant discharges. You must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered pursuant to this permit if stormwater runoff from the piles is not discharged or if discharges from the piles are authorized under another NPDES permit.

2.1.2.8 Employee Training. You must train all employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your stormwater pollution prevention team. You must ensure the following personnel understand the requirements of this permit and their specific responsibilities with respect to those requirements:

- Personnel who are responsible for the design, installation, maintenance, and/or repair of controls (including pollution prevention measures);
- Personnel responsible for the storage and handling of chemicals and materials that could become contaminants in stormwater discharges;
- Personnel who are responsible for conducting and documenting monitoring and inspections as required in Parts 3 and 6; and
- Personnel who are responsible for taking and documenting corrective actions as required in Part 4.

Personnel must be trained in at least the following if related to the scope of their job duties (e.g., only personnel responsible for conducting inspections need to understand how to conduct inspections):

- An overview of what is in the SWPPP;
- Spill response procedures, good housekeeping, maintenance requirements, and material management practices;

- The location of all controls on the site required by this permit, and how they are to be maintained;
- The proper procedures to follow with respect to the permit's pollution prevention requirements; and
- When and how to conduct inspections, record applicable findings, and take corrective actions.

2.1.2.9 Non-Stormwater Discharges. You must evaluate for the presence of non-stormwater discharges. Any non-stormwater discharges not explicitly authorized in Part 1.1.3 or covered by another NPDES permit must be eliminated. This includes vehicle and equipment/tank wash water (except for those authorized in Part 1.1.3.3 for Sectors G, H, and J). If not covered under a separate NPDES permit, wastewater, wash water and any other unauthorized non-stormwater must be discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or otherwise disposed of appropriately.

2.1.2.10 Dust Generation and Vehicle Tracking of Industrial Materials. You must minimize generation of dust and off-site tracking of raw, final, or waste materials in order to minimize pollutant discharges.

2.1.3 Numeric Effluent Limitations Based on Effluent Limitations Guidelines.

If you are in an industrial category subject to one of the effluent limitations guidelines identified in Table 6-1 (see Part 6.2.2.1), you must meet the effluent limits referenced in Table 2-1 below:

Table 2-1. Applicable Effluent Limitations Guidelines

Regulated Activity	40 CFR Part/Subpart	Effluent Limit
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	Part 429, Subpart I	See Part 8.A.7
Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874)	Part 418, Subpart A	See Part 8.C.4
Runoff from asphalt emulsion facilities	Part 443, Subpart A	See Part 8.D.4
Runoff from material storage piles at cement manufacturing facilities	Part 411, Subpart C	See Part 8.E.5
Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	Part 436, Subparts B, C, or D	See Part 8.J.9
Runoff from hazardous waste landfills	Part 445, Subpart A	See Part 8.K.6
Runoff from non-hazardous waste landfills	Part 445, Subpart B	See Part 8.L.10
Runoff from coal storage piles at steam electric generating facilities	Part 423	See Part 8.O.8
Runoff containing urea from airfield pavement deicing at existing and new primary airports with 1,000 or more annual non-propeller aircraft departures	Part 449	See Part 8.S.8

2.2 Water Quality-Based Effluent Limitations.

2.2.1 Water Quality Standards.

Your discharge must be controlled as necessary to meet applicable water quality standards of all affected states (i.e., your discharge must not cause or contribute to an exceedance of applicable water quality standards in any affected state).

EPA expects that compliance with the conditions in this permit will control discharges as necessary to meet applicable water quality standards. If at any time you become aware, or EPA determines, that your discharge does not meet applicable water quality standards, you must take corrective action(s) as required in Part 4.1 and document the corrective actions as required in Part 4.4. You must also comply with any additional requirements that your state or tribe requires in Part 9.

EPA may also require that you undertake additional control measures (to meet the narrative water quality-based effluent limit above) on a site-specific basis, or require you to obtain coverage under an individual permit, if information in your NOI, required reports, or from other sources indicates that your discharges are not controlled as necessary to meet applicable water quality standards. You must implement all measures necessary to be consistent with an available wasteload allocation in an EPA-established or approved TMDL.

2.2.2 Discharges to Water Quality-Impaired Waters.

You are considered to discharge to an impaired water if the first water of the U.S. to which you discharge is identified by a state, tribe or EPA as not meeting an applicable water quality standard, and:

- Requires development of a TMDL (pursuant to section 303(d) of the CWA);
- Is addressed by an EPA-approved or established TMDL; or
- Is not in either of the above categories but the waterbody is covered by a pollution control program that meets the requirements of 40 CFR 130.7(b)(1).

Note: For discharges that enter a separate storm sewer system³ prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the water from the storm sewer system.

2.2.2.1 Existing Discharge to an Impaired Water with an EPA-Approved or Established TMDL.

If you discharge to an impaired water with an EPA-approved or established TMDL, EPA will inform you whether any additional measures are necessary for your discharge to be consistent with the assumptions and requirements of the applicable TMDL and its wasteload allocation, or if coverage under an individual permit is necessary per Part 1.2.3.

2.2.2.2 Existing Discharge to an Impaired Water without an EPA-Approved or Established TMDL.

If you discharge to an impaired water without an EPA-approved or established TMDL, you are still required to comply with Part 2.2.1, and you must comply with the monitoring requirements of Part 6.2.4.1. Note that the impaired waters monitoring requirements of Part 6.2.4.1 also apply where EPA determines that your discharge is not controlled as necessary to meet applicable water quality

³ Separate storm systems do not include combined sewer systems or sanitary sewer systems. Separate storm systems include both municipal storm sewer systems (MS4s) and non-municipal separate storm sewers.

standards in an impaired downstream water segment, even if your discharge is to a receiving water that is not identified as impaired according to Part 2.2.2.

2.2.2.3 New Discharger or New Source to an Impaired Water. If your authorization to discharge under this permit relied on Part 1.1.4.8 for a new discharger or a new source to an impaired water, you must implement and maintain any measures that enabled you to become eligible under Part 1.1.4.8, and modify such measures as necessary pursuant to any Part 4 corrective actions. You also must comply with Part 2.2.1 and the monitoring requirements of Parts 6.2.4.1.

2.2.3 Tier 2 Antidegradation Requirements for New Dischargers, New Sources, or Increased Discharges.

If you are a new discharger or a new source (as defined in Appendix A), or an existing discharger required to notify EPA of an increased discharge consistent with Part 7.7 (i.e., a "planned changes" report), and you discharge directly to waters designated by a state or tribe as Tier 2 or Tier 2.5 for antidegradation purposes under 40 CFR 131.12(a), EPA may require that you undertake additional control measures as necessary to ensure compliance with the applicable antidegradation requirements, or notify you that an individual permit application is necessary in accordance with Part 1.2.3. See list of Tier 2 and 2.5 waters in Appendix L.

2.3 Requirements Relating to Endangered Species, Historic Properties, and Federal CERCLA Sites.

If your eligibility under either Part 1.1.4.5, Part 1.1.4.6, and/or Part 1.1.4.10 was made possible through your, or another operator's, agreement to undertake additional measures, you must comply with all such measures to maintain eligibility under the MSGP.

Note that if at any time you become aware, or EPA determines, that your discharges and/or discharge-related activities have the potential to adversely affect listed species and/or critical habitat, EPA may inform you of the need to implement additional measures on a site-specific basis to meet the effluent limits in this permit, or require you to obtain coverage under an individual permit.

3. Inspections.

3.1 Routine Facility Inspections.

During normal facility operating hours you must conduct inspections of areas of the facility covered by the requirements in this permit, including, but not limited to, the following:

- Areas where industrial materials or activities are exposed to stormwater;
- Areas identified in the SWPPP and those that are potential pollutant sources (see Part 5.2.3);
- Areas where spills and leaks have occurred in the past three years;
- Discharge points; and
- Control measures used to comply with the effluent limits contained in this permit.

Inspections must be conducted at least quarterly (i.e., once each calendar quarter), or in some instances more frequently (e.g., monthly). Increased frequency may be appropriate for some types of equipment, processes and stormwater control measures, or areas of the facility with significant activities and materials exposed to stormwater. At least once each calendar year, the routine inspection must be conducted during a period when a stormwater discharge is occurring.

Inspections must be performed by qualified personnel (as defined in Appendix A) with at least one member of your stormwater pollution prevention team participating. Inspectors must consider the results of visual and analytical monitoring (if any) for the past year when planning and conducting inspections.

During the inspection you must examine or look out for the following:

- Industrial materials, residue or trash that may have or could come into contact with stormwater;
- Leaks or spills from industrial equipment, drums, tanks and other containers;
- Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
- Tracking or blowing of raw, final or waste materials from areas of no exposure to exposed areas;
- Control measures needing replacement, maintenance or repair.

During an inspection occurring during a stormwater event or discharge, control measures implemented to comply with effluent limits must be observed to ensure they are functioning correctly. Discharge points, as defined in Appendix A, must also be observed during this inspection. If such discharge locations are inaccessible, nearby downstream locations must be inspected.

3.1.1 Exceptions to Routine Facility Inspections for Inactive and Unstaffed Sites.

The requirement to conduct facility inspections on a routine basis does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to stormwater. Such a facility is only required to conduct an annual site inspection in accordance with Part 3.1. To invoke this exception, you must indicate that your facility is inactive and unstaffed on your NOI. If you are already covered under the permit and your

facility has changed from active to inactive and unstaffed, you must modify and re-certify your NOI. You must also include a statement in your SWPPP per Part 5.2.5.2 indicating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to stormwater, in accordance with the substantive requirements in 40 CFR 122.26(g)(4)(iii). The statement must be signed and certified in accordance with Appendix B, Subsection 11. If circumstances change and industrial materials or activities become exposed to stormwater or your facility becomes active and/or staffed, this exception no longer applies and you must immediately resume routine facility inspections. If you are not qualified for this exception at the time you become authorized under this permit, but during the permit term you become qualified because your facility becomes inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, you must include the same signed and certified statement as above and retain it with your records pursuant to Part 5.5.

Inactive and unstaffed facilities covered under Sectors G (Metal Mining), H (Coal Mines and Coal Mining-Related Facilities), and J (Non-Metallic Mineral Mining and Dressing) are not required to meet the “no industrial materials or activities exposed to stormwater” standard to be eligible for this exception from routine inspections, per Parts 8.G.8.4, 8.H.8.1, and 8.J.8.1.

3.1.2 Routine Facility Inspection Documentation.

You must document the findings of your facility inspections and maintain this report with your SWPPP as required in Part 5.5. Do not submit your routine facility inspection report to EPA, unless specifically requested to do so. However, you must summarize your findings in the annual report per Part 7.5. Document all findings, including but not limited to, the following information:

- The inspection date and time;
- The name(s) and signature(s) of the inspector(s);
- Weather information;
- All observations relating to the implementation of control measures at the facility, including:
 - A description of any discharges occurring at the time of the inspection;
 - Any previously unidentified discharges from and/or pollutants at the site;
 - Any evidence of, or the potential for, pollutants entering the drainage system;
 - Observations regarding the physical condition of and around all outfalls, including any flow dissipation devices, and evidence of pollutants in discharges and/or the receiving water;
 - Any control measures needing maintenance, repairs, or replacement;
- Any additional control measures needed to comply with the permit requirements;
- Any incidents of noncompliance; and
- A statement, signed and certified in accordance with Appendix B, Subsection 11.

Any corrective action required as a result of a routine facility inspection must be performed consistent with Part 4 of this permit.

If you performed a discharge visual assessment required in Part 3.2 during your facility inspection, you may include the results of the assessment with the report required in Part 3.1.2, as long as all components of both types of inspections are included in the report.

3.2 Quarterly Visual Assessment of Stormwater Discharges.

3.2.1 Quarterly Visual Assessment Procedures.

Once each quarter for the entire permit term, you must collect a stormwater sample from each outfall (except as noted in Part 3.2.3) and conduct a visual assessment of each of these samples. These samples are not required to be collected consistent with 40 CFR Part 136 procedures but must be collected in such a manner that the samples are representative of the stormwater discharge. Guidance on monitoring is available at <http://water.epa.gov/polwaste/npdes/stormwater/EPA-Multi-Sector-General-Permit-MSGP.cfm>.

The visual assessment must be made:

- Of a sample in a clean, colorless glass or plastic container, and examined in a well-lit area;
- On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and you must document why it was not possible to take the sample within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from your site; and
- For storm events, on discharges that occur at least 72 hours (three days) from the previous discharge. The 72-hour (three-day) storm interval does not apply if you document that less than a 72-hour (three-day) interval is representative for local storm events during the sampling period.

You must visually inspect or observe the sample for the following water quality characteristics:

- Color;
- Odor;
- Clarity (diminished);
- Floating solids;
- Settled solids;
- Suspended solids;
- Foam;
- Oil sheen; and
- Other obvious indicators of stormwater pollution.

Whenever the visual assessment shows evidence of stormwater pollution, you must initiate the corrective action procedures in Part 4.

3.2.2 Quarterly Visual Assessment Documentation.

You must document the results of your visual assessments and maintain this documentation onsite with your SWPPP as required in Part 5.5. You are not required to submit

your visual assessment findings to EPA, unless specifically requested to do so. However, you must summarize your findings in the annual report per Part 7.5. Your documentation of the visual assessment must include, but not be limited to:

- Sample location(s);
- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Results of observations of the stormwater discharge;
- Probable sources of any observed stormwater contamination;
- If applicable, why it was not possible to take samples within the first 30 minutes; and
- A statement, signed and certified in accordance with Appendix B, Subsection 11.

Any corrective action required as a result of a quarterly visual assessment must be performed consistent with Part 4 of this permit.

3.2.3 Exceptions to Quarterly Visual Assessments.

Adverse Weather Conditions: When adverse weather conditions prevent the collection of samples during the quarter, you must take a substitute sample during the next qualifying storm event. Documentation of the rationale for no visual assessment for the quarter must be included with your SWPPP records as described in Part 5.5. Adverse conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, electrical storms, or situations that otherwise make sampling impractical, such as extended frozen conditions.

Climates with Irregular Stormwater Runoff: If your facility is located in an area where limited rainfall occurs during many parts of the year (e.g., arid or semi-arid climate) or in an area where freezing conditions exist that prevent runoff from occurring for extended periods, then your samples for the quarterly visual assessments may be distributed during seasons when precipitation runoff occurs.

Areas Subject to Snow: In areas subject to snow, at least one quarterly visual assessment must capture snowmelt discharge, as described in Part 6.1.3, taking into account the exception described above for climates with irregular stormwater runoff.

Inactive and Unstaffed Sites: The requirement for a quarterly visual assessment does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to stormwater. To invoke this exception, you must maintain a statement in your SWPPP per Part 5.2.5.2 indicating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to precipitation, in accordance with the substantive requirements in 40 CFR 122.26(g)(4)(iii). The statement must be signed and certified in accordance with Appendix B, Subsection 11. If circumstances change and industrial materials or activities become exposed to stormwater or your facility becomes active and/or staffed, this exception no longer applies and you must immediately resume quarterly visual assessments. If you are not qualified for this exception at the time you are authorized under this

permit, but during the permit term you become qualified because your facility becomes inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then you must include the same signed and certified statement as above and retain it with your records pursuant to Part 5.5.

Inactive and unstaffed facilities covered under Sectors G (Metal Mining), H (Coal Mines and Coal Mining-Related Facilities), and J (Non-Metallic Mineral Mining and Dressing), are not required to meet the “no industrial materials or activities exposed to stormwater” standard to be eligible for this exception from quarterly visual assessments, consistent with the requirements established in Parts 8.G.8.4, 8.H.8.1, and 8.J.8.1.

Substantially Identical Outfalls: If your facility has two or more outfalls that discharge substantially identical effluents, as documented in Part 5.2.5.3, you may conduct quarterly visual assessments of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s) provided that you perform visual assessments on a rotating basis of each substantially identical outfall throughout the period of your coverage under this permit.

If stormwater contamination is identified through visual assessment performed at a substantially identical outfall, you must assess and modify your control measures as appropriate for each outfall represented by the monitored outfall.

4. Corrective Actions.

4.1 Conditions Requiring SWPPP Review and Revision to Ensure Effluent Limits are Met.

When any of the following conditions occur or are detected during an inspection, monitoring or other means, or EPA or the operator of the MS4 through which you discharge informs you that any of the following conditions have occurred, you must review and revise, as appropriate, your SWPPP (e.g., sources of pollution; spill and leak procedures; non-stormwater discharges; the selection, design, installation and implementation of your control measures) so that this permit's effluent limits are met and pollutant discharges are minimized:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another NPDES permit to a water of the U.S.) occurs at your facility.
- A discharge violates a numeric effluent limit listed in Table 2-1 and in your Part 8 sector-specific requirements.
- Your control measures are not stringent enough for the discharge to meet applicable water quality standards or the non-numeric effluent limits in this permit.
- A required control measure was never installed, was installed incorrectly, or not in accordance with Parts 2 and/or 8, or is not being properly operated or maintained.
- Whenever a visual assessment shows evidence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam).

4.2 Conditions Requiring SWPPP Review to Determine if Modifications Are Necessary.

If any of the following conditions occur, you must review your SWPPP (e.g., sources of pollution, spill and leak procedures, non-stormwater discharges, selection, design, installation and implementation of your control measures) to determine if modifications are necessary to meet the effluent limits in this permit:

- Construction or a change in design, operation, or maintenance at your facility that significantly changes the nature of pollutants discharged in stormwater from your facility, or significantly increases the quantity of pollutants discharged.
- The average of four quarterly sampling results exceeds an applicable benchmark (see Part 6.2.1.2). If less than four benchmark samples have been taken, but the results are such that an exceedance of the four quarter average is mathematically certain (i.e., if the sum of quarterly sample results to date is more than four times the benchmark level) this is considered a benchmark exceedance, triggering this review.

Note: A benchmark exceedance does not trigger a corrective action if you determine that the exceedance is solely attributable to natural background sources, or if you make a finding that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice (see Part 6.2.1.2).

Note: When run-on to your facility causes a benchmark exceedance, in addition to reviewing and revising, as appropriate, your SWPPP, you should notify the other operators contributing run-on to your discharges to abate their pollutant contribution. Where the other operators fail to take action to address the stormwater run-on, you should contact your EPA Regional Office.

4.3 Corrective Actions and Deadlines.**4.3.1 Immediate Actions.**

If corrective action is needed, you must immediately take all reasonable steps necessary to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational, including cleaning up any contaminated surfaces so that the material will not discharge in subsequent storm events.

Note: In this context, the term "immediately" requires you to, on the same day a condition requiring corrective action is found, take all reasonable steps to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational. However, if a problem is identified at a time in the work day when it is too late to initiate corrective action, the initiation of corrective action must begin no later than the following work day. "All reasonable steps" means that the permittee has undertaken initial actions to assess and address the condition causing the corrective action, including, for example, cleaning up any exposed materials that may be discharged in a storm event (e.g., through sweeping, vacuuming) or making arrangements (i.e., scheduling) for a new BMP to be installed at a later date. "All reasonable steps" for purposes of complying with Part 4.2 Conditions Requiring SWPPP Review to Determine if Modifications Are Necessary, when you conclude a corrective action is, in fact, not necessary, could include documenting why a corrective action is unnecessary.

4.3.2 Subsequent Actions.

If you determine that additional actions are necessary beyond those implemented pursuant to Part 4.3.1, you must complete the corrective actions (e.g., install a new or modified control and make it operational, complete the repair) before the next storm event if possible, and within 14 calendar days from the time of discovery of the corrective action condition. If it is infeasible to complete the corrective action within 14 calendar days, you must document why it is infeasible to complete the corrective action within the 14-day timeframe. You must also identify your schedule for completing the work, which must be done as soon as practicable after the 14-day timeframe but no longer than 45 days after discovery. If the completion of corrective action will exceed the 45 day timeframe, you may take the minimum additional time necessary to complete the corrective action, provided that you notify the EPA Regional Office of your intention to exceed 45 days, your rationale for an extension, and a completion date, which you must also include in your corrective action documentation (see Part 4.4). Where your corrective actions result in changes to any of the controls or procedures documented in your SWPPP, you must modify your SWPPP accordingly within 14 calendar days of completing corrective action work.

These time intervals are not grace periods, but are schedules considered reasonable for documenting your findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements do not persist indefinitely.

4.4 Corrective Action Documentation.

You must document the existence of any of the conditions listed in Parts 4.1 or 4.2 within 24 hours of becoming aware of such condition. You are not required to submit your corrective action documentation to EPA, unless specifically requested to do so. However, you must summarize your findings in the annual report per Part 7.5. Include the following information in your documentation:

- Description of the condition triggering the need for corrective action review. For any spills or leaks, include the following information: a description of the

incident including material, date/time, amount, location, and reason for spill, and any leaks, spills or other releases that resulted in discharges of pollutants to waters of U.S., through stormwater or otherwise;

- Date the condition was identified;
- Description of immediate actions taken pursuant to Part 4.3.1 to minimize or prevent the discharge of pollutants. For any spills or leaks, include response actions, the date/time clean-up completed, notifications made, and staff involved. Also include any measures taken to prevent the reoccurrence of such releases (see Part 2.1.2.4); and
- A statement, signed and certified in accordance with Appendix B, Subsection 11.

You must also document the corrective actions taken or to be taken as a result of the conditions listed in Part 4.1 or 4.2 (or, for triggering events in Part 4.2 where you determine that corrective action is not necessary, the basis for this determination) within 14 days from the time of discovery of any of those conditions. Provide the dates when each corrective action was initiated and completed (or is expected to be completed). If applicable, document why it is infeasible to complete the necessary installations or repairs within the 14-day timeframe and document your schedule for installing the controls and making them operational as soon as practicable after the 14-day timeframe. If you notified EPA regarding an extension of the 45 day timeframe, you must document your rationale for an extension.

4.5 Effect of Corrective Action.

If the event triggering the review is a permit violation (e.g., non-compliance with an effluent limit), correcting it does not remove the original violation. Additionally, failing to take corrective action in accordance with this section is an additional permit violation. EPA will consider the appropriateness and promptness of corrective action in determining enforcement responses to permit violations.

4.6 Substantially Identical Outfalls.

If the event triggering corrective action is associated with an outfall that had been identified as a "substantially identical outfall" (see Parts 3.2.3 and 6.1.1), your review must assess the need for corrective action for all related substantially identical outfalls. Any necessary changes to control measures that affect these other outfalls must also be made before the next storm event if possible, or as soon as practicable following that storm event. Any corrective actions must be conducted within the timeframes set forth in Part 4.3.

5. Stormwater Pollution Prevention Plan (SWPPP).

You must prepare a SWPPP for your facility before submitting your NOI for permit coverage. If you prepared a SWPPP for coverage under a previous version of this NPDES permit, you must review and update the SWPPP to implement all provisions of this permit prior to submitting your NOI. The SWPPP does not contain effluent limitations; such limitations are contained in Parts 2, 8, and 9 of the permit. The SWPPP is intended to document the selection, design, and installation of control measures to meet the permit's effluent limits. As distinct from the SWPPP, the additional documentation requirements (see Part 5.5) are intended to document the implementation (including inspection, maintenance, monitoring, and corrective action) of the permit requirements.

Note: Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the SWPPP, during an inspection, etc.

5.1 Person(s) Responsible for SWPPP Preparation.

The SWPPP shall be prepared in accordance with good engineering practices and to industry standards. The SWPPP may be developed by either a person on your staff or a third party you hire, but it must be developed by a "qualified person" and must be certified per the signature requirements in Part 5.2.7. If EPA concludes that the SWPPP is not in compliance with Part 5.2 of this permit, EPA may require the SWPPP to be reviewed, amended as necessary, and certified by a Professional Engineer, or for Sector G, H or J, by a Professional Geologist, with the education and experience necessary to prepare an adequate SWPPP.

Note: A "qualified person" is a person knowledgeable in the principles and practices of industrial stormwater controls and pollution prevention, and possesses the education and ability to assess conditions at the industrial facility that could impact stormwater quality, and the education and ability to assess the effectiveness of stormwater controls selected and installed to meet the requirements of the permit.

5.2 Contents of Your SWPPP.

For coverage under this permit, your SWPPP must contain all of the following elements:

- Stormwater pollution prevention team (see Part 5.2.1);
- Site description (see Part 5.2.2);
- Summary of potential pollutant sources (see Part 5.2.3);
- Description of control measures (see Part 5.2.4);
- Schedules and procedures (see Part 5.2.5);
- Documentation to support eligibility considerations under other federal laws (see Part 5.2.6); and
- Signature requirements (see Part 5.2.7).

Where your SWPPP refers to procedures in other facility documents, such as a Spill Prevention, Control and Countermeasure (SPCC) Plan or an Environmental Management System (EMS), copies of the relevant portions of those documents must be kept with your SWPPP.

5.2.1 Stormwater Pollution Prevention Team.

You must identify the staff members (by name or title) that comprise the facility's stormwater pollution prevention team as well as their individual responsibilities. Your stormwater pollution prevention team is responsible for overseeing development of the SWPPP, any modifications to it, and for implementing and maintaining control measures and taking corrective actions when required. Each member of the stormwater pollution prevention team must have ready access to either an electronic or paper copy of applicable portions of this permit, the most updated copy of your SWPPP, and other relevant documents or information that must be kept with the SWPPP.

5.2.2 Site Description.

Your SWPPP must include the following:

- *Activities at the Facility.* Provide a description of the nature of the industrial activities at your facility.
- *General location map.* Provide a general location map (e.g., U.S. Geological Survey (USGS) quadrangle map) with enough detail to identify the location of your facility and all receiving waters for your stormwater discharges.
- *Site map.* Provide a map showing:
 - Boundaries of the property and the size of the property in acres;
 - Location and extent of significant structures and impervious surfaces;
 - Directions of stormwater flow (use arrows);
 - Locations of all stormwater control measures;
 - Locations of all receiving waters, including wetlands, in the immediate vicinity of your facility. Indicate which waterbodies are listed as impaired and which are identified by your state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 waters;
 - Locations of all stormwater conveyances including ditches, pipes, and swales;
 - Locations of potential pollutant sources identified under Part 5.2.3.2;
 - Locations where significant spills or leaks identified under Part 5.2.3.3 have occurred;
 - Locations of all stormwater monitoring points;
 - Locations of stormwater inlets and outfalls, with a unique identification code for each outfall (e.g., Outfall 001, 002), indicating if you are treating one or more outfalls as "substantially identical" under Parts 3.2.3, 5.2.5.3, and 6.1.1, and an approximate outline of the areas draining to each outfall;
 - If applicable, MS4s and where your stormwater discharges to them;
 - Areas of designated critical habitat for endangered or threatened species, if applicable.
 - Locations of the following activities where such activities are exposed to precipitation:
 - fueling stations;
 - vehicle and equipment maintenance and/or cleaning areas;
 - loading/unloading areas;
 - locations used for the treatment, storage, or disposal of wastes;
 - liquid storage tanks;

- processing and storage areas;
- immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility;
- transfer areas for substances in bulk;
- machinery;
- locations and sources of run-on to your site from adjacent property that contains significant quantities of pollutants.

5.2.3 Summary of Potential Pollutant Sources.

You must describe areas at your facility where industrial materials or activities are exposed to stormwater or from which allowable non-stormwater discharges originate. Industrial materials or activities include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, by-products, final products, and waste products. Material handling activities include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For structures located in areas of industrial activity, you must be aware that the structures themselves are potential sources of pollutants. This could occur, for example, when metals such as aluminum or copper are leached from the structures as a result of acid rain.

For each area identified, the description must include:

- 5.2.3.1 Activities in the Area.** A list of the industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams).
- 5.2.3.2 Pollutants.** A list of the pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, cleaning solvents) associated with each identified activity, which could be exposed to rainfall or snowmelt and could be discharged from your facility. The pollutant list must include all significant materials that have been handled, treated, stored or disposed, and that have been exposed to stormwater in the three years prior to the date you prepare or amend your SWPPP.
- 5.2.3.3 Spills and Leaks.** You must document where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfall(s) that would be affected by such spills and leaks. You must document all significant spills and leaks of oil or toxic or hazardous substances that actually occurred at exposed areas, or that drained to a stormwater conveyance, in the three years prior to the date you prepare or amend your SWPPP.

Note: Significant spills and leaks include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under CWA section 311 (see 40 CFR 110.6 and 40 CFR 117.21) or section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §9602. This permit does not relieve you of the reporting requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302 relating to spills or other releases of oils or hazardous substances.

- 5.2.3.4 Unauthorized Non-Stormwater Discharges.** You must document that you have evaluated for the presence of unauthorized non-stormwater discharges (see Part

1.1.3 for the exclusive list of authorized non-stormwater discharges under this permit).

Documentation of your evaluation must include:

- The date of the evaluation;
- A description of the evaluation criteria used;
- A list of the outfalls or onsite drainage points that were directly observed during the evaluation; and
- The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), or documentation that a separate NPDES permit was obtained. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge.

5.2.3.5 Salt Storage. You must document the location of any storage piles containing salt used for deicing or other commercial or industrial purposes.

5.2.3.6 Sampling Data. Existing dischargers must summarize all stormwater discharge sampling data collected at the facility during the previous permit term. The summary shall include a narrative description (and may include data tables/figures) that adequately summarizes the collected sampling data to support identification of potential pollution sources at your facility. New dischargers and new sources must provide a summary of any available stormwater runoff data they may have.

5.2.4 Description of Control Measures to Meet Technology-Based and Water Quality-Based Effluent Limits.

You must document the location and type of control measures you have specifically chosen and/or designed to comply with:

- Non-numeric technology-based effluent limits in Part 2.1.2;
- Applicable numeric effluent limitations guidelines-based limits in Part 2.1.3 and Part 8;
- Water quality-based effluent limits in Part 2.2;
- Any additional measures that formed the basis of eligibility regarding threatened and endangered species, historic properties, and/or federal CERCLA Site requirements in Part 2.3;
- Applicable effluent limits in Parts 8 and 9.
- Regarding your control measures, you must also document, as appropriate:
 - How you addressed the selection and design considerations in Part 2.1.1;
 - How they address the pollutant sources identified in Part 5.2.3.

Effluent limit requirements in Part 2.1.2 that do not involve the site-specific selection of a control measure or are specific activity requirements (e.g., "cleaning catch basins when the depth of debris reaches two-thirds (2/3) of the sump depth and keeping the debris surface at least six inches below the lowest outlet pipe") are marked with an asterisk (*). For the requirements marked with an asterisk, you may include extra information, or you may just "cut-

and-paste" these effluent limits verbatim into your SWPPP without providing additional documentation.

5.2.5 Schedules and Procedures.

5.2.5.1 *Pertaining to Control Measures Used to Comply with the Effluent Limits in Part 2.* The following must be documented in your SWPPP:

- Good Housekeeping (See Part 2.1.2.2) – A schedule or the convention used for determining when pickup and disposal of waste materials occurs. Also provide a schedule for routine inspections for leaks and conditions of drums, tanks and containers.
- Maintenance (See Part 2.1.2.3) – Preventative maintenance procedures, including regular inspections, testing, maintenance and repair of all control measures to avoid situations that may result in leaks, spills, and other releases, and any back-up practices in place should a runoff event occur while a control measure is off-line. The SWPPP shall include the schedule or frequency for maintaining all control measures used to comply with the effluent limits in Part 2;
- Spill Prevention and Response Procedures (See Part 2.1.2.4) – Procedures for preventing and responding to spills and leaks, including notification procedures. For preventing spills, include in your SWPPP the control measures for material handling and storage, and the procedures for preventing spills that can contaminate stormwater. Also specify cleanup equipment, procedures and spill logs, as appropriate, in the event of spills. You may reference the existence of other plans for Spill Prevention Control and Countermeasure (SPCC) developed for the facility under section 311 of the CWA or BMP programs otherwise required by an NPDES permit for the facility, provided that you keep a copy of that other plan onsite and make it available for review consistent with Part 5.4;
- Erosion and Sediment Controls (Part 2.1.2.5) – If you use polymers and/or other chemical treatments as part of your controls, you must identify the polymers and/or chemicals used and the purpose;
- Employee Training (Part 2.1.2.8) – The elements of your employee training plan shall include all, but not be limited to, the requirements set forth in Part 2.1.2.8, and also the following:
 - The content of the training;
 - The frequency/schedule of training for employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit;
 - A log of the dates on which specific employees received training.

5.2.5.2 *Pertaining to Inspections and Assessments.* You must document in your SWPPP your procedures for performing, as appropriate, the types of inspections specified by this permit, including:

- Routine facility inspections (see Part 3.1) and;
- Quarterly visual assessment of stormwater discharges (see Part 3.2).

For each type of inspection performed, your SWPPP must identify:

- Person(s) or positions of person(s) responsible for inspection;

- Schedules for conducting inspections, including tentative schedule for facilities in climates with irregular stormwater runoff discharges (see Part 3.2.3);
- Specific items to be covered by the inspection, including schedules for specific outfalls.

If you are invoking the exception for inactive and unstaffed sites relating to routine facility inspections and quarterly visual assessments, you must include in your SWPPP the information to support this claim as required by Parts 3.1.1 and 3.2.3.

5.2.5.3 *Pertaining to Monitoring.* You must document in your SWPPP procedures for conducting the five types of analytical monitoring specified by this permit, where applicable to your facility, including:

- Benchmark monitoring (see Part 6.2.1);
- Effluent limitations guidelines monitoring (see Part 6.2.2);
- State- or tribal-specific monitoring (see Part 6.2.3);
- Impaired waters monitoring (see Part 6.2.4);
- Other monitoring as required by EPA (see Part 6.2.5).

For each type of monitoring, your SWPPP must document:

- Locations where samples are collected, including any determination that two or more outfalls are substantially identical;
- Parameters for sampling and the frequency of sampling for each parameter;
- Schedules for monitoring at your facility, including schedule for alternate monitoring periods for climates with irregular stormwater runoff (see Part 6.1.6);
- Any numeric control values (benchmarks, effluent limitations guidelines, TMDL-related requirements, or other requirements) applicable to discharges from each outfall;
- Procedures (e.g., responsible staff, logistics, laboratory to be used) for gathering storm event data, as specified in Part 6.1.

If you are invoking the exception for inactive and unstaffed sites for benchmark monitoring or impaired waters monitoring, you must include in your SWPPP the information to support this claim as required by Part 6.2.1.3 and 6.2.4.2.

You must document the following in your SWPPP if you plan to use the substantially identical outfall exception for your quarterly visual assessment requirements in Part 3.2.3 or your benchmark or impaired waters monitoring requirements in Parts 6.2.1 and 6.2.4.1 (see also Part 6.1.1):

- Location of each of the substantially identical outfalls;
- Description of the general industrial activities conducted in the drainage area of each outfall;
- Description of the control measures implemented in the drainage area of each outfall;

- Description of the exposed materials located in the drainage area of each outfall that are likely to be significant contributors of pollutants to stormwater discharges;
- An estimate of the runoff coefficient of the drainage areas (low = under 40%; medium = 40 to 65%; high = above 65%);
- Why the outfalls are expected to discharge substantially identical effluents.

5.2.6 Documentation to Support Eligibility Considerations Under Other Federal Laws.

5.2.6.1 Documentation Regarding Endangered and Threatened Species and Critical Habitat Protection. You must keep with your SWPPP the documentation supporting your determination with regard to Part 1.1.4.5 (Endangered and Threatened Species and Critical Habitat Protection).

5.2.6.2 Documentation Regarding Historic Properties. You must keep with your SWPPP the documentation supporting your determination with regard to Part 1.1.4.6 (Historic Properties Preservation).

5.2.7 Signature Requirements. You must sign and date your SWPPP in accordance with Appendix B, Subsection 11.

5.3 Required SWPPP Modifications.

You must modify your SWPPP based on the corrective actions and deadlines required under Part 4.3 and that you documented under Part 4.4. SWPPP modifications must be signed and dated in accordance with Appendix B, Subsection 11.

5.4 SWPPP Availability.

You must retain a complete copy of your current SWPPP required by this permit at the facility in any accessible format. A complete SWPPP includes any documents incorporated by reference and all documentation supporting your permit eligibility pursuant to Part 1.1 of this permit, as well as your signed and dated certification page. Regardless of the format, the SWPPP must be immediately available to facility employees, EPA, a state or tribe, the operator of an MS4 into which you discharge, and representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) at the time of an onsite inspection. Your current SWPPP or certain information from your current SWPPP described below must also be made available to the public (except any confidential business information (CBI) or restricted information [as defined in Appendix A]), but you must clearly identify those portions of the SWPPP that are being withheld from public access; to do so, you must comply with one of the following two options:

5.4.1 SWPPP Posting on the Internet.

If you provide a URL in your NOI where your SWPPP can be found, and maintain your current SWPPP at this URL, you will have complied with the public availability requirements for the SWPPP. To remain current, you must post any SWPPP modifications, records and other reporting elements required for the previous year at the same URL as the main body of the SWPPP. The SWPPP update shall be no later than 45 days after conducting the final routine facility inspection for the year required in Part 3.1. If you did not provide a SWPPP URL in your NOI, you may reopen your NOI at any time subsequent to your original NOI submittal to add a URL where your current SWPPP can be found. You are not required to post any CBI or restricted information (as defined in Appendix A) (such information may be redacted), but you must clearly identify those portions of the SWPPP that are being withheld from public access. CBI may not be withheld from those staff cleared for CBI review within EPA, USFWS or NMFS.

5.4.2 SWPPP Information Provided on NOI Form.

If you did not provide a SWPPP URL in your NOI, your NOI must include the information required by Part 7.3. Irrespective of this requirement, EPA may provide access to portions of your SWPPP to a member of the public upon request (except any CBI or restricted information (as defined in Appendix A)). To remain current, you must report any modifications to the SWPPP information required by Part 7.3 through submittal of a "Change NOI" form. The SWPPP update shall be no later than 45 days after conducting the final routine facility inspection for the year required in Part 3.1.

5.5 Additional Documentation Requirements.

You are required to keep the following inspection, monitoring, and certification records with your SWPPP that together keep your records complete and up-to-date, and demonstrate your full compliance with the conditions of this permit:

- A copy of the NOI submitted to EPA along with any correspondence exchanged between you and EPA specific to coverage under this permit;
- A copy of the acknowledgment you receive from the EPA assigning your NPDES ID;
- A copy of this permit (an electronic copy easily available to SWPPP personnel is also acceptable);
- Documentation of maintenance and repairs of control measures, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair/replacement, and for repairs, date(s) that the control measure(s) returned to full function, and the justification for any extended maintenance/repair schedules (see Part 2.1.2.3);
- All inspection reports, including the Routine Facility Inspection Reports (see Part 3.1.2) and Quarterly Visual Assessment Reports (see Part 3.2.2);
- Description of any deviations from the schedule for visual assessments and/or monitoring, and the reason for the deviations (e.g., adverse weather or it was impracticable to collect samples within the first 30 minutes of a measurable storm event) (see Parts 3.2.3 and 6.1.5);
- Corrective action documentation required per Part 4.4;
- Documentation of any benchmark exceedances and the type of response to the exceedance you employed, including:
 - the corrective action taken;
 - a finding that the exceedance was due to natural background pollutant levels;
 - a determination from EPA that benchmark monitoring can be discontinued because the exceedance was due to run-on; or
 - a finding that no further pollutant reductions were technologically available and economically practicable and achievable in light of best industry practice consistent with Part 6.2.1.2.
- Documentation to support any determination that pollutants of concern are not expected to be present above natural background levels if you discharge directly to impaired waters, and that such pollutants were not detected in your discharge or were solely attributable to natural background sources (see Part 6.2.4.1); and

- Documentation to support your claim that your facility has changed its status from active to inactive and unstaffed with respect to the requirements to conduct routine facility inspections (see Part 3.1.1), quarterly visual assessments (see Part 3.2.3), benchmark monitoring (see Part 6.2.1.3), and/or impaired waters monitoring (see Part 6.2.4.2).

6. Monitoring.

You must collect and analyze stormwater samples and document monitoring activities consistent with the procedures described in Part 6 and Appendix B, Subsections 10 – 12, and any additional sector-specific or state/tribal-specific requirements in Parts 8 and 9, respectively. Refer to Part 7 for reporting and recordkeeping requirements.

6.1 Monitoring Procedures.**6.1.1 Monitored Outfalls.**

Applicable monitoring requirements apply to each outfall authorized by this permit, except as otherwise exempt from monitoring as a “substantially identical outfall.” If your facility has two or more outfalls that you believe discharge substantially identical effluents, based on the similarities of the general industrial activities and control measures, exposed materials that may significantly contribute pollutants to stormwater, and runoff coefficients of their drainage areas, you may monitor the effluent of just one of the outfalls and report that the results also apply to the substantially identical outfall(s). As required in Part 5.2.5.3, your SWPPP must identify each outfall authorized by this permit and describe the rationale for any substantially identical outfall determinations. The allowance for monitoring only one of the substantially identical outfalls is not applicable to any outfalls with numeric effluent limitations. You are required to monitor each outfall covered by a numeric effluent limit as identified in Part 6.2.2.

6.1.2 Commingled Discharges.

If discharges authorized by this permit commingle with discharges not authorized under this permit, any required sampling of the authorized discharges must be performed at a point before they mix with other waste streams, to the extent practicable.

6.1.3 Measurable Storm Events.

All required monitoring must be performed on a storm event that results in an actual discharge from your site (“measurable storm event”) that follows the preceding measurable storm event by at least 72 hours (three days). The 72-hour (3-day) storm interval does not apply if you are able to document that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period. In the case of snowmelt, the monitoring must be performed at a time when a measurable discharge occurs at your site.

For each monitoring event, except snowmelt monitoring, you must identify the date and duration (in hours) of the rainfall event, rainfall total (in inches) for that rainfall event, and time (in days) since the previous measurable storm event. For snowmelt monitoring, you must identify the date of the sampling event.

6.1.4 Sample Type.

You must take a minimum of one grab sample from a discharge resulting from a measurable storm event as described in Part 6.1.3. Samples must be collected within the first 30 minutes of a discharge associated with a measurable storm event. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample must be collected as soon as practicable after the first 30 minutes and documentation must be kept with the SWPPP explaining why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge.

6.1.5 Adverse Weather Conditions.

When adverse weather conditions as described in Part 3.2.3 prevent the collection of samples according to the relevant monitoring schedule, you must take a substitute sample

during the next qualifying storm event. Adverse weather does not exempt you from having to file a benchmark monitoring report in accordance with your sampling schedule. As specified in Part 7.4, you must use NetDMR to report any failure to monitor using a "no data" or "NODI" code during the regular reporting period.

6.1.6 Climates with Irregular Stormwater Runoff.

If your facility is located in areas where limited rainfall occurs during parts of the year (e.g., arid or semi-arid climates) or in areas where freezing conditions exist that prevent runoff from occurring for extended periods, required monitoring events may be distributed during seasons when precipitation occurs, or when snowmelt results in a measurable discharge from your site. You must still collect the required number of samples. As specified in Part 7.4, you must also use NetDMR to report using a "no data" or "NODI" code for any of the regular reporting periods that there was no monitoring.

6.1.7 Monitoring Periods.

Monitoring requirements in this permit begin in the first full quarter following either September 2, 2015 or your date of discharge authorization, whichever date comes later. If your monitoring is required on a quarterly basis (e.g., benchmark monitoring), you must monitor at least once in each of the following 3-month intervals:

- January 1 – March 31;
- April 1 – June 30;
- July 1 – September 30;
- October 1 – December 31.

For example, if you obtain permit coverage on July 2, 2015, then your first monitoring quarter is October 1 - December 31, 2015. This monitoring schedule may be modified in accordance with Part 6.1.6 if the revised schedule is documented with your SWPPP. However, using NetDMR you must report using a "no data" or "NODI" code for any 3-month interval that you did not take a sample.

6.1.8 Monitoring for Allowable Non-Stormwater Discharges.

You are only required to monitor allowable non-stormwater discharges (as delineated in Part 1.1.3) when they are commingled with stormwater discharges associated with industrial activity.

6.1.9 Monitoring Reports

Monitoring data must be reported using EPA's electronic NetDMR tool at www.epa.gov/netdmr, as described in Part 7.4 (unless a waiver from electronic reporting has been granted from the EPA Regional Office, in which case you may submit a paper DMR form).

6.2 Required Monitoring.

This permit includes five types of required analytical monitoring, one or more of which may apply to your discharge:

- Quarterly benchmark monitoring (see Part 6.2.1);
- Annual effluent limitations guidelines monitoring (see Part 6.2.2);
- State- or tribal-specific monitoring (see Part 6.2.3);

- Impaired waters monitoring (see Part 6.2.4); and
- Other monitoring as required by EPA (see Part 6.2.5).

When more than one type of monitoring for the same pollutant at the same outfall applies (e.g., total suspended solids once per year for an effluent limitation and once per quarter for benchmark monitoring at a given outfall), you may use a single sample to satisfy both monitoring requirements (i.e., one sample satisfying both the annual effluent limitation sample and one of the four quarterly benchmark monitoring samples). When the effluent limitation is lower than the benchmark concentration for the same pollutant, your corrective action trigger is based on an exceedance of the effluent limitation, which would subject you to the corrective action requirements of Part 4.1.

Note: Exceedance of an effluent limitation associated with the results of any analytical monitoring type required by this Part subjects you to the corrective action requirements of Part 4.1.

All required monitoring must be conducted in accordance with the procedures described in Appendix B, Subsection B.10.

6.2.1 Benchmark Monitoring.

This permit specifies pollutant benchmark concentrations that are applicable to certain sectors / subsectors. Benchmark monitoring data are primarily for your use to determine the overall effectiveness of your control measures and to assist you in determining when additional corrective action(s) may be necessary to comply with the effluent limitations in Part 2.

The benchmark concentrations are not effluent limitations; a benchmark exceedance, therefore, is not a permit violation. However, if corrective action is required as a result of a benchmark exceedance, failure to conduct required corrective action is a permit violation.

At your discretion, more than four samples may be taken during separate runoff events and used to determine the average benchmark parameter concentration for facility discharges.

6.2.1.1 Applicability of Benchmark Monitoring. You must monitor for any benchmark parameters specified for the industrial sector(s), both primary industrial activity and any co-located industrial activities, applicable to your discharge. Your industry-specific benchmark concentrations are listed in the sector-specific sections of Part 8. If your facility is in one of the industrial sectors subject to benchmark concentrations that are hardness-dependent, you are required to submit to EPA with your NOI a hardness value, established consistent with the procedures in Appendix J, which is representative of your receiving water.

Samples must be analyzed consistent with 40 CFR Part 136 analytical methods and using test procedures with quantitation limits at or below benchmark values for all benchmark parameters for which you are required to sample.

6.2.1.2 Benchmark Monitoring Schedule. Benchmark monitoring must be conducted quarterly, as identified in Part 6.1.7, for your first four full quarters of permit coverage commencing no earlier than September 2, 2015.

Facilities in climates with irregular stormwater runoff, as described in Part 6.1.6, may modify this quarterly schedule provided that this revised schedule is reported directly to EPA by the due date of the first benchmark sample (see EPA Regional contacts in Part 7.9.1), and that this revised schedule is kept with the facility's SWPPP as specified in Part 5.5. When conditions prevent you from obtaining four samples in four consecutive quarters, you must continue monitoring until you have the four samples required for calculating your benchmark monitoring average. As noted in Part 6.1.7, you must use NetDMR to report using a "no data" or "NODI" code for any 3-month interval that you did not take a sample.

Data not exceeding benchmarks: After collection of four quarterly samples, if the average of the four monitoring values for any parameter does not exceed the benchmark, you have fulfilled your monitoring requirements for that parameter for the permit term.

Data exceeding benchmarks: After collection of four quarterly samples, if the average of the four monitoring values for any parameter exceeds the benchmark, you must, in accordance with Part 4, review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limits in this permit, and either:

- Make the necessary modifications and continue quarterly monitoring until you have completed four additional quarters of monitoring for which the average does not exceed the benchmark; or
- Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology-based effluent limits or are necessary to meet the water-quality-based effluent limitations in Parts 2.1 and 2.2 of this permit, in which case you must continue monitoring once per year. You must also document your rationale for concluding that no further pollutant reductions are achievable, and retain all records related to this documentation with your SWPPP.

You must review your control measures and perform any required corrective action immediately (or document why no corrective action is required), per Part 4, without waiting for the full four quarters of monitoring data, when an exceedance of the four quarter average is mathematically certain. If after modifying your control measures and conducting four additional quarters of monitoring, your average still exceeds the benchmark (or if an exceedance of the benchmark by the four quarter average is mathematically certain prior to conducting the full four additional quarters of monitoring), you must again review your control measures and take one of the two actions above.

Natural background pollutant levels: Following the first four quarters of benchmark monitoring (or sooner if the exceedance is triggered by less than four quarters of data; see above), if the average concentration of a pollutant exceeds a benchmark value, and you determine that exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background, you are not required to perform corrective action or additional benchmark monitoring provided that:

- The average concentration of your benchmark monitoring results is less than or equal to the concentration of that pollutant in the natural background; and

- You document and maintain with your SWPPP, as required in Part 5.5, your supporting rationale for concluding that benchmark exceedances are in fact attributable solely to natural background pollutant levels. You must include in your supporting rationale any data previously collected by you or others (including literature studies) that describe the levels of natural background pollutants in your stormwater discharge.

Natural background pollutants are those substances that are naturally occurring in soils or ground water. Natural background pollutants do not include legacy pollutants from earlier activity on your site, or pollutants in run-on from neighboring sources which are not naturally occurring, such as other industrial sites or roadways. However, the EPA Regional Office may determine that you are eligible to discontinue monitoring for pollutants that occur solely from run-on sources.

6.2.1.3 Exception for Inactive and Unstaffed Sites. The requirement for benchmark monitoring does not apply at a facility that is inactive and unstaffed, provided that there are no industrial materials or activities exposed to stormwater. To invoke this exception, you must do the following:

- Maintain a statement with your SWPPP stating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to stormwater in accordance with the substantive requirements in 40 CFR 122.26(g) and sign and certify the statement in accordance with Appendix B, Subsection 11.
- If circumstances change and industrial materials or activities become exposed to stormwater or your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the applicable benchmark monitoring requirements under Part 6.2 as if you were in your first year of permit coverage. You must indicate in your NOI that your facility has materials or activities exposed to stormwater or has become active and/or staffed.
- If you are not qualified for this exception at the time you are authorized under this permit, but during the permit term you become qualified because your facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then you must notify EPA of this change on your NOI form. You may discontinue benchmark monitoring once you have notified EPA, and prepared and signed the certification statement described above concerning your facility's qualification for this special exception.

Note: This exception has different requirements for Sectors G, H, and J (see Part 8).

6.2.2 Effluent Limitations Monitoring.

6.2.2.1 Monitoring Based on Effluent Limitations Guidelines. Table 6-1 identifies the stormwater discharges subject to effluent limitation guidelines that are authorized for coverage under this permit. An exceedance of the effluent limitation is a permit violation. Beginning in the first full quarter following September 2, 2015 or your date of discharge authorization, whichever date comes later, you must monitor once per year at each outfall containing the discharges identified in Table 6-1 for the parameters specified in the sector-specific section of Part 8.

Table 6-1. Required Monitoring for Effluent Limits Based on Effluent Limitations Guidelines

Regulated Activity	Effluent Limit	Monitoring Frequency	Sample Type
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	See Part 8.A.7	1/year	Grab
Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874)	See Part 8.C.4	1/year	Grab
Runoff from asphalt emulsion facilities	See Part 8.D.4	1/year	Grab
Runoff from material storage piles at cement manufacturing facilities	See Part 8.E.5	1/year	Grab
Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	See Part 8.J.9	1/year	Grab
Runoff from hazardous waste landfills	See Part 8.K.6	1/year	Grab
Runoff from non-hazardous waste landfills	See Part 8.L.10	1/year	Grab
Runoff from coal storage piles at steam electric generating facilities	See Part 8.O.8	1/year	Grab
Runoff containing urea from airfield pavement deicing at existing and new primary airports with 1,000 or more annual non-propeller aircraft departures.	See Part 8.S.8	1/year	Grab

6.2.2.2 Substantially Identical Outfalls. You must monitor each outfall discharging runoff from any regulated activity identified in Table 6-1. The substantially identical outfall monitoring provisions are not available for numeric effluent limits monitoring.

6.2.2.3 Follow-up Actions if Discharge Exceeds Numeric Effluent Limitation. If any monitoring value exceeds a numeric effluent limitation contained in this permit, you must indicate the exceedance on a "Change NOI" form in the NPDES eReporting Tool (NeT), and you must conduct follow-up monitoring within 30 calendar days (or during the next qualifying runoff event, should none occur within 30 days) of implementing corrective action(s) taken per Part 4. When your follow-up monitoring exceeds the applicable effluent limitation, you must:

- **Submit an Exceedance Report:** You must submit an Exceedance Report no later than 30 days after you have received your laboratory result consistent with Part 7.6; and
- **Continue to Monitor:** You must monitor, at least quarterly, until your discharge is in compliance with the effluent limit or until EPA waives the requirement for additional monitoring. Once your discharge is back in compliance with the effluent limitation you must indicate this on a "Change NOI" form per Part 7.4.

6.2.3 State or Tribal Monitoring Provisions.

6.2.3.1 Sectors Required to Conduct State or Tribal Monitoring. You must comply with any state or tribal monitoring requirements (see Part 9) applicable to your facility's location.

6.2.3.2 State or Tribal Monitoring Schedule. If a monitoring frequency is not specified for an applicable requirement in Part 9, you must monitor once per year for the entire permit term.

6.2.4 Discharges to Impaired Waters Monitoring.

Note: For the purposes of this permit, your project is considered to discharge to an impaired water if the first water of the U.S. to which you discharge is identified by a state, tribe, or EPA pursuant to section 303(d) of the CWA as not meeting an applicable water quality standard, or has been removed from the 303(d) list either because the impairments are addressed by an EPA-approved or established TMDL or is covered by pollution control requirements that meet the requirements of 40 CFR 130.7(b)(1). For discharges that enter a separate storm sewer system⁴ prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system.

6.2.4.1 Permittees Required to Monitor Discharges to Impaired Waters.

Discharges to impaired waters without an EPA-approved or established TMDL:

Beginning in the first full quarter following September 2, 2015 or your date of discharge authorization, whichever date comes later, you must monitor all pollutants for which the waterbody is impaired and for which a standard analytical method exists (see 40 CFR Part 136) once per year at each outfall (except substantially identical outfalls) discharging stormwater to impaired waters without an EPA-approved or established TMDL.

If the pollutant of concern for the impaired waterbody is suspended solids, turbidity or sediment/sedimentation, you must monitor for Total Suspended Solids (TSS). If a pollutant of concern is expressed in the form of an indicator or surrogate pollutant, you must monitor for that indicator or surrogate pollutant. No monitoring is required when a waterbody's biological communities are impaired but no pollutant, including indicator or surrogate pollutants, is specified as causing the impairment, or when a waterbody's impairment is related to hydrologic modifications, impaired hydrology, or other non-pollutant. Permittees should consult the appropriate EPA Regional Office for any available guidance regarding required monitoring parameters under this part.

If the pollutant of concern is not detected and not expected to be present in your discharge, or it is detected but you have determined that its presence is caused solely by natural background sources, you may discontinue monitoring for that pollutant. To support a determination that the pollutant's presence is caused solely by natural background sources, you must document and maintain with your SWPPP, as required by Part 5.5:

- An explanation of why you believe that the presence of the pollutant of concern in your discharge is not related to the activities or materials at your facility; and
- Data and/or studies that tie the presence of the pollutant of concern in your discharge to natural background sources in the watershed.

Natural background pollutants include those that occur naturally as a result of native soils, and vegetation, wildlife, or ground water. Natural background pollutants do not include legacy pollutants from earlier activity on your site, or pollutants in run-on from neighboring sources that are not naturally occurring. However, you may be eligible to discontinue annual monitoring for pollutants that

⁴ Separate storm systems do not include combined sewer systems or sanitary sewer systems. Separate storm systems include both municipal storm sewer systems (MS4s) and non-municipal separate storm sewers.

occur solely from these sources and should consult the appropriate EPA Regional Office for related guidance.

Discharges to impaired waters with an EPA-approved or established TMDL: For stormwater discharges to waters for which there is an EPA-approved or established TMDL, you are not required to monitor for the pollutant(s) for which the TMDL was written unless EPA informs you, upon examination of the applicable TMDL and its wasteload allocation, that you are subject to such a requirement consistent with the assumptions and requirements of the applicable TMDL and its wasteload allocation. EPA's notice will include specifications on monitoring parameters and frequency. Permittees must consult the appropriate EPA Regional Office for guidance regarding required monitoring under this Part.

6.2.4.2 Exception for Inactive and Unstaffed Sites. The requirement for impaired waters monitoring does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to stormwater. To invoke this exception, you must do the following:

- Maintain a statement with your SWPPP stating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to stormwater in accordance with the substantive requirements in 40 CFR 122.26(g) and sign and certify the statement in accordance with Appendix B, Subsection 11.
- If circumstances change and industrial materials or activities become exposed to stormwater or your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the applicable impaired waters monitoring requirements under Part 6.2 as if you were in your first year of permit coverage. You must indicate in a "Change NOI" form per Part 7.4 that your facility has materials or activities exposed to stormwater or has become active and/or staffed.
- If you are not qualified for this exception at the time you are authorized under this permit, but during the permit term you become qualified because your facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then you must notify EPA of this change on your NOI form. You may discontinue impaired waters monitoring once you have notified EPA, and prepared and signed the certification statement described above concerning your facility's qualification for this special exception.

Note: This exception has different requirements for Sectors G, H, and J (see Part 8).

6.2.5 Additional Monitoring Required by EPA.

EPA may notify you of additional discharge monitoring requirements that EPA determines are necessary to meet the permit's effluent limitations. Any such notice will briefly state the reasons for the monitoring, locations, and parameters to be monitored, frequency and period of monitoring, sample types, and reporting requirements.

7. Reporting and Recordkeeping.

7.1 Electronic Reporting Requirement.

You must submit all NOIs, NOTs, NOEs, Annual Reports, Discharge Monitoring Reports (DMRs), and other reporting information as appropriate electronically, unless you have received a waiver from your EPA Regional Office based on one of the following conditions:

- If your headquarters is physically located in a geographic area (i.e., zip code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission; or
- If you have limitations regarding available computer access or computer capability.

Waivers are only granted for a one-time use for a single information submittal, i.e., an initial waiver does not apply for the entire term of the permit. If you need to submit information on paper after your first waiver, you must apply for a new waiver. However, waivers may be extended on a case-by-case basis by the EPA Regional Office.

If you wish to obtain a waiver from submitting a report electronically, you must submit a request to your EPA Regional Office. EPA Regional Office contact information can be found in Part 7.9.1 of this permit. In that request you must document which exemption you meet, provide evidence supporting any claims, and a copy of your completed NOI form. A waiver may only be considered granted once you receive written confirmation from EPA or its authorized representative.

7.2 Submitting Information to EPA.

Most information required to be submitted by this permit shall be submitted via EPA's electronic NPDES eReporting tool (NeT), unless the permit states otherwise or unless a waiver has been granted per Part 7.1. NeT allows you to both prepare and submit required information using specific forms, found in the permit's appendices. To access NeT, go to <http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm>.

Information required to be submitted to EPA via NeT:

- Notice of Intent (Part 1.2);
- No Exposure Certification (Part 1.4);
- Notice of Termination (Part 1.3); and
- Annual Report (Part 7.5).

Note: Discharge Monitoring Reports (see Part 7.4) are required to be submitted using EPA's NetDMR system, available at www.epa.gov/netdmr.

If you are given a waiver by the EPA Regional Office to submit information in paper form, you must utilize the required forms found in the Appendices.

Information required to be submitted to an EPA Regional Office at the address in Part 7.9.1:

- New Dischargers and New Sources to Water Quality-Impaired Waters (Part 1.1.4.8);

- Exceedance Report for Numeric Effluent Limitations (Part 7.6); and
- Additional Reporting (Part 7.7)

7.3 Additional SWPPP Information Required in Your NOI.

If you did not provide a SWPPP URL in your NOI per Part 5.4.1, your NOI must include the additional SWPPP information as follows:

- Onsite industrial activities exposed to stormwater, including potential spill and leak areas (see Parts 5.2.3.1, 5.2.3.3 and 5.2.3.5);
- Pollutants or pollutant constituents associated with each industrial activity exposed to stormwater that could be discharged in stormwater and/or any authorized non-stormwater discharges listed in Part 1.1.3 (see Part 5.2.3.2);
- Stormwater control measures you employ to comply with the non-numeric technology-based effluent limits required in Part 2.1.2 and Part 8, and any other measures taken to comply with the requirements in Part 2.2 Water Quality - Based Effluent Limitations (see Part 5.2.4). If you use polymers and/or other chemical treatments as part of your controls, you must identify the polymers and/or chemicals used and the purpose; and
- Schedule for good housekeeping and maintenance (see Part 5.2.5.1) and schedule for all inspections required in Part 3 (see Part 5.2.5.2).

7.4 Reporting Monitoring Data to EPA.

All monitoring data collected pursuant to Part 6.2 must be submitted to EPA using EPA's NetDMR system (available at www.epa.gov/netdmr) (unless a waiver from electronic reporting has been granted, in which case you may submit a paper DMR form) no later than 30 days after you have received your complete laboratory results for all monitoring outfalls for the reporting period. Your monitoring requirements (i.e., parameters required to be monitored and sample frequency) will be prepopulated on your electronic Discharge Monitoring Report (DMR) form based on the information you reported on your NOI form (through the NDPEs eReporting tool (NeT)). Accordingly, the following changes to your monitoring frequency must be reported to EPA through the submittal of a "Change NOI" form in NeT, which will trigger changes to your monitoring requirements in NetDMR:

- All benchmark monitoring requirements have been fulfilled for the permit term;
- All impaired waters monitoring requirements have been fulfilled for the permit term;
- Benchmark and/or impaired monitoring requirements no longer apply because your facility is inactive and unstaffed;
- Benchmark and/or impaired monitoring requirements now apply because your facility has changed from inactive and unstaffed to active and staffed;
- For Sector G2 only: Discharges from waste rock and overburden piles have exceeded benchmark values;
- A numeric effluent limitation guideline has been exceeded;
- A numeric effluent limitation guideline exceedance is back in compliance.

Once monitoring requirements have been completely fulfilled, you are no longer required to report monitoring results using NetDMR. If you have only partially fulfilled your benchmark monitoring and/or impaired waters monitoring requirements (e.g., your four

quarterly average is below the benchmark for some, but not all, parameters; you did not detect some, but not all, impairment pollutants), you must continue to use NetDMR to report your results, but you must report a "no data" or "NODI" code for any monitoring parameters that have been fulfilled.

If you have received a waiver per Part 7.1, paper reporting forms must be submitted by the same deadline.

See Part 9 for specific reporting requirements applicable to individual states or tribes.

For benchmark monitoring, note that you are required to submit sampling results to EPA no later than 30 days after receiving your complete laboratory results for all monitored outfalls for each quarter that you are required to collect benchmark samples, per Part 6.2.1.2. If you collect samples during multiple storm events in a single quarter (e.g., due to adverse weather conditions, climates with irregular stormwater runoff, or areas subject to snow), you are required to submit all sampling results for each storm event to EPA within 30 days of receiving all laboratory results for the event. Or, for any of your monitored outfalls that did not have a discharge within the reporting period, using NetDMR you must report using a "no data" or "NODI" code for that outfall no later than 30 days after the end of the reporting period.

7.5 Annual Report.

You must submit an Annual Report to EPA electronically, per Part 7.2, by January 30th for each year of permit coverage containing information generated from the past calendar year. You must include the following information:

- A summary of your past year's routine facility inspection documentation required (Part 3.1.2). In addition, if you are an operator of an airport facility (Sector S) that is subject to the airport effluent limitations guidelines, and are complying with the Part 8.S.8.1 effluent limitation through the use of non-urea-containing deicers, provide a statement certifying that you do not use pavement deicers containing urea. (Note: Operators of airport facilities that are complying with Part 8.S.8.1 by meeting the numeric effluent limitation for ammonia do not need to include this statement.)
- A summary of your past year's quarterly visual assessment documentation (see Part 3.2.2 of the permit);
- For any four-sample (minimum) average benchmark monitoring exceedance, if after reviewing the selection, design, installation, and implementation of your control measures and considering whether any modifications are necessary to meet the effluent limits in the permit, you determine that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice, your rationale for why you believe no further reductions are achievable (see Part 6.2.1.2 of the permit); and
- A summary of your past year's corrective action documentation (see Part 4.4). If corrective action is not yet completed at the time of submission of your annual report, you must describe the status of any outstanding corrective action(s). Also describe any incidents of noncompliance in the past year or currently ongoing, or if none, provide a statement that you are in compliance with the permit.

Your Annual Report must also include a statement, signed and certified in accordance with Appendix B, Subsection 11.

7.6 Exceedance Report for Numeric Effluent Limitations.

If follow-up monitoring per Part 6.2.2.3 exceeds a numeric effluent limit, you must submit an Exceedance Report to EPA no later than 30 days after you have received your laboratory results. Your report must include the following:

- NPDES ID;
- Facility name, physical address and location;
- Name of receiving water;
- Monitoring data from this and the preceding monitoring event(s);
- An explanation of the situation, including what you have done and intend to do (should your corrective actions not yet be complete) to correct the violation;
- An appropriate contact name and phone number.

Send the Exceedance Report to the appropriate EPA Regional Office listed in Part 7.9.1, and report the monitoring data through NetDMR

7.7 Additional Reporting.

In addition to the reporting requirements stipulated in Part 7, you are also subject to the standard permit reporting provisions of Appendix B, Subsection 12.

You must submit the following reports to the appropriate EPA Regional Office listed in Part 7.9.1, as applicable. If you discharge through an MS4, you must also submit these reports to the MS4 operator (identified pursuant to Part 5.2.2).

- 24-hour reporting (see Appendix B, Subsection 12.F) – You must report any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time you become aware of the circumstances;
- 5-day follow-up reporting to the 24 hour reporting (see Appendix B, Subsection 12.F) – A written submission must also be provided within five days of the time you become aware of the circumstances;
- Reportable quantity spills (see Part 2.1.2.4) – You must provide notification, as required under Part 2.1.2.4, as soon as you have knowledge of a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity;
- Planned changes (see Appendix B, Subsection 12.A) – You must give notice to EPA promptly, no fewer than 30 days prior to making any planned physical alterations or additions to the permitted facility that qualify the facility as a new source or that could significantly change the nature or significantly increase the quantity of pollutants discharged;
- Anticipated noncompliance (see Appendix B, Subsection 12.B) – You must give advance notice to EPA of any planned changes in the permitted facility or activity which you anticipate will result in noncompliance with permit requirements;

- Compliance schedules (see Appendix B, Subsection 12.F) – Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date;
- Other noncompliance (see Appendix B, Subsection 12.G) – You must report all instances of noncompliance not reported in your annual report, compliance schedule report, or 24-hour report at the time monitoring reports are submitted; and
- Other information (see Appendix B, Subsection 12.H) – You must promptly submit facts or information if you become aware that you failed to submit relevant facts in your NOI, or that you submitted incorrect information in your NOI or in any report.

7.8 Recordkeeping.

You must retain copies of your SWPPP (including any modifications made during the term of this permit), additional documentation requirements pursuant to Part 5.5 (including documentation related to corrective actions taken pursuant to Part 4), all reports and certifications required by this permit, monitoring data, and records of all data used to complete the NOI to be covered by this permit, for a period of at least three years from the date that your coverage under this permit expires or is terminated.

7.9 Addresses for Reports.

7.9.1 EPA Addresses.

7.9.1.1 *Region 1: Connecticut, Massachusetts, and New Hampshire, Rhode Island, Vermont.*

U.S. EPA Region 1
Office of Ecosystem Protection
Stormwater and Construction Permits Section
5 Post Office Square, Suite 100
(OEP 06-1)
Boston, MA 02109-3912

7.9.1.2 *Region 2: New Jersey, New York, Puerto Rico, and Virgin Islands.*

For Puerto Rico and the Virgin Islands

U.S. EPA Region 2
Caribbean Environmental Protection Division
NPDES Stormwater Program
City View Plaza II – Suite 7000
48 Rd. 165 Km 1.2
Guaynabo, PR 00968-8069

For New Jersey and New York:

(Coverage not available under this permit.)
U.S. EPA Region 2
NPDES Stormwater Program
290 Broadway, 24th Floor
New York, NY 10007-1866

7.9.1.3 *Region 3: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia.*

U.S. EPA Region 3
Office of NPDES Permits and Enforcement
NPDES Permits Branch, Mailcode 3WP41
1650 Arch Street
Philadelphia, PA 19103

7.9.1.4 *Region 4: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee.*

(Coverage not available under this permit.)

U.S. EPA Region 4
Water Protection Division
NPDES Stormwater Program
Atlanta Federal Center
61 Forsyth Street SW
Atlanta, GA 30303-3104

7.9.1.5 *Region 5: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin.*

U.S. EPA Region 5
NPDES Program Branch
77 W. Jackson Blvd.
Mail Code WN16J
Chicago, IL 60604-3507

7.9.1.6 *Region 6: Arkansas, Louisiana, Oklahoma, Texas, and New Mexico (except see Region 9 for Navajo lands, and see Region 8 for Ute Mountain Reservation lands).*

U.S. EPA Region 6
NPDES Stormwater Program (WQ-PP)
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

7.9.1.7 *Region 7: Iowa, Kansas, Missouri, Nebraska.*

U.S. EPA Region 7
NPDES Stormwater Program
11201 Renner Blvd
Lenexa, KS 66219

7.9.1.8 *Region 8: Colorado, Montana, North Dakota, South Dakota, Wyoming, Utah (except see Region 9 for Goshute Reservation and Navajo Reservation lands), the Ute Mountain Reservation in New Mexico, and the Pine Ridge Reservation in Nebraska.*

EPA Region 8 Storm Water Program
Mailcode: 8P-W-WW
1595 Wynkoop Street
Denver, CO 80202-1129

7.9.1.9 *Region 9: Arizona, California, Hawaii, Nevada, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Goshute Reservation in Utah*

and Nevada, the Navajo Reservation in Utah, New Mexico, and Arizona, the Duck Valley Reservation in Idaho, Fort McDermitt Reservation in Oregon.

U.S. EPA Region 9
Water Division
NPDES Stormwater Program (WTR-2-3)
75 Hawthorne Street
San Francisco, CA 94105-3901

7.9.1.10 *Region 10: Alaska, Idaho, Oregon (except see Region 9 for Fort McDermitt Reservation), Washington.*

U.S. EPA Region 10
NPDES Stormwater Program
1200 6th Avenue (OWW-191)
Seattle, WA 98101-3140

7.9.2 *State and Tribal Addresses.*

See Part 9 (states and tribes) for the addresses of applicable states or tribes that require submission of information to their agencies.

Part 8 – Sector-Specific Requirements for Industrial Activity

You must comply with the requirements applicable to your industrial sector(s) in this Part, in addition to the requirements applicable to all facilities in Parts 1 through 7 and the appendices to the permit.

Subpart A – Sector A – Timber Products.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.A.1 Covered Stormwater Discharges.

The requirements in Subpart A apply to stormwater discharges associated with industrial activity from Timber Products facilities as identified by the SIC Codes specified under Sector A in Table D-1 of Appendix D of the permit.

8.A.2 Limitations on Coverage.

8.A.2.1 Prohibition of Discharges. (See also Part 1.1.4) Not covered by this permit: stormwater discharges from areas where there may be contact with the chemical formulations sprayed to provide surface protection. These discharges must be covered by a separate NPDES permit.

8.A.2.2 Authorized Non-Stormwater Discharges. (See also Part 1.1.3) Also authorized by this permit, provided the non-stormwater component of the discharge is in compliance with the requirements in Part 2.1.2 (Non-Numeric Effluent Limits): discharges from the spray down of lumber and wood product storage yards where no chemical additives are used in the spray-down waters and no chemicals are applied to the wood during storage.

8.A.3 Additional Technology-Based Effluent Limits.

8.A.3.1 Good Housekeeping. (See also Part 2.1.2.2) In areas where storage, loading and unloading, and material handling occur, perform good housekeeping to minimize the discharge of wood debris, leachate generated from decaying wood materials, and the generation of dust.

8.A.4 Additional SWPPP Requirements.

8.A.4.1 Drainage Area Site Map. (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: processing areas, treatment chemical storage areas, treated wood and residue storage areas, wet decking areas, dry decking areas, untreated wood and residue storage areas, and treatment equipment storage areas.

8.A.4.2 Inventory of Exposed Materials. (See also Part 5.2.3.2) Where such information exists, if your facility has used chlorophenolic, creosote, or chromium-copper-arsenic formulations for wood surface protection or preserving, document in your SWPPP the following: areas where contaminated soils, treatment equipment, and stored materials still remain and the management practices employed to minimize the contact of these materials with stormwater runoff.

8.A.4.3 Description of Stormwater Management Controls. (See also Part 5.2.4) Document measures implemented to address the following activities and sources: log, lumber, and wood product storage areas; residue storage areas; loading and unloading areas;

material handling areas; chemical storage areas; and equipment and vehicle maintenance, storage, and repair areas. If your facility performs wood surface protection and preservation activities, address the specific control measures, including any BMPs, for these activities.

8.A.5 Additional Inspection Requirements. (See also Part 3.1)

If your facility performs wood surface protection and preservation activities, inspect processing areas, transport areas, and treated wood storage areas monthly to assess the usefulness of practices to minimize the deposit of treatment chemicals on unprotected soils and in areas that will come in contact with stormwater discharges.

8.A.6 Sector-Specific Benchmarks. (See also Part 6)

Table 8.A-1 identifies benchmarks that apply to the specific subsectors of Sector A. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.A-1		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector A1. General Sawmills and Planing Mills (SIC 2421)	Chemical Oxygen Demand (COD)	120.0 mg/L
	Total Suspended Solids (TSS)	100 mg/L
	Total Zinc (freshwater) ² Total Zinc (saltwater) ¹	Hardness Dependent 0.09 mg/L
Subsector A2. Wood Preserving (SIC 2491)	Total Arsenic (freshwater)	0.15 mg/L
	Total Arsenic (saltwater) ¹	0.069 mg/L
	Total Copper (freshwater) ² Total Copper (saltwater) ¹	Hardness Dependent 0.0048 mg/L
Subsector A3. Log Storage and Handling (SIC 2411)	Total Suspended Solids (TSS)	100 mg/L
Subsector A4. Hardwood Dimension and Flooring Mills; Special Products Sawmills, not elsewhere classified; Millwork, Veneer, Plywood, and Structural Wood; Wood Pallets and Skids; Wood Containers, not elsewhere classified; Wood Buildings and Mobile Homes; Reconstituted Wood Products; and Wood Products Facilities not elsewhere classified (SIC 2426, 2429, 2431-2439 (except 2434), 2441, 2448, 2449, 2451, 2452, 2493, and 2499)	Chemical Oxygen Demand (COD)	120.0 mg/L
	Total Suspended Solids (TSS)	100.0 mg/L

¹ Saltwater benchmark values apply to stormwater discharges into saline waters where indicated.

² The freshwater benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. Hardness Dependent Benchmarks follow in the table below:

Freshwater Hardness Range	Copper (mg/L)	Zinc (mg/L)
0-24.99 mg/L	0.0038	0.04
25-49.99 mg/L	0.0056	0.05
50-74.99 mg/L	0.0090	0.08
75-99.99 mg/L	0.0123	0.11
100-124.99 mg/L	0.0156	0.13
125-149.99 mg/L	0.0189	0.16
150-174.99 mg/L	0.0221	0.18
175-199.99 mg/L	0.0253	0.20
200-224.99 mg/L	0.0285	0.23
225-249.99 mg/L	0.0316	0.25
250+ mg/L	0.0332	0.26

8.A.7 Effluent Limitations Based on Effluent Limitations Guidelines. (See also Part 6.2.2)

Table 8.A-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other waste streams that may be covered under this permit.

Table 8.A-2 ¹		
Industrial Activity	Parameter	Effluent Limitation
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	pH	6.0 - 9.0 s.u
	Debris (woody material such as bark, twigs, branches, heartwood, or sapwood)	No discharge of debris that will not pass through a 2.54-cm (1-in.) diameter round opening

¹ Monitor annually.

8.A.7.1 Credit for Pollutants in Intake Water. For discharges that are comprised solely of water drawn from the same body of water into which the discharges flow and that exceed an applicable effluent limitation, you may be eligible for a credit to the extent necessary to meet the limitation. To obtain this credit, you must show that your discharge would meet the limitation in the absence of the pollutant(s) in the intake water by demonstrating that the control measures you use to meet the limitation would, if properly installed and operated, meet the limitations for the pollutant (i.e., the pollutant level in your discharge is in exceedance of the limitation due to the pollutant concentration in the source or intake water). You must consult the appropriate EPA Regional Office for guidance in seeking a pollutant credit under this Part. EPA will notify you whether you are eligible for the credit, and, if so, provide the scope of such credit.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart B – Sector B – Paper and Allied Products.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.B.1 Covered Stormwater Discharges.

The requirements in Subpart B apply to stormwater discharges associated with industrial activity from Paper and Allied Products Manufacturing facilities, as identified by the SIC Codes specified under Sector B in Table D-1 of Appendix D of the permit.

8.B.2 Sector-Specific Benchmarks. (See also Part 6)

Table 8.B-1 identifies benchmarks that apply to the specific subsectors of Sector B. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.B-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector B1. Paperboard Mills (SIC Code 2631)	Chemical Oxygen Demand (COD)	120 mg/L

Part 8 – Sector-Specific Requirements for Industrial Activity**Subpart C – Sector C – Chemical and Allied Products Manufacturing, and Refining.**

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.C.1 Covered Stormwater Discharges.

The requirements in Subpart C apply to stormwater discharges associated with industrial activity from Chemical and Allied Products Manufacturing, and Refining facilities, as identified by the SIC Codes specified under Sector C in Table D-1 of Appendix D of the permit.

8.C.2 Limitations on Coverage.

8.C.2.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.1.4) The following are not covered by this permit: non-stormwater discharges containing inks, paints, or substances (hazardous, nonhazardous, etc.) resulting from an onsite spill, including materials collected in drip pans; wash water from material handling and processing areas; and wash water from drum, tank or container rinsing and cleaning. (EPA includes this prohibited non-stormwater discharge here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.C.3 Sector-Specific Benchmarks. (See also Part 6)

Table 8.C-1 identifies benchmarks that apply to the specific subsectors of Sector C. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.C-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector C1. Agricultural Chemicals (SIC 2873-2879)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Lead (freshwater) ² Total Lead (saltwater) ¹	Hardness Dependent 0.21 mg/L
	Total Iron	1.0 mg/L
	Total Zinc (freshwater) ² Total Zinc (saltwater) ¹	Hardness Dependent 0.09 mg/L
	Phosphorus	2.0 mg/L
Subsector C2. Industrial Inorganic Chemicals (SIC 2812-2819)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
Subsector C3. Soaps, Detergents, Cosmetics, and Perfumes (SIC 2841-2844)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Zinc (freshwater) ² Total Zinc (saltwater) ¹	Hardness Dependent 0.09 mg/L
Subsector C4. Plastics, Synthetics, and Resins (SIC 2821-2824)	Total Zinc (freshwater) ² Total Zinc (saltwater) ¹	Hardness Dependent 0.09 mg/L

¹Saltwater benchmark values apply to stormwater discharges into saline waters where indicated.

²The freshwater benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. Hardness Dependent Benchmarks follow in the table below:

Freshwater Hardness Range	Lead (mg/L)	Zinc (mg/L)
0-24.99 mg/L	0.014	0.04
25-49.99 mg/L	0.023	0.05
50-74.99 mg/L	0.045	0.08
75-99.99 mg/L	0.069	0.11
100-124.99 mg/L	0.095	0.13
125-149.99 mg/L	0.122	0.16
150-174.99 mg/L	0.151	0.18
175-199.99 mg/L	0.182	0.20
200-224.99 mg/L	0.213	0.23
225-249.99 mg/L	0.246	0.25
250+ mg/L	0.262	0.26

8.C.4 Effluent Limitations Based on Effluent Limitations Guidelines. (See also Part 6.2.2.1)

Table 8.C-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other waste streams that may be covered under this permit.

Table 8.C-2 ¹		
Industrial Activity	Parameter	Effluent Limitation
Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874)	Total Phosphorus (as P)	105.0 mg/L, daily maximum
		35 mg/L, 30-day avg.
	Fluoride	75.0 mg/L, daily maximum
		25.0 mg/L, 30-day avg.

¹ Monitor annually.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart D – Sector D – Asphalt Paving and Roofing Materials and Lubricant Manufacturing.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.D.1 Covered Stormwater Discharges.

The requirements in Subpart D apply to stormwater discharges associated with industrial activity from Asphalt Paving and Roofing Materials and Lubricant Manufacturing facilities, as identified by the SIC Codes specified under Sector D in Table D-1 of Appendix D of the permit.

8.D.2 Limitations on Coverage.

The following stormwater discharges associated with industrial activity are not authorized by this permit (see also Part 1.1.4):

8.D.2.1 *Stormwater discharges from petroleum refining facilities, including those that manufacture asphalt or asphalt products, that are subject to nationally established effluent limitation guidelines found in 40 CFR Part 419 (Petroleum Refining).*

The following stormwater discharges associated with industrial activity are not authorized under Sector D:

8.D.2.2 *Stormwater discharges from oil recycling facilities, which are covered under Sector N* (see Part 8.N); and

8.D.2.3 *Stormwater discharges associated with fats and oils rendering, which are covered under Sector U* (see Part 8.U).

8.D.3 Sector-Specific Benchmarks. (See also Part 6)

Table 8.D-1 identifies benchmarks that apply to the specific subsectors of Sector D. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.D-1.		
Subsector	Parameter	Benchmark Monitoring Concentration
Subsector D1. Asphalt Paving and Roofing Materials (SIC 2951, 2952)	Total Suspended Solids (TSS)	100 mg/L

8.D.4 Effluent Limitations Based on Effluent Limitations Guidelines. (See also Part 6.2.2.1)

Table 8.D-2 identifies effluent limitations that apply to the industrial activities described below. Compliance with these effluent limitations is to be determined based on discharges from these industrial activities independent of commingling with any other waste streams that may be covered under this permit.

Table 8.D-2 ¹		
Industrial Activity	Parameter	Effluent Limitation
Discharges from asphalt emulsion facilities.	Total Suspended Solids (TSS)	23.0 mg/L, daily maximum 15.0 mg/L, 30-day avg.
	pH	6.0 - 9.0 s.u.
	Oil and Grease	15.0 mg/L, daily maximum
		10 mg/L, 30-day avg.

¹Monitor annually.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart E – Sector E – Glass, Clay, Cement, Concrete, and Gypsum Products.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.E.1 Covered Stormwater Discharges.

The requirements in Subpart E apply to stormwater discharges associated with industrial activity from Glass, Clay, Cement, Concrete, and Gypsum Products facilities, as identified by the SIC Codes specified under Sector E in Table D-1 of Appendix D of the permit.

8.E.2 Additional Technology-Based Effluent Limits.

8.E.2.1 Good Housekeeping Measures. (See also Part 2.1.2.2) As part of your good housekeeping program, prevent or minimize the discharge of spilled cement, aggregate (including sand or gravel), kiln dust, fly ash, settled dust, or other significant material in stormwater from paved portions of the site that are exposed to stormwater. Sweep or vacuum paved surfaces of the site that are exposed to stormwater at regular intervals or use other equivalent measures (e.g., wash down the area and collect and/or treat and properly dispose of the washdown water) to minimize the potential discharge of these materials in stormwater. Indicate in your SWPPP the frequency of sweeping, vacuuming or other equivalent measures. Determine the frequency based on the amount of industrial activity occurring in the area and the frequency of precipitation, but it must be performed at least once a week in areas where cement, aggregate, kiln dust, fly ash or settled dust are being handled or processed and may be discharged in stormwater. You must also prevent the exposure of fine granular solids (e.g., cement, fly ash, kiln dust) to stormwater, where practicable, by storing these materials in enclosed silos, hoppers, buildings or under other covering.

8.E.3 Additional SWPPP Requirements.

8.E.3.1 Drainage Area Site Map. (See also Part 5.2.2) Document in the SWPPP the locations of the following, as applicable: bag house or other dust control device; recycle/sedimentation pond, clarifier, or other device used for the treatment of process wastewater; and the areas that drain to the treatment device.

8.E.3.2 Discharge Testing. (See also Part 5.2.3.4) For facilities producing ready-mix concrete, concrete block, brick, or similar products, include in the non-stormwater discharge testing a description of measures that ensure that process wastewaters resulting from washing trucks, mixers, transport buckets, forms, or other equipment are discharged in accordance with NPDES wastewater permit requirements or are recycled.

8.E.4 Sector-Specific Benchmarks. (See also Part 6)

Table 8.E-1 identifies benchmarks that apply to the specific subsectors of Sector E. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.E-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector E1. Clay Product Manufacturers (SIC 3251-3259, 3261-3269)	Total Aluminum	0.75 mg/L
Subsector E2. Concrete and Gypsum Product Manufacturers (SIC 3271-3275)	Total Suspended Solids (TSS)	100 mg/L
	Total Iron	1.0 mg/L

8.E.5 Effluent Limitations Based on Effluent Limitations Guidelines. (See also Part 6.2.2.1)

Table 8.E-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these limits is to be determined based on discharges from these industrial activities independent of commingling with any other waste streams that may be covered under this permit.

Table 8.E-2 ¹		
Industrial Activity	Parameter	Effluent Limitation
Discharges from material storage piles at cement manufacturing facilities (SIC 3241)	Total Suspended Solids (TSS)	50 mg/L, daily maximum ²
	pH	6.0 - 9.0 s.u. ²

¹Monitor annually.

²Any untreated overflow from facilities designed, constructed and operated to treat the volume of runoff from materials storage piles which is associated with a 10-year, 24-hour rainfall event shall not be subject to the pH and TSS limitations (40 CFR 411.32(b)).

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart F – Sector F – Primary Metals.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.F.1 Covered Stormwater Discharges.

The requirements in Subpart F apply to stormwater discharges associated with industrial activity from Primary Metals facilities, as identified by the SIC Codes specified under Sector F in Table D-1 of Appendix D of the permit.

8.F.2 Additional Technology-Based Effluent Limits.

8.F.2.1 Good Housekeeping Measures. (See also Part 2.1.2.2) As part of your good housekeeping program, you must implement a cleaning and maintenance program for all impervious areas of the facility where particulate matter, dust or debris may accumulate to minimize the discharge of pollutants in stormwater. The cleaning and maintenance program must encompass, as appropriate, areas where material loading and unloading, storage, handling and processing occur.

Stabilize unpaved areas using vegetation or paving where there is vehicle traffic or where material loading and unloading, storage, handling and processing occurs, unless feasible.

For paved areas of the facility where particulate matter, dust or debris may accumulate, to minimize the discharge of pollutants in stormwater, implement control measures such as the following, where determined to be feasible (list not exclusive): sweeping or vacuuming at regular intervals; and washing down the area and collecting and/or treating and properly disposing of the washdown water. For unstabilized areas or for stabilized areas where sweeping, vacuuming, or washing down is not possible, to minimize the discharge of particulate matter, dust, or debris or other pollutants in stormwater, implement stormwater management devices such as the following, where determined to be feasible (list not exclusive): sediment traps, vegetative buffer strips, filter fabric fence, sediment filtering boom, gravel outlet protection, and other equivalent measures that effectively trap or remove sediment.

8.F.3 Additional SWPPP Requirements.

8.F.3.1 Drainage Area Site Map. (See also Part 5.2.2) Identify in the SWPPP where any of the following activities may be exposed to precipitation or surface runoff: storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such as coal, coke, scrap, sand, fluxes, refractories or metal in any form. In addition, indicate where an accumulation of significant amounts of particulate matter could occur from such sources as furnace or oven emissions, losses from coal and coke handling operations, etc., and could result in a discharge of pollutants in stormwater.

8.F.3.2 Inventory of Exposed Material. (See also Part 5.2.3) Include in the inventory of materials handled at the site that potentially may be exposed to precipitation or runoff areas where there is the potential for deposition of particulate matter from process air emissions or losses during material-handling activities.

8.F.4 Additional Inspection Requirements. (See also Part 3.1)

As part of conducting your routine facility inspections at least quarterly (Part 3.1), address all potential sources of pollutants, including (if applicable) air pollution control equipment (e.g., baghouses, electrostatic precipitators, scrubbers, cyclones), for any signs of degradation (e.g., leaks, corrosion, improper operation) that could limit their efficiency and lead to excessive emissions. Consider monitoring air flow at inlets and outlets (or use equivalent measures) to check for leaks (e.g., particulate deposition) or blockage in ducts. Also inspect all process and material handling equipment (e.g., conveyors, cranes and vehicles) for leaks, drips, or the potential loss of material; and material storage areas (e.g., piles, bins, or hoppers for storing coke, coal, scrap or slag, as well as chemicals stored in tanks and drums) for signs of material losses due to wind or stormwater runoff.

8.F.5 Sector-Specific Benchmarks. (See also Part 6)

Table 8.F-1 identifies benchmarks that apply to the specific subsectors of Sector F. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.F-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector F1. Steel Works, Blast Furnaces, and Rolling and Finishing Mills (SIC 3312-3317)	Total Aluminum	0.75 mg/L
	Total Zinc (freshwater) ²	Hardness Dependent
	Total Zinc (saltwater) ¹	0.09 mg/L
Subsector F2. Iron and Steel Foundries (SIC 3321-3325)	Total Aluminum	0.75 mg/L
	Total Suspended Solids (TSS)	100 mg/L
	Total Copper (freshwater) ²	Hardness Dependent
	Total Copper (saltwater) ¹	0.0048 mg/L
	Total Iron	1.0 mg/L
Subsector F3. Rolling, Drawing, and Extruding of Nonferrous Metals (SIC 3351-3357)	Total Zinc (freshwater) ²	Hardness Dependent
	Total Zinc (saltwater) ¹	0.09 mg/L
	Total Copper (freshwater) ²	Hardness Dependent
Subsector F4. Nonferrous Foundries (SIC 3363-3369)	Total Copper (saltwater) ¹	0.0048 mg/L
	Total Zinc (freshwater) ²	Hardness Dependent
	Total Zinc (saltwater) ¹	0.09 mg/L

¹Saltwater benchmark values apply to stormwater discharges into saline waters where indicated.

² The freshwater benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. Hardness Dependent Benchmarks follow in the table below:

Freshwater Hardness Range	Copper (mg/L)	Zinc (mg/L)
0-24.99 mg/L	0.0038	0.04
25-49.99 mg/L	0.0056	0.05
50-74.99 mg/L	0.0090	0.08
75-99.99 mg/L	0.0123	0.11
100-124.99 mg/L	0.0156	0.13
125-149.99 mg/L	0.0189	0.16
150-174.99 mg/L	0.0221	0.18
175-199.99 mg/L	0.0253	0.20
200-224.99 mg/L	0.0285	0.23
225-249.99 mg/L	0.0316	0.25
250+ mg/L	0.0332	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart G – Sector G – Metal Mining.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

Note: Where compliance with a requirement in a separate exploration permit, mining permit, reclamation plan, Surface Mining Control and Reclamation Act (SMCRA) requirements, etc. will result in you fully meeting any requirement in this Subpart, you are considered to have complied with the relevant requirement in this Subpart. You must include documentation in your SWPPP describing your rationale for concluding that any particular action on your part is sufficient to comply with the corresponding requirement in this Subpart.

8.G.1 Covered Stormwater Discharges.

The requirements in Subpart G apply to stormwater discharges associated with industrial activity from Metal Mining facilities, including mines abandoned on Federal lands, as identified by the SIC Codes specified under Sector G in Table D-1 of Appendix D. Coverage is required for metal mining facilities that discharge stormwater contaminated by contact with, or that has come into contact with, any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of the operation.

8.G.1.1 Covered Discharges from Inactive Facilities. All stormwater discharges.

8.G.1.2 Covered Discharges from Active and Temporarily Inactive Facilities. Only the stormwater discharges from the following areas are covered:

- Waste rock and overburden piles if composed entirely of stormwater and not combined with mine drainage;
- Topsoil piles;
- Offsite haul and access roads;
- Onsite haul and access roads constructed of waste rock, overburden or spent ore if composed entirely of stormwater and not combining with mine drainage;
- Onsite haul and access roads not constructed of waste rock, overburden or spent ore except if mine drainage is used for dust control;
- Runoff from tailings dams or dikes when not constructed of waste rock or tailings and no process fluids are present;
- Runoff from tailings dams or dikes when constructed of waste rock or tailings and no process fluids are present, if composed entirely of stormwater and not combining with mine drainage;
- Concentration building if no contact with material piles;
- Mill site if no contact with material piles;
- Office or administrative building and housing if mixed with stormwater from industrial area;
- Chemical storage area;
- Docking facility if no excessive contact with waste product that would otherwise constitute mine drainage;
- Explosive storage;
- Fuel storage;
- Vehicle and equipment maintenance area and building;
- Parking areas (if necessary);
- Power plant;

- Truck wash areas if no excessive contact with waste product that would otherwise constitute mine drainage;
- Unreclaimed, disturbed areas outside of active mining area;
- Reclaimed areas released from reclamation requirements prior to December 17, 1990;
- Partially or inadequately reclaimed areas or areas not released from reclamation requirements.

8.G.1.3 Covered Discharges from Earth-Disturbing Activities Conducted Prior to Active Mining Activities. All stormwater discharges.

8.G.1.4 Covered Discharges from Facilities Undergoing Reclamation. All stormwater discharges.

8.G.2 Limitations on Coverage.

8.G.2.1 Prohibition of Stormwater Discharges. Stormwater discharges not authorized by this permit: discharges from active metal mining facilities that are subject to effluent limitation guidelines for the Ore Mining and Dressing Point Source Category (40 CFR Part 440).

Note: Stormwater runoff from these sources are subject to 40 CFR Part 440 if they are mixed with other discharges subject to Part 440. In this case, they are not eligible for coverage under this permit. Discharges from overburden/waste rock and overburden/waste rock-related areas are not subject to 40 CFR Part 440 unless they: (1) drain naturally (or are intentionally diverted) to a point source; and (2) combine with "mine drainage" that is otherwise regulated under the Part 440 regulations. For such sources, coverage under this permit would be available if the discharge composed entirely of stormwater does not combine with other sources of mine drainage that are not subject to 40 CFR Part 440, and meets the other eligibility criteria contained in Part 1.1 of the permit. Operators bear the initial responsibility for determining if they are eligible for coverage under this permit, or must seek coverage under another NPDES permit. EPA recommends that operators contact the relevant NPDES permit issuance authority for assistance to determine the nature and scope of the "active mining area" on a mine-by-mine basis, as well as to determine the appropriate permitting mechanism for authorizing such discharges.

8.G.2.2 Prohibition of Non-Stormwater Discharges. Not authorized by this permit: adit drainage, and contaminated springs or seeps discharging from waste rock dumps that do not directly result from precipitation events (see also the standard Limitations on Coverage in Part 1.1.4). (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3)

8.G.3 Definitions.

The following definitions are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

8.G.3.1 Mining operations – For this permit, mining operations are grouped into two distinct categories, with distinct effluent limits and requirements applicable to each: a) earth-disturbing activities conducted prior to active mining activities; and b) active mining activities, which includes reclamation. "Mining operations" can occur at both inactive mining facilities and temporarily inactive mining facilities.

8.G.3.2 Earth-disturbing activities conducted prior to active mining activities – Consists of two classes of earth-disturbing (i.e., clearing, grading and excavation) activities:

a. activities performed for purposes of mine site preparation, including: cutting new rights of way (except when related to access road construction); providing access to a mine site for vehicles and equipment (except when related to access road construction); other earth disturbances associated with site preparation activities on any areas where active mining activities have not yet commenced (e.g., for heap leach pads, waste rock facilities, tailings impoundments, wastewater treatment plants); and

b. construction of staging areas to prepare for erecting structures such as to house project personnel and equipment, mill buildings, etc., and construction of access roads. Earth-disturbing activities associated with the construction of staging areas and the construction of access roads conducted prior to active mining are considered to be "construction" and have additional effluent limits in Part 8.G.4.2.

8.G.3.3 Active mining activities – Activities related to the extraction, removal or recovery, and beneficiation of metal ore from the earth; removal of overburden and waste rock to expose mineable minerals; and site reclamation and closure activities. All such activities occur within the "active mining area." Reclamation involves activities undertaken, in compliance with applicable mined land reclamation requirements, to return the land to an appropriate post-mining contour and land use in order to meet applicable federal and state reclamation requirements. In addition, once earth-disturbing activities conducted prior to active mining activities have ceased and all related requirements in Part 8.G.4 have been met, and a well-delineated "active mining area" has been established, all activities (including any clearing, grading, and excavation) that occur within the active mining area are "active mining activities."

8.G.3.4 Active mining area – A place where work or other activity related to the extraction, removal or recovery of metal ore is being conducted, except, with respect to surface mines, any area of land on or in which grading has been completed to return the earth to desired contour and reclamation work has begun.

Note: Earth-disturbing activities described in the definition in Part 8.G.3.2 that occur on areas outside the active mining area (e.g., for expansion of the mine into undeveloped territory) are considered "earth-disturbing conducted prior to active mining activities", and must comply with the requirements in Part 8.G.4.

8.G.3.5 Inactive metal mining facility – A site or portion of a site where metal mining and/or milling occurred in the past but there are no active mining activities occurring as defined above, and where the inactive portion is not covered by an active mining permit issued by the applicable state or federal agency. An inactive metal mining facility has an identifiable owner / operator. Sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials and sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim are not considered either active or inactive mining facilities and do not require an NPDES industrial stormwater permit.

8.G.3.6 Temporarily inactive metal mining facility – A site or portion of a site where metal mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable state or federal agency.

8.G.4 Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.

Stormwater discharges from earth-disturbing activities conducted prior to active mining activities (defined in Part 8.G.3.2) are covered under this permit. For such earth-disturbing

activities, you must comply with all applicable requirements in Parts 1-9 of the MSGP except for the technology-based effluent limits in Part 8.G.5 and Part 2.1.2, the inspection requirements in Part 8.G.7 and Part 3, and the monitoring requirements in Part 8.G.8 and Part 6.

Authorized discharges from areas where earth-disturbing activities have ceased and stabilization as specified in Part 8.G.4.1.9 or 8.G.4.2.11, where appropriate, has been completed (stabilization is not required for areas where active mining activities will occur), are no longer subject to the Part 8.G.4 requirements. At such time, authorized discharges become subject to all other applicable requirements in the MSGP, including the effluent limits in Parts 2.1.2 and 8.G.5, the inspection requirements in Parts 3 and 8.G.7, and the monitoring requirements in Parts 6 and 8.G.8.

8.G.4.1 Technology-Based Effluent Limits Applicable to All Earth-Disturbing Activities Conducted Prior to Active Mining Activities. The following technology-based effluent limits apply to authorized discharges from all earth-disturbing activities conducted prior to active mining activities defined in Part 8.G.3.2(a) and 8.G.3.2(b). These limits supersede the technology-based limits listed in Part 2.1.2 and Part 8.G.5 of the MSGP.

8.G.4.1.1 Erosion and sediment control installation requirements.

- By the time construction activities commence, install and make operational downgradient sediment controls, unless this timeframe is infeasible. If infeasible you must install and make such controls operational as soon as practicable or as soon as site conditions permit.
- All other stormwater controls described in the SWPPP must be installed and made operational as soon as conditions on each portion of the site allows.

8.G.4.1.2 Erosion and sediment control maintenance requirements. You must:

- Ensure that all erosion and sediment controls remain in effective operating condition.
- Wherever you determine that a stormwater control needs maintenance to continue operating effectively, initiate efforts to fix the problem immediately after its discovery, and complete such work by the end of the next work day.
- When a stormwater control must be replaced or significantly repaired, complete the work within 7 days, unless infeasible. If 7 days is infeasible, you must complete the installation or repair as soon practicable.

8.G.4.1.3 Perimeter controls. You must:

- Install sediment controls along those perimeter areas of your disturbed area that will receive stormwater, except where site conditions prevent the use of such controls (in which case, maximize their installation to the extent practicable).
- Remove sediment before it accumulates to one-half of the above-ground height of any perimeter control.

8.G.4.1.4 Sediment track-out. For construction vehicles and equipment exiting the site directly onto paved roads, you must:

- Use appropriate stabilization techniques to minimize sediment track-out from vehicles and equipment prior to exit;
- Use additional controls to remove sediment from vehicle and equipment tires prior to exit, where necessary;
- Remove sediment that is tracked out onto paved roads by end of the work day.

Note: EPA recognizes that some fine grains may remain visible on the surfaces of off-site streets, other paved areas, and sidewalks even after you have implemented sediment removal practices. Such “staining” is not a violation of Part 8.G.4.1.4.

8.G.4.1.5 Soil or sediment stockpiles. You must:

- Minimize erosion of stockpiles from stormwater and wind via temporary cover, if feasible.
- Prevent up-slope stormwater flows from causing erosion of stockpiles (e.g., by diverting flows around the stockpile).
- Minimize sediment from stormwater that runs off of stockpiles, using sediment controls (e.g., a sediment barrier or downslope sediment control).

8.G.4.1.6 Sediment basins. If you intend to install a sediment basin to treat stormwater from your earth-disturbing activities, you must:

- Provide storage for either (1) the 2-year, 24-hour storm, or (2) 3,600 cubic feet per acre drained.
- Prevent erosion of (1) basin embankments using stabilization controls (e.g., erosion control blankets), and (2) the inlet and outlet points of the basin using erosion controls and velocity dissipation devices.

8.G.4.1.7 Minimize dust. You must minimize the generation of dust through the appropriate application of water or other dust suppression techniques that minimize pollutants being discharged into surface waters.

8.G.4.1.8 Restrictions on use of treatment chemicals. If you intend to use sediment treatment chemicals at your site, you are subject to the following minimum requirements:

- Use conventional erosion and sediment controls prior to and after application of chemicals;
- Select chemicals suited to soil type, and expected turbidity, pH, flow rate;
- Minimize the discharge risk from stored chemicals;
- Comply with state/local requirements;
- Use chemicals in accordance with good engineering practices and specifications of chemical supplier;
- Ensure proper training;
- Provide proper SWPPP documentation.

If you plan to use cationic treatment chemicals (as defined in Appendix A), you are ineligible for coverage under this permit, unless you notify your applicable EPA Regional Office in advance and the EPA Regional Office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards.

8.G.4.1.9 Site stabilization requirements for earth-disturbing activities performed for purposes of mine site preparation as defined in 8.G.3.2(a) (i.e., not applicable to construction of staging areas for structures and access roads as defined in 8.G.3.2(b)). You must comply with the following stabilization requirements except where the intended function of the site accounts for such disturbed earth (e.g., the earth disturbances will become actively mined, or the controls implemented at the active mining area effectively control the disturbance)

(although you are encouraged to do so within the active mining area, where appropriate):

- *Temporary stabilization of disturbed areas.* Stabilization measures must be initiated immediately in portions of the site where earth-disturbing activities performed for purposes of mine site preparation (as defined in 8.G.3.2(a)) have temporarily ceased, but in no case more than 14 days after such activities have temporarily ceased. In arid, semi-arid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after earth-disturbing activities performed for purposes of mine site preparation has temporarily ceased, temporary vegetative stabilization measures must be initiated as soon as practicable. Until temporary vegetative stabilization is achieved, interim measures such as erosion control blankets with an appropriate seed base and tackifiers must be employed. In areas of the site where earth-disturbing activities performed for purposes of mine site preparation have permanently ceased prior to active mining, temporary stabilization measures must be implemented to minimize mobilization of sediment or other pollutants until active mining activities commence.
- *Final stabilization of disturbed areas.* Stabilization measures must be initiated immediately where earth-disturbing activities performed for purposes of mine site preparation (as defined in 8.G.3.2(a)) have permanently ceased, but in no case more than 14 days after the earth-disturbing activities have permanently ceased. In arid, semi-arid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after earth-disturbing activities have permanently ceased, final vegetative stabilization measures must be initiated as soon as possible. Until final stabilization is achieved, temporary stabilization measures, such as erosion control blankets with an appropriate seed base and tackifiers, must be used.

8.G.4.2 Additional Technology-Based Effluent Limits Applicable Only to the Construction of Staging Areas for Structures and Access Roads. The following technology-based effluent limits apply to authorized discharges from earth-disturbing activities associated with the construction of staging areas and the construction of access roads, as defined in Part 8.G.3.2(b). These limits supersede the technology-based limits listed in Part 2.1.2 and Part 8.G.5 of the MSGP. These limits do not apply to earth-disturbing activities performed for purposes of mine site preparation (as defined in 8.G.3.2(a)).

8.G.4.2.1 Area of disturbance. You must minimize the amount of soil exposed during construction activities.

8.G.4.2.2 Erosion and sediment control design requirements. You must:

- Design, install and maintain effective erosion and sediment controls to minimize the discharge of pollutants from construction activities. Account for the following factors in designing your erosion and sediment controls:
 - The expected amount, frequency, intensity and duration of precipitation;
 - The nature of stormwater runoff and run-on at the site, including factors such as impervious surfaces, slopes and site drainage features;
 - The range of soil particle sizes expected to be present on the site.

- Direct discharges from your stormwater controls to vegetated areas of your site to increase sediment removal and maximize stormwater infiltration, including any natural buffers, unless infeasible. Use velocity dissipation devices if necessary to prevent erosion when directing stormwater to vegetated areas.
- If any stormwater flow becomes or will be channelized at your site, you must design erosion and sediment controls to control both peak flowrates and total stormwater volume to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points.
- If you install stormwater conveyance channels, they must be designed to avoid unstabilized areas on the site and to reduce erosion, unless infeasible. In addition, you must minimize erosion of channels and their embankments, outlets, adjacent streambanks, slopes, and downstream waters during discharge conditions through the use of erosion controls and velocity dissipation devices within and along the length of any constructed stormwater conveyance channel, and at any outlet to provide a non-erosive flow velocity.

8.G.4.2.3 Natural Buffers. For any stormwater discharges from construction activities within 50 feet of a water of the U.S., you must comply with one of the following compliance alternatives:

1. Provide a 50-foot undisturbed natural buffer between construction activities and the water of the U.S.; or
2. Provide an undisturbed natural buffer that is less than 50 feet supplemented by additional erosion and sediment controls, which in combination, achieve a sediment load reduction that is equivalent to a 50-foot undisturbed natural buffer; or
3. If it is infeasible to provide an undisturbed natural buffer of any size, implement erosion and sediment controls that achieve a sediment load reduction that is equivalent to a 50-foot undisturbed natural buffer.

There are exceptions when buffer requirements do not apply:

- There is no stormwater discharge from construction disturbances to a water of the U.S.;
- The natural buffer has already been eliminated by preexisting development disturbances;
- The disturbance is for the construction of a water-dependent structure or construction approved under a CWA section 404 permit;
- For linear construction projects, you are not required to comply with the requirements if there are site constraints provided that, to the extent feasible, you limit disturbances within 50 feet of a water of the U.S. and/or you provide supplemental erosion and sediment controls to treat stormwater discharges from any disturbances within 50 feet of a water of the U.S.

See

http://water.epa.gov/polwaste/npdes/stormwater/upload/cgp2012_appendixg.pdf for guidance on complying with these alternatives.

8.G.4.2.4 Soil or sediment stockpiles. In addition to the requirements in Part 8.G.4.1.5, you must locate any piles outside of any natural buffers established under Part 8.G.4.2.3.

8.G.4.2.5 Sediment basins. In addition to the requirements in Part 8.G.4.1.6, you must locate sediment basins outside of any surface waters and any natural buffers established under Part 8.G.4.2.3, and you must utilize outlet structures that withdraw water from the surface, unless infeasible.

8.G.4.2.6 Native topsoil preservation. You must preserve native topsoil removed during clearing, grading, or excavation, unless infeasible. Store topsoil in a manner that will maximize its use in reclamation or final vegetative stabilization (e.g., by keeping the topsoil stabilized with seed or similar measures). This requirement does not apply if the intended function of the disturbed area dictates that topsoil be disturbed or removed.

8.G.4.2.7 Steep slopes. You must minimize the disturbance of steep slopes. The permit does not prevent or prohibit disturbance on steep slopes.

Depending on site conditions and needs, disturbance on steep slopes may be necessary (e.g., a road cut in mountainous terrain; for grading steep slopes prior to erecting the mine office). Where steep slope disturbances are necessary, you can minimize the disturbances to steep slopes through the implementation of a number of standard erosion and sediment control practices, such as by phasing disturbances in these areas and using stabilization practices specifically for steep grades.

8.G.4.2.8 Soil compaction. Where final vegetative stabilization will occur or where infiltration practices will be installed, you must either restrict vehicle/ equipment use in these areas to avoid soil compaction or use soil conditioning techniques to support vegetative growth. Minimizing soil compaction is not required where compacted soil is integral to the functionality of the site.

8.G.4.2.9 Dewatering Practices. You are prohibited from discharging ground water or accumulated stormwater that is removed from excavations, trenches, foundations, vaults or other similar points of accumulation, unless such waters are first effectively managed by appropriate controls (e.g., sediment basins or sediment traps, sediment socks, dewatering tanks, tube settlers, weir tanks, or filtration systems). Uncontaminated, non-turbid dewatering water can be discharged without being routed to a control.

You must also meet the following requirements for dewatering activities:

- Discharge requirements:
 - No discharging visible floating solids or foam;
 - Remove oil, grease and other pollutants from dewatering water via an oil-water separator or suitable filtration device (such as a cartridge filter);
 - Utilize vegetated upland areas of the site, to the extent feasible, to infiltrate dewatering water before discharge. In no case shall waters of the U.S. be considered part of the treatment area;
 - Implement velocity dissipation devices at all points where dewatering water is discharged;
 - Haul backwash water away for disposal or return it to the beginning of the treatment process; and

- Clean or replace the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.
- Treatment chemical restrictions: If you use polymers, flocculants or other chemicals to treat dewatering water, you must comply with the requirements in Parts 8.G.4.1.8.

8.G.4.2.10 Pollution prevention requirements.

- *Prohibited discharges* (this non-exhaustive list of prohibited non-stormwater discharges is included here as a reminder that only the only allowable non-stormwater discharges are those enumerated in Part 1.1.3):
 - Wastewater from washout of concrete;
 - Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials;
 - Fuels, oils, or other pollutants used for operation and maintenance of vehicles or equipment;
 - Soaps, solvents, or detergents used in vehicle or equipment washing;
 - Toxic or hazardous substances from a spill or other release.
- *Design and location requirements*: Minimize the discharge of pollutants from pollutant sources by:
 - Minimizing exposure;
 - Using secondary containment, spill kits, or other equivalent measures;
 - Locating pollution sources away from surface waters, storm sewer inlets, and drainageways;
 - Cleaning up spills immediately (do not clean by hosing area down).
- *Pollution prevention requirements for wash waters*: Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
- *Pollution prevention requirements for the storage, handling, and disposal of construction products, materials, and wastes*: Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to stormwater. Minimization of exposure is not required in cases where the exposure to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

8.G.4.2.11 Site Stabilization requirements for the construction of staging areas for structures and access roads as defined in 8.G.3.2(b) (i.e., not applicable to

earth-disturbing activities performed for purposes of mine site preparation as defined in 8.G.3.2(a)). You must comply with the following stabilization requirements, except where the intended function of the site accounts for such disturbed earth (e.g., the area of construction will become actively mined, or the controls implemented at the active mining area effectively control the disturbance):

- By no later than the end of the next work day after construction work in an area has stopped permanently or temporarily ("temporarily" means the land will be idle for a period of 14 days or more but earth-disturbing activities will resume in the future), immediately initiate stabilization measures;

- If using vegetative measures, by no later than 14 days after initiating stabilization:
 - Seed or plant the area, and provide temporary cover to protect the planted area;
 - Once established, vegetation must be uniform, perennial (if final stabilization), and cover at least 70% of stabilized area based on density of native vegetation.
- If using non-vegetative stabilization, by no later than 14 days after initiating stabilization:
 - Install or apply all non-vegetative measures;
 - Cover all areas of exposed soil.

Note: For the purposes of this permit, EPA will consider any of the following types of activities to constitute the initiation of stabilization: 1. Prepping the soil for vegetative or non-vegetative stabilization; 2. Applying mulch or other non-vegetative product to the exposed area; 3. Seeding or planting the exposed area; 4. Starting any of the activities in # 1 – 3 on a portion of the area to be stabilized, but not on the entire area; and 5. Finalizing arrangements to have stabilization product fully installed in compliance with the applicable deadline for completing stabilization.

Exceptions:

- Arid, semi-arid (if construction occurs during seasonally dry period), or drought-stricken areas:
 - Within 14 days of stopping construction work in an area, install any necessary non-vegetative stabilization measures;
 - Initiate vegetative stabilization as soon as conditions on the site allow;
 - Document the schedule that will be followed for initiating and completing vegetative stabilization;
 - Plant the area so that within 3 years the 70% cover requirement is met.
- Sites affected by severe storm events or other unforeseen circumstances:
 - Initiate vegetative stabilization as soon conditions on the site allow;
 - Document the schedule that will be followed for initiating and completing vegetative stabilization;
 - Plant the area so that so that within 3 years the 70% cover requirement is met.

8.G.4.3 Water Quality-Based Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.

The following water quality-based limits apply to earth-disturbing activities conducted prior to active mining activities defined in Part 8.G.3.2(a) and 8.G.3.2(b), in addition to the water quality-based limits in Part 2.2 of the MSGP.

Stricter requirements apply if your site will discharge to an impaired water or a water that is identified by your state, tribe, or EPA as a Tier 2 or Tier 2.5 for antidegradation purposes:

- More rapid stabilization of exposed areas: Complete initial stabilization activities within 7 days of stopping earth-disturbing work.
- More frequent site inspections: Once every 7 days and within 24 hours of a storm event of 0.25 inches or greater.

8.G.4.4 Inspection Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.

The following requirements supersede the inspection requirements in Part 3 and 8.G.7 of the MSGP for earth-disturbing activities conducted prior to active mining activities defined in Part 8.G.3.2(a) and 8.G.3.2(b).

8.G.4.4.1 Inspection frequency

- At least once every 7 calendar days, or
- Once every 14 calendar days and within 24 hours of a storm event of 0.25 inches or greater.

Note:

- Inspections only required during working hours;
- Inspections not required during unsafe conditions; and
- If you choose to inspect once every 14 days, you must have a method for measuring rainfall amount on site (either rain gauge or representative weather station)

Note: To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day.

Note: You are required to specify in your SWPPP which schedule you will be following.

Note: "Within 24 hours of the occurrence of a storm event" means that you are required to conduct an inspection within 24 hours once a storm event has produced 0.25 inches, even if the storm event is still continuing. Thus, if you have elected to inspect bi-weekly and there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, you are required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.

8.G.4.4.2 Reductions in inspection frequency.

- Stabilized areas: You may reduce the frequency of inspections to once per month in any area of your site where stabilization has occurred pursuant to Part 8.G.4.1.9 or 8.G.4.2.11.
- Arid, semi-arid, and drought stricken areas: If earth-disturbing activities are occurring during the seasonally dry period or during a period in which drought is predicted to occur, you may reduce inspections to once per month and within 24 hours of a 0.25 inch storm event.
- Frozen conditions: You may temporarily suspend or reduce inspections to once per month until thawing conditions occur if frozen conditions are continuous and disturbed areas have been stabilized. For extreme conditions in remote areas, e.g., where transit to the site is perilous/restricted or temperatures are routinely below freezing, you may suspend inspections until the conditions are conducive to safe access, and more frequent inspections can resume.

8.G.4.4.3 Areas to be inspected. You must at a minimum inspect the all of the following areas:

- Disturbed areas;
- Stormwater controls and pollution prevention measures;
- Locations where stabilization measures have been implemented;
- Material, waste, borrow, or equipment storage and maintenance areas;

- Areas where stormwater flows;
- Points of discharge.

8.G.4.4.4 What to check for during inspections. At a minimum you must check:

- Whether all stormwater controls are installed, operational and working as intended;
- Whether any new or modified stormwater controls are needed;
- For conditions that could lead to a spill or leak;
- For visual signs of erosion/sedimentation at points of discharge.

If a discharge is occurring, check:

- The quality and characteristics of the discharge;
- Whether controls are operating effectively.

8.G.4.4.5 Inspection report. Within 24 hours of an inspection, complete a report that includes:

- Inspection date;
- Name and title of inspector(s);
- Summary of inspection findings;
- Rainfall amount that triggered the inspection (if applicable);
- If it was unsafe to inspect a portion of the site, include documentation of the reason and the location(s);
- Each inspection report must be signed;
- Keep a current copy of all reports at the site or at an easily accessible location.

8.G.5 Technology-Based Effluent Limits for Active Mining Activities.

Note: These requirements do not apply for any discharges from earth-disturbing activities conducted prior to active mining as defined in 8.G.3.2(a) or 8.G.3.2(b).

8.G.5.1 Employee training. (See also Part 2.1.2.8) Conduct employee training at least annually at active and temporarily inactive facilities.

8.G.5.2 Stormwater controls. Apart from the control measures you implement to meet your Part 2 technology-based effluent limits, where necessary to minimize pollutant discharges in stormwater, implement the following control measures at your site. The potential pollutants identified in Part 8.G.6.3 shall determine the priority and appropriateness of the control measures selected. For mines subject to dust control requirements under state or county air quality permits, provided the requirements are equivalent, compliance with such air permit dust requirements shall constitute compliance with the dust control effluent limit in Part 2.1.2.10.

Stormwater diversions: Divert stormwater away from potential pollutant sources through implementation of control measures such as the following, where determined to be feasible (list not exclusive): interceptor or diversion controls (e.g., dikes, swales, curbs, berms); pipe slope drains; subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts); or their equivalents.

Capping: When capping is necessary to minimize pollutant discharges in stormwater, identify the source being capped and the material used to construct the cap.

Treatment: If treatment of stormwater (e.g., chemical or physical systems, oil - water separators, artificial wetlands) is necessary to protect water quality, describe the type and location of treatment used. Passive and/or active treatment of stormwater runoff is encouraged, where feasible. Treated runoff may be discharged as a stormwater

source regulated under this permit provided the discharge is not combined with discharges subject to effluent limitation guidelines for the Ore Mining and Dressing Point Source Category (40 CFR Part 440).

8.G.5.3 Discharge testing. (See also Part 5.2.3.4) Test or evaluate all outfalls covered under this permit for the presence of specific mining-related but unauthorized non-stormwater discharges such as seeps or adit discharges, or discharges subject to effluent limitations guidelines (e.g., 40 CFR Part 440), such as mine drainage or process water. Alternatively (if applicable), you may keep a certification with your SWPPP consistent with Part 8.G.6.6.

8.G.6 Additional SWPPP Requirements for Mining Operations.

Note: The requirements in Part 8.G.6 are not applicable to inactive metal mining facilities.

8.G.6.1 Nature of industrial activities. (See also Part 5.2.2) Briefly document in your SWPPP the mining and associated activities that can potentially affect the stormwater discharges covered by this permit, including a general description of the location of the site relative to major transportation routes and communities.

8.G.6.2 Site map. (See also Part 5.2.2) Document in your SWPPP the locations of the following (as appropriate): mining or milling site boundaries; access and haul roads; outline of the drainage areas of each stormwater outfall within the facility with indications of the types of discharges from the drainage areas; location(s) of all permitted discharges covered under an individual NPDES permit; outdoor equipment storage, fueling, and maintenance areas; materials handling areas; outdoor manufacturing, outdoor storage, and material disposal areas; outdoor chemicals and explosives storage areas; overburden, materials, soils, or waste storage areas; location of mine drainage (where water leaves mine) or other process water; tailings piles and ponds (including proposed ones); heap leach pads; off-site points of discharge for mine drainage and process water; surface waters; boundary of tributary areas that are subject to effluent limitations guidelines; and location(s) of reclaimed areas.

8.G.6.3 Potential pollutant sources. (See also Part 5.2.3) For each area of the mine or mill site where stormwater discharges associated with industrial activities occur, identify the types of pollutants (e.g., heavy metals, sediment) likely to be present in significant amounts. Consider these factors: the mineralogy of the ore and waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced, or discharged; the likelihood of contact with stormwater; vegetation of site (if any); and history of significant leaks or spills of toxic or hazardous pollutants. Also include a summary of any existing ore or waste rock or overburden characterization data and test results for potential generation of acid rock. If any new data is acquired due to changes in ore type being mined, update your SWPPP with this information.

8.G.6.4 Documentation of control measures. Document all control measures that you implement consistent with Part 8.G.5.2. If control measures are implemented or planned but are not listed in Part 8.G.5.2 (e.g., substituting a less toxic chemical for a more toxic one), include descriptions of them in your SWPPP. If you are in compliance with dust control requirements under state or county air quality permits, you must include (or summarize, as necessary) what the state or county air quality permit dust control requirements are and how you've achieved compliance with them.

8.G.6.5 Employee training. All employee training(s) must be documented in the SWPPP.

8.G.6.6 Certification of permit coverage for commingled non-stormwater discharges. If you are able, consistent with Part 8.G.5.3 above, to certify that a particular discharge composed of commingled stormwater and non-stormwater is covered under a separate NPDES permit, and that permit subjects the non-stormwater portion to effluent limitations prior to any commingling, retain such certification with your SWPPP. This certification must identify the non-stormwater discharges, the applicable NPDES permit(s), the effluent limitations placed on the non-stormwater discharge by the permit(s), and the points at which the limitations are applied.

8.G.7 Additional Inspection Requirements. (See also Part 3.1)

Except for earth-disturbing activities conducted prior to active mining activities as defined in Part 8.G.3.2(a) and 8.G.3.2(b), which are subject to Part 8.G.4.4, inspect sites at least quarterly unless adverse weather conditions make the site inaccessible. Sites which discharge to waters designated as Tier 2 or 2.5 or waters which are impaired for sediment or nitrogen must be inspected monthly. See Part 8.G.8.4 for inspection requirements for inactive and unstaffed sites.

8.G.8 Monitoring and Reporting Requirements. (See also Part 6)

Note: There are no Part 8.G.8 monitoring and reporting or impaired waters monitoring requirements for inactive and unstaffed sites.

8.G.8.1 Benchmark Monitoring for Active Copper Ore Mining and Dressing Facilities.

Table 8.G-1 identifies benchmarks that apply to active copper ore mining and dressing facilities. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.G-1		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector G1. Active Copper Ore Mining and Dressing Facilities (SIC 1021)	Total Suspended Solids (TSS)	100 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L

8.G.8.2 Benchmark Monitoring Requirements for Discharges From Waste Rock and Overburden Piles at Active Metal Mining Facilities. For discharges from waste rock and overburden piles, perform benchmark monitoring once in the first year for the parameters listed in Table 8.G-2, and twice annually in all subsequent years of coverage under this permit for any parameters for which the benchmark has been exceeded. You are also required to conduct analytic monitoring for the parameters listed in Table 8.G-3 in accordance with the requirements in Part 8.G.8.3. The Director may also notify you that you must perform additional monitoring to accurately characterize the quality and quantity of pollutants discharged from your waste rock and overburden piles.

Table 8.G-2.

Subsector (Discharges may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector G2. Iron Ores; Copper Ores; Lead and Zinc Ores; Gold and Silver Ores; Ferroalloy Ores, Except Vanadium; and Miscellaneous Metal Ores (SIC Codes 1011, 1021, 1031, 1041, 1044, 1061, 1081, 1094, 1099) (Note: when analyzing hardness for a suite of metals, it is more cost effective to add analysis of calcium and magnesium, and have hardness calculated than to require hardness analysis separately)	Total Suspended Solids (TSS)	100 mg/L
	Turbidity	50 NTU
	pH	6.0-9.0 s.u.
	Hardness (as CaCO ₃ ; calc. from Ca, Mg) ²	no benchmark value
	Total Antimony	0.64 mg/L
	Total Arsenic (freshwater)	0.15 mg/L
	Total Arsenic (saltwater) ¹	0.069 mg/L
	Total Beryllium	0.13 mg/L
	Total Cadmium (freshwater) ²	Hardness Dependent
	Total Cadmium (saltwater) ¹	0.04 mg/L
	Total Copper (freshwater) ²	Hardness Dependent
	Total Copper (saltwater) ¹	0.0048 mg/L
	Total Iron	1.0 mg/L
	Total Lead (freshwater) ²	Hardness Dependent
	Total Lead (saltwater) ¹	0.21 mg/L
	Total Mercury (freshwater)	0.0014 mg/L
	Total Mercury (saltwater) ¹	0.0018 mg/L
	Total Nickel (freshwater) ²	Hardness Dependent
	Total Nickel (saltwater) ¹	0.074 mg/L
	Total Selenium (freshwater)	0.005 mg/L
	Total Selenium (saltwater) ¹	0.29 mg/L
	Total Silver (freshwater) ²	Hardness Dependent
	Total Silver (saltwater) ¹	0.0019 mg/L
	Total Zinc (freshwater) ²	Hardness Dependent
	Total Zinc (saltwater) ¹	0.09 mg/L

¹Saltwater benchmark values apply to stormwater discharges into saline waters where indicated.

² The freshwater benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. Hardness Dependent Benchmarks follow in the table below:

Freshwater Hardness Range	Cadmium (mg/L)	Copper (mg/L)	Lead (mg/L)	Nickel (mg/L)	Silver (mg/L)	Zinc (mg/L)
0-24.99 mg/L	0.0005	0.0038	0.014	0.15	0.0007	0.04
25-49.99 mg/L	0.0008	0.0056	0.023	0.20	0.0007	0.05
50-74.99 mg/L	0.0013	0.0090	0.045	0.32	0.0017	0.08
75-99.99 mg/L	0.0018	0.0123	0.069	0.42	0.0030	0.11
100-124.99 mg/L	0.0023	0.0156	0.095	0.52	0.0046	0.13
125-149.99 mg/L	0.0029	0.0189	0.122	0.61	0.0065	0.16
150-174.99 mg/L	0.0034	0.0221	0.151	0.71	0.0087	0.18
175-199.99 mg/L	0.0039	0.0253	0.182	0.80	0.0112	0.20
200-224.99 mg/L	0.0045	0.0285	0.213	0.89	0.0138	0.23
225-249.99 mg/L	0.0050	0.0316	0.246	0.98	0.0168	0.25
250+ mg/L	0.0053	0.0332	0.262	1.02	0.0183	0.26

8.G.8.3 Additional Analytic Monitoring Requirements for Discharges From Waste Rock and Overburden Piles at Active Metal Mining Facilities. In addition to the monitoring required in Part 8.G.8.2 for discharges from waste rock and overburden piles, you must also conduct monitoring for additional parameters based on the type of ore you mine at your site. Where a parameter in Table 8.G-3 is the same as a pollutant you are required to monitor for in Table 8.G-2 (i.e., for all of the metals), you must use the corresponding benchmark in Table 8.G-2 and you may use any monitoring results conducted for Part 8.G.8.2 to satisfy the monitoring requirement for that parameter for Part 8.G.8.3. For radium and uranium, which do not have corresponding benchmarks in Table 8.G-2, there are no applicable benchmarks. The frequency and schedule for monitoring for these additional parameters is the same as that specified in Part 6.2.1.2.

Table 8.G-3. Additional Monitoring Requirements for Discharges from Waste Rock and Overburden Piles			
Supplemental Requirements			
Type of Ore Mined	Pollutants of Concern		
	Total Suspended Solids (TSS)	pH	Metals, Total
Tungsten Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Nickel Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Aluminum Ore	X	X	Iron
Mercury Ore	X	X	Nickel (H)
Iron Ore	X	X	Iron (Dissolved)
Platinum Ore			Cadmium (H), Copper (H), Mercury, Lead (H), Zinc (H)
Titanium Ore	X	X	Iron, Nickel (H), Zinc (H)
Vanadium Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Molybdenum	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Mercury, Zinc (H)
Uranium, Radium, and Vanadium Ore	X	X	Chemical Oxygen Demand, Arsenic, Radium (Dissolved and Total), Uranium, Zinc (H)

Note: An "X" indicated for TSS and/or pH means that you are required to monitor for those parameters. (H) indicates that hardness must also be measured when this pollutant is measured.

8.G.8.4 Inactive and Unstaffed Sites – Conditional Exemption from No Exposure Requirements for Quarterly Visual Assessments and Routine Facility Inspections. As a Sector G facility, if you are seeking to exercise a waiver from the quarterly visual assessment and routine facility inspection requirements for inactive and unstaffed sites (including temporarily inactive sites), you are conditionally exempt from the requirement to certify that "there are no industrial materials or activities exposed to stormwater" in Parts 3.1.1 and 3.2.3. This exemption is conditioned on the following:

- If circumstances change and your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the quarterly visual assessment requirements; and
- EPA retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to

cause, or contributes to an instream excursion above an applicable water quality standard, including designated uses.

Subject to the two conditions above, if your facility is inactive and unstaffed, you are waived from the requirement to conduct quarterly visual assessments and routine facility inspections. You must still do an annual site inspection in accordance with Part 3.1. You are encouraged to inspect your site more frequently where you have reason to believe that severe weather or natural disasters may have damaged control measures or increased discharges.

Table 8.G-4. Applicability of the Multi-Sector General Permit to Stormwater Runoff From Active Mining and Dressing Sites, Temporarily Inactive Sites, and Sites Undergoing Reclamation	
Discharge/Source of Discharge	Note/Comment
Piles	
Waste rock/overburden	Covered under the MSGP if composed entirely of stormwater and not combined with mine drainage. See note below.
Topsoil	--
Roads constructed of waste rock or spent ore	
Onsite haul roads	Covered under the MSGP if composed entirely of stormwater and not combined with mine drainage. See note below.
Offsite haul and access roads	--
Roads not constructed of waste rock or spent ore	
Onsite haul roads	Covered under the MSGP except if mine drainage is used for dust control.
Offsite haul and access roads	--
Milling/concentrating	
Runoff from tailings dams and dikes when constructed of waste rock/tailings	Covered under the MSGP except if process fluids are present and only if composed entirely of stormwater and not combined with mine drainage. See Note below.
Runoff from tailings dams/dikes when not constructed of waste rock and tailings	Covered under the MSGP except if process fluids are present.
Concentration building	Covered under the MSGP If stormwater only and no contact with piles.
Mill site	If stormwater only and no contact with piles.
Ancillary areas	
Office and administrative building and housing	Covered under the MSGP if mixed with stormwater from the industrial area.
Chemical storage area	--
Docking facility	Covered under the MSGP except if excessive contact with waste product that would otherwise constitute mine drainage.
Explosive storage	--
Fuel storage (oil tanks/coal piles)	--
Vehicle and equipment maintenance area/building	--
Parking areas	Covered under the MSGP but coverage unnecessary if only employee and visitor-type parking.

Table 8.G-4. Applicability of the Multi-Sector General Permit to Stormwater Runoff From Active Mining and Dressing Sites, Temporarily Inactive Sites, and Sites Undergoing Reclamation	
Discharge/Source of Discharge	Note/Comment
Power plant	
Truck wash area	Covered under the MSGP except when excessive contact with waste product that would otherwise constitute mine drainage.
Reclamation-related areas	
Any disturbed area (unreclaimed)	Covered under the MSGP only if not in active mining area.
Reclaimed areas released from reclamation requirements prior to Dec. 17, 1990	--
Partially/inadequately reclaimed areas or areas not released from reclamation requirements	--

Note: Stormwater runoff from these sources are subject to the NPDES program for stormwater unless mixed with discharges subject to 40 CFR Part 440 that are regulated by another permit prior to mixing. Non-stormwater discharges from these sources are subject to NPDES permitting and may be subject to the effluent limitation guidelines under 40 CFR Part 440. Discharges from overburden/waste rock and overburden/waste rock-related areas are not subject to 40 CFR Part 440 unless: (1) it drains naturally (or is intentionally diverted) to a point source; and (2) combines with "mine drainage" that is otherwise regulated under the Part 440 regulations. For such sources, coverage under this permit would be available if the discharge composed entirely of stormwater does not combine with other sources of mine drainage that are not subject to 40 CFR Part 440, as well as meeting other eligibility criteria contained in Part 1.1 of the permit. Operators bear the initial responsibility for determining the applicable technology-based standard for such discharges. EPA recommends that operators contact the relevant NPDES permit issuance authority for assistance to determine the nature and scope of the "active mining area" on a mine-by-mine basis, as well as to determine the appropriate permitting mechanism for authorizing such discharges.

8.G.9. Termination of Permit Coverage

8.G.9.1 Termination of Permit Coverage for Sites Reclaimed After December 17, 1990. A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in Part 8.G.3.3.

8.G.9.2 Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990. A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if: (1) stormwater runoff that comes into contact with raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards, (2) soil disturbing activities related to mining at the sites or portion of the site have been completed, (3) the site or portion of the site has been stabilized to minimize soil erosion, and (4) as appropriate depending on location, size, and the potential to contribute pollutants to stormwater discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart H – Sector H – Coal Mines and Coal Mining-Related Facilities.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

Note: Where compliance with a requirement in a separate exploration permit, mining permit, reclamation plan, Surface Mining Control and Reclamation Act (SMCRA) requirements, etc. will result in you fully meeting any requirement in this Subpart, you are considered to have complied with the relevant requirement in this Subpart. You must include documentation in your SWPPP describing your rationale for concluding that any particular action on your part is sufficient to comply with the corresponding requirement in this Subpart.

8.H.1 Covered Stormwater Discharges.

The requirements in Subpart H apply to stormwater discharges associated with industrial activity from Coal Mines and Coal Mining-Related facilities as identified by the SIC Codes specified under Sector H in Table D-1 of Appendix D.

8.H.2 Limitations on Coverage.

8.H.2.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.1.4) Not covered by this permit: discharges from pollutant seeps or underground drainage from inactive coal mines and refuse disposal areas that do not result from precipitation events, and discharges from floor drains in maintenance buildings and other similar drains in mining and preparation plant areas. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3).

8.H.2.2 Discharges Subject to Stormwater Effluent Guidelines. (See also Part 1.1.2.4) Not authorized by this permit: stormwater discharges subject to an existing effluent limitation guideline at 40 CFR Part 434.

8.H.3 Definitions

The following definitions are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

8.H.3.1 Mining operations - For this permit, mining operations are grouped into two distinct categories, with distinct effluent limits and requirements applicable to each: a) earth-disturbing activities conducted prior to active mining activities); and b) active mining activities, which includes reclamation. "Mining operations" can occur at both inactive mining facilities and temporarily inactive mining facilities.

8.H.3.2 Earth-disturbing activities conducted prior to active mining activities – Consists of two classes of earth-disturbing (i.e., clearing, grading and excavation) activities:

a. activities performed for purposes of mine site preparation, including: cutting new rights of way (except when related to access road construction); providing access to a mine site for vehicles and equipment (except when related to access road construction); other earth disturbances associated with site preparation activities on any areas where active mining activities have not yet commenced (e.g., for heap leach pads, waste rock facilities, tailings impoundments, wastewater treatment plants); and

b. construction of staging areas to prepare for erecting structures such as to house project personnel and equipment, mill buildings, etc., and construction of access roads. Earth-disturbing activities associated with the construction of staging areas and the construction of access roads conducted prior to active mining are considered to be "construction" and have additional effluent limits in Part 8.H.4.2.

8.H.3.3 Active mining activities – Activities related to the extraction, removal or recovery, and preparation of coal; removal of overburden and waste rock to expose mineable minerals; and site reclamation and closure activities. All such activities occur within the "active mining area." Reclamation involves activities undertaken, in compliance with applicable mined land reclamation requirements, to return the land to an appropriate post-mining contour and land use in order to meet applicable federal and state reclamation requirements. In addition, once earth-disturbing activities conducted prior to active mining activities have ceased and all related requirements in Part 8.H.4 have been met, and a well-delineated "active mining area" has been established, all activities (including any clearing, grading, and excavation) that occur within the active mining area are "active mining activities."

8.H.3.4 Active mining area – A place where work or other activity related to the extraction, removal or recovery of coal is being conducted, except, with respect to surface mines, any area of land on or in which grading has been completed to return the earth to desired contour and reclamation work has begun.

Note: Earth-disturbing activities described in the definition in Part 8.H.3.2 that occur on areas outside the active mining area (e.g., for expansion of the mine into undeveloped territory) are considered "earth-disturbing conducted prior to active mining activities", and must comply with the requirements in Part 8.H.4.

8.H.3.5 Inactive coal mining facility – A site or portion of a site where coal mining and/or milling occurred in the past but there are no active mining operations occurring as defined above, and where the inactive portion is not covered by an active mining permit issued by the applicable state or federal agency. An inactive coal mining facility has an identifiable owner / operator. Sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials and sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim are not considered either active or inactive mining facilities and do not require an NPDES industrial stormwater permit.

8.H.3.6 Temporarily inactive coal mining facility – A site or portion of a site where coal mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable state or federal agency.

8.H.4 Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.

Stormwater discharges from earth-disturbing activities conducted prior to active mining activities (defined in Part 8.H.3.2) are covered under this permit. For such earth-disturbing activities, you must comply with all applicable requirements in Parts 1-9 of the MSGP except for the technology-based effluent limits in Part 8.H.5 and Part 2.1.2, the inspection requirements in Part 8.H.7 and Part 3, and the monitoring requirements in Part 8.H.8 and Part 6.

Authorized discharges from areas where earth-disturbing activities have ceased and stabilization as specified in Part 8.H.4.19 or 8.H.4.2.11, where appropriate, has been completed (stabilization is not required for areas where active mining activities will occur), are no longer subject to the Part 8.H.4 requirements. At such time, authorized discharges become subject to all

other applicable requirements in the MSGP, including the effluent limits in Parts 2.1.2 and 8.H.5, the inspection requirements in Parts 3 and 8.H.7, and the monitoring requirements in Parts 6 and 8.H.8.

8.H.4.1 Technology-Based Effluent Limits Applicable to All Earth-Disturbing Activities Conducted Prior to Active Mining Activities. The following technology-based effluent limits apply to authorized discharges from all earth-disturbing activities conducted prior to active mining activities defined in Part 8.H.3.2(a) and 8.H.3.2(b). These limits supersede the technology-based limits listed in Part 2.1.2 and Part 8.H.5 of the MSGP.

8.H.4.1.1 Erosion and sediment control installation requirements.

- By the time construction activities commence, install and make operational downgradient sediment controls, unless this timeframe is infeasible. If infeasible you must install and make such controls operational as soon as practicable or as soon as site conditions permit.
- All other stormwater controls described in the SWPPP must be installed and made operational as soon as conditions on each portion of the site allows.

8.H.4.1.2 Erosion and sediment control maintenance requirements. You must:

- Ensure that all erosion and sediment controls remain in effective operating condition.
- Wherever you determine that a stormwater control needs maintenance to continue operating effectively, initiate efforts to fix the problem immediately after its discovery, and complete such work by the end of the next work day.
- When a stormwater control must be replaced or significantly repaired, complete the work within 7 days, unless infeasible. If 7 days is infeasible, you must complete the installation or repair as soon practicable.

8.H.4.1.3 Perimeter controls. You must:

- Install sediment controls along those perimeter areas of your disturbed area that will receive stormwater, except where site conditions prevent the use of such controls (in which case, maximize their installation to the extent practicable).
- Remove sediment before it accumulates to one-half of the above-ground height of any perimeter control.

8.H.4.1.4 Sediment track-out. For construction vehicles and equipment exiting the site directly onto paved roads, you must:

- Use appropriate stabilization techniques to minimize sediment track-out from vehicles and equipment prior to exit;
- Use additional controls to remove sediment from vehicle and equipment tires prior to exit, where necessary;
- Remove sediment that is tracked out onto paved roads by end of the work day.

Note: EPA recognizes that some fine grains may remain visible on the surfaces of off-site streets, other paved areas, and sidewalks even after you have implemented sediment removal practices. Such "staining" is not a violation of Part 8.H.4.1.4.

8.H.4.1.5 Soil or sediment stockpiles. You must:

- Minimize erosion of stockpiles from stormwater and wind via temporary cover, if feasible.

- Prevent up-slope stormwater flows from causing erosion of stockpiles (e.g., by diverting flows around the stockpile).
- Minimize sediment from stormwater that runs off of stockpiles, using sediment controls (e.g., a sediment barrier or downslope sediment control).

8.H.4.1.6 Sediment basins. If you intend to install a sediment basin to treat stormwater from your earth-disturbing activities, you must:

- Provide storage for either (1) the 2-year, 24-hour storm, or (2) 3,600 cubic feet per acre drained.
- Prevent erosion of (1) basin embankments using stabilization controls (e.g., erosion control blankets), and (2) the inlet and outlet points of the basin using erosion controls and velocity dissipation devices.

8.H.4.1.7 Minimize dust. You must minimize the generation of dust through the appropriate application of water or other dust suppression techniques that minimize pollutants being discharged into surface waters.

8.H.4.1.8 Restrictions on use of treatment chemicals. If you intend to use sediment treatment chemicals at your site, you are subject to the following minimum requirements:

- Use conventional erosion and sediment controls prior to and after application of chemicals;
- Select chemicals suited to soil type, and expected turbidity, pH, flow rate;
- Minimize the discharge risk from stored chemicals;
- Comply with state/local requirements;
- Use chemicals in accordance with good engineering practices and specifications of chemical supplier;
- Ensure proper training;
- Provide proper SWPPP documentation.

If you plan to use cationic treatment chemicals (as defined in Appendix A), you are ineligible for coverage under this permit, unless you notify your applicable EPA Regional Office in advance and the EPA Regional Office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards.

8.H.4.1.9 Site stabilization requirements for earth-disturbing activities performed for purposes of mine site preparation as defined in 8.H.3.2(a) (i.e., not applicable to construction of staging areas for structures and access roads as defined in 8.H.3.2(b)). You must comply with the following stabilization requirements except where the intended function of the site accounts for such disturbed earth (e.g., the earth disturbances will become actively mined, or the controls implemented at the active mining area effectively control the disturbance):

- *Temporary stabilization of disturbed areas.* Stabilization measures must be initiated immediately in portions of the site where earth-disturbing activities performed for purposes of mine site preparation (as defined in 8.H.3.2(a)) have temporarily ceased, but in no case more than 14 days after such activities have temporarily ceased. In arid, semi-arid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after earth-disturbing activities performed for purposes of mine site preparation has temporarily ceased, temporary vegetative

stabilization measures must be initiated as soon as practicable. Until temporary vegetative stabilization is achieved, interim measures such as erosion control blankets with an appropriate seed base and tackifiers must be employed. In areas of the site where earth-disturbing activities performed for purposes of mine site preparation have permanently ceased prior to active mining, temporary stabilization measures must be implemented to minimize mobilization of sediment or other pollutants until active mining activities commence.

- *Final stabilization of disturbed areas.* Stabilization measures must be initiated immediately where earth-disturbing activities performed for purposes of mine site preparation (as defined in 8.H.3.2(a)) have permanently ceased, but in no case more than 14 days after the earth-disturbing activities have permanently ceased. In arid, semi-arid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after earth-disturbing activities have permanently ceased, final vegetative stabilization measures must be initiated as soon as possible. Until final stabilization is achieved, temporary stabilization measures, such as erosion control blankets with an appropriate seed base and tackifiers, must be used.

8.H.4.2 Additional Technology-Based Effluent Limits Applicable Only to the Construction of Staging Areas for Structures and Access Roads. The following technology-based effluent limits apply to authorized discharges from earth-disturbing activities associated with the construction of staging areas and the construction of access roads, as defined in Part 8.H.3.2(b). These limits supersede the technology-based limits listed in Part 2.1.2 and Part 8.H.5 of the MSGP. These limits do not apply to earth-disturbing activities performed for purposes of mine site preparation (as defined in 8.H.3.2(a)).

8.H.4.2.1 Area of disturbance. You must minimize the amount of soil exposed during construction activities.

8.H.4.2.2 Erosion and sediment control design requirements. You must:

- Design, install and maintain effective erosion and sediment controls to minimize the discharge of pollutants from construction activities. Account for the following factors in designing your erosion and sediment controls:
 - The expected amount, frequency, intensity and duration of precipitation;
 - The nature of stormwater runoff and run-on at the site, including factors such as impervious surfaces, slopes and site drainage features;
 - The range of soil particle sizes expected to be present on the site.
- Direct discharges from your stormwater controls to vegetated areas of your site to increase sediment removal and maximize stormwater infiltration, including any natural buffers, unless infeasible. Use velocity dissipation devices if necessary to prevent erosion when directing stormwater to vegetated areas.
- If any stormwater flow becomes or will be channelized at your site, you must design erosion and sediment controls to control both peak flowrates and total stormwater volume to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points.
- If you install stormwater conveyance channels, they must be designed to avoid unstabilized areas on the site and to reduce erosion, unless infeasible. In addition, you must minimize erosion of channels and their embankments, outlets, adjacent streambanks, slopes, and downstream

waters during discharge conditions through the use of erosion controls and velocity dissipation devices within and along the length of any constructed stormwater conveyance channel, and at any outlet to provide a non-erosive flow velocity.

8.H.4.2.3 Natural Buffers. For any stormwater discharges from construction activities within 50 feet of a water of the U.S., you must comply with one of the following compliance alternatives:

1. Provide a 50-foot undisturbed natural buffer between construction activities and the water of the U.S.; or
2. Provide an undisturbed natural buffer that is less than 50 feet supplemented by additional erosion and sediment controls, which in combination, achieve a sediment load reduction that is equivalent to a 50-foot undisturbed natural buffer; or
3. If it is infeasible to provide an undisturbed natural buffer of any size, implement erosion and sediment controls that achieve a sediment load reduction that is equivalent to a 50-foot undisturbed natural buffer.

There are exceptions when buffer requirements do not apply:

- There is no stormwater discharge from construction disturbances to a water of the U.S.;
- The natural buffer has already been eliminated by preexisting development disturbances;
- The disturbance is for the construction of a water-dependent structure or construction approved under a CWA section 404 permit;
- For linear construction projects, you are not required to comply with the requirements if there are site constraints provided that, to the extent feasible, you limit disturbances within 50 feet of a water of the U.S. and/or you provide supplemental erosion and sediment controls to treat stormwater discharges from any disturbances within 50 feet of a water of the U.S.

See

http://water.epa.gov/polwaste/npdes/stormwater/upload/cgp2012_appendixg.pdf for guidance on complying with these alternatives.

8.H.4.2.4 Soil or sediment stockpiles. In addition to the requirements in Part 8.H.4.1.5, you must locate any piles outside of any natural buffers established under Part 8.H.4.2.3.

8.H.4.2.5 Sediment basins. In addition to the requirements in Part 8.H.4.1.6, you must locate sediment basins outside of any surface waters and any natural buffers established under Part 8.H.4.2.3, and you must utilize outlet structures that withdraw water from the surface, unless infeasible.

8.H.4.2.6 Native topsoil preservation. You must preserve native topsoil removed during clearing, grading, or excavation, unless infeasible. Store topsoil in a manner that will maximize its use in reclamation or final vegetative stabilization (e.g., by keeping the topsoil stabilized with seed or similar measures). This requirement does not apply if the intended function of the disturbed area dictates that topsoil be disturbed or removed.

- 8.H.4.2.7 Steep slopes.** You must minimize the disturbance of steep slopes. The permit does not prevent or prohibit disturbance on steep slopes.

Depending on site conditions and needs, disturbance on steep slopes may be necessary (e.g., a road cut in mountainous terrain; for grading steep slopes prior to erecting the mine office). Where steep slope disturbances are necessary, you can minimize the disturbances to steep slopes through the implementation of a number of standard erosion and sediment control practices, such as by phasing disturbances in these areas and using stabilization practices specifically for steep grades.

- 8.H.4.2.8 Soil compaction.** Where final vegetative stabilization will occur or where infiltration practices will be installed, you must either restrict vehicle/equipment use in these areas to avoid soil compaction or use soil conditioning techniques to support vegetative growth. Minimizing soil compaction is not required where compacted soil is integral to the functionality of the site.

- 8.H.4.2.9 Dewatering Practices.** You are prohibited from discharging ground water or accumulated stormwater that is removed from excavations, trenches, foundations, vaults or other similar points of accumulation, unless such waters are first effectively managed by appropriate controls (e.g., sediment basins or sediment traps, sediment socks, dewatering tanks, tube settlers, weir tanks, or filtration systems). Uncontaminated, non-turbid dewatering water can be discharged without being routed to a control.

You must also meet the following requirements for dewatering activities:

- Discharge requirements:
 - No discharging visible floating solids or foam;
 - Remove oil, grease and other pollutants from dewatering water via an oil-water separator or suitable filtration device (such as a cartridge filter);
 - Utilize vegetated upland areas of the site, to the extent feasible, to infiltrate dewatering water before discharge. In no case shall waters of the U.S. be considered part of the treatment area;
 - Implement velocity dissipation devices at all points where dewatering water is discharged;
 - Haul backwash water away for disposal or return it to the beginning of the treatment process; and
 - Clean or replace the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.
- Treatment chemical restrictions: If you use polymers, flocculants or other chemicals to treat dewatering water, you must comply with the requirements in Parts 8.H.4.1.8.

8.H.4.2.10 Pollution prevention requirements.

- *Prohibited discharges* (this non-exhaustive list of prohibited non-stormwater discharges is included here as a reminder that only the only allowable non-stormwater discharges are those enumerated in Part 1.1.3):
 - Wastewater from washout of concrete;
 - Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials;
 - Fuels, oils, or other pollutants used for operation and maintenance of vehicles or equipment;

- Soaps, solvents, or detergents used in vehicle or equipment washing;
 - Toxic or hazardous substances from a spill or other release.
- *Design and location requirements:* Minimize the discharge of pollutants from pollutant sources by:
 - Minimizing exposure;
 - Using secondary containment, spill kits, or other equivalent measures;
 - Locating pollution sources away from surface waters, storm sewer inlets, and drainageways;
 - Cleaning up spills immediately (do not clean by hosing area down).
- *Pollution prevention requirements for wash waters:* Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
- *Pollution prevention requirements for the storage, handling, and disposal of construction products, materials, and wastes:* Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to stormwater. Minimization of exposure is not required in cases where the exposure to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

8.H.4.2.11 Site Stabilization requirements for the construction of staging areas for structures and access roads as defined in 8.H.3.2(b) (*i.e., not applicable to earth-disturbing activities performed for purposes of mine site preparation as defined in 8.H.3.2(a)*). You must comply with the following stabilization requirements, except where the intended function of the site accounts for such disturbed earth (e.g., the area of construction will become actively mined, or the controls implemented at the active mining area effectively control the disturbance):

- By no later than the end of the next work day after construction work in an area has stopped permanently or temporarily ("temporarily" means the land will be idle for a period of 14 days or more but earth-disturbing activities will resume in the future), immediately initiate stabilization measures;
- If using vegetative measures, by no later than 14 days after initiating stabilization:
 - Seed or plant the area, and provide temporary cover to protect the planted area;
 - Once established, vegetation must be uniform, perennial (if final stabilization), and cover at least 70% of stabilized area based on density of native vegetation.
- If using non-vegetative stabilization, by no later than 14 days after initiating stabilization:
 - Install or apply all non-vegetative measures;
 - Cover all areas of exposed soil.

Note: For the purposes of this permit, EPA will consider any of the following types of activities to constitute the initiation of stabilization: 1. Prepping the soil for vegetative or non-vegetative stabilization; 2. Applying mulch or other non-vegetative product to the exposed area; 3. Seeding or planting

the exposed area; 4. Starting any of the activities in # 1 – 3 on a portion of the area to be stabilized, but not on the entire area; and 5. Finalizing arrangements to have stabilization product fully installed in compliance with the applicable deadline for completing stabilization.

Exceptions:

- Arid, semi-arid (if construction occurs during seasonally dry period), or drought-stricken areas:
 - Within 14 days of stopping construction work in an area, install any necessary non-vegetative stabilization measures;
 - Initiate vegetative stabilization as soon as conditions on the site allow;
 - Document the schedule that will be followed for initiating and completing vegetative stabilization;
 - Plant the area so that within 3 years the 70% cover requirement is met.
- Sites affected by severe storm events or other unforeseen circumstances:
 - Initiate vegetative stabilization as soon conditions on the site allow;
 - Document the schedule that will be followed for initiating and completing vegetative stabilization;
 - Plant the area so that so that within 3 years the 70% cover requirement is met.

8.H.4.3 *Water Quality-Based Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.*

The following water quality-based limits apply to earth-disturbing activities conducted prior to active mining activities defined in Part 8.H.3.2(a) and 8.H.3.2(b), in addition to the water quality-based limits in Part 2.2 of the MSGP.

Stricter requirements apply if your site will discharge to an impaired water or a water that is identified by your state, tribe, or EPA as a Tier 2 or Tier 2.5 for antidegradation purposes:

- More rapid stabilization of exposed areas: Complete initial stabilization activities within 7 days of stopping earth-disturbing work.
- More frequent site inspections: Once every 7 days and within 24 hours of a storm event of 0.25 inches or greater.

8.H.4.4 *Inspection Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.*

The following requirements supersede the inspections requirements in Part 3 and 8.H.7 of the MSGP for earth-disturbing activities conducted prior to active mining activities defined in Part 8.H.3.2(a) and 8.H.3.2(b).

8.H.4.4.1 *Inspection Frequency*

- At least once every 7 calendar days, or
- Once every 14 calendar days and within 24 hours of a storm event of 0.25 inches or greater.

Note:

- Inspections only required during working hours;
- Inspections not required during unsafe conditions; and
- If you choose to inspect once every 14 days, you must have a method for measuring rainfall amount on site (either rain gauge or representative weather station)

Note: To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any

day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that.

Note: You are required to specify in your SWPPP which schedule you will be following.

Note: "Within 24 hours of the occurrence of a storm event" means that you are required to conduct an inspection within 24 hours once a storm event has produced 0.25 inches, even if the storm event is still continuing. Thus, if you have elected to inspect bi-weekly in and there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, you are required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.

8.H.4.4.2 Reductions in Inspection Frequency

- Stabilized areas: You may reduce the frequency of inspections to once per month in any area of your site where stabilization has occurred pursuant to Part 8.H.4.1.9 or 8.H.4.2.11.
- Arid, semi-arid, and drought stricken areas: If earth-disturbing activities are occurring during the seasonally dry period or during a period in which drought is predicted to occur, you may reduce inspections to once per month and within 24 hours of a 0.25 inch storm event.
- Frozen conditions: You may temporarily suspend or reduce inspections to once per month until thawing conditions occur if frozen conditions are continuous and disturbed areas have been stabilized. For extreme conditions in remote areas, e.g., where transit to the site is perilous/restricted or temperatures are routinely below freezing, you may suspend inspections until the conditions are conducive to safe access, and more frequent inspections can resume.

8.H.4.4.3 Areas to be Inspected. You must at a minimum inspect the following areas:

- Disturbed areas;
- Stormwater controls and pollution prevention measures;
- Locations where stabilization measures have been implemented;
- Material, waste, borrow, or equipment storage and maintenance areas;
- Areas where stormwater flows;
- Points of discharge.

8.H.4.4.4 What to Check for During Inspections. At a minimum you must check:

- Whether all stormwater controls are installed, operational, and working as intended;
- Whether any new or modified stormwater controls are needed;
- For conditions that could lead to a spill or leak;
- For visual signs of erosion/sedimentation at points of discharge.

If a discharge is occurring:

- The quality and characteristics of the discharge;
- Whether controls are operating effectively.

8.H.4.4.5 Inspection Report. Within 24 hours of an inspection, complete a report that includes:

- Inspection date;
- Name and title of inspector(s);
- Summary of inspection findings;
- Rainfall amount that triggered the inspection (if applicable);
- If it was unsafe to inspect a portion of the site, include documentation of the reason and the location(s);

- Each inspection report must be signed;
- Keep a current copy of all reports at the site or at an easily accessible location.

8.H.4.5 Cessation of Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities. The requirements in 8.H.4 no longer apply for any earth-disturbing activities conducted prior to active mining activities as defined in 8.H.3.2(a) or 8.H.3.2(b) where:

1. Earth-disturbing activities have ceased; and
2. Stabilization has been met consistent with Part 8.H.4.1.9 or 8.H.4.2.11 (not required for areas where active mining activities will occur).

8.H.5 Technology-Based Effluent Limits for Active Mining Activities.

Note: These requirements do not apply for any discharges from earth-disturbing activities conducted prior to active mining as defined in 8.H.3.2(a) or 8.H.3.2(b).

8.H.5.1 Good Housekeeping Measures. (See also Part 2.1.2.2) As part of your good housekeeping program, in order to minimize discharges of pollutants in stormwater, implement control measures such as the following, where determined to be feasible (list not inclusive): using sweepers and covered storage; watering haul roads to minimize dust generation; and conserving vegetation to minimize erosion. For mines subject to dust control requirements under state or county air quality permits, provided the requirements are equivalent, compliance with such air permit dust requirements shall constitute compliance with the dust control effluent limit in Part 2.1.2.10.

8.H.5.2 Preventive Maintenance. (See also Part 2.1.2.3) Perform inspections or other equivalent measures of storage tanks and pressure lines of fuels, lubricants, hydraulic fluid, and slurry to prevent leaks due to deterioration or faulty connections.

8.H.6 Additional SWPPP Requirements for Mining Operations.

Note: The requirements in Part 8.H.6 are not applicable to inactive coal mining facilities.

8.H.6.1 Other Applicable Regulations. Most active coal mining-related areas (SIC Codes 1221-1241) are subject to sediment and erosion control regulations of the U.S. Office of Surface Mining (OSM) that enforces the Surface Mining Control and Reclamation Act (SMCRA). OSM has granted authority to most coal-producing states to implement SMCRA through State SMCRA regulations. All SMCRA requirements regarding control of stormwater-related pollutant discharges must be addressed and then documented with the SWPPP (directly or by reference).

8.H.6.2 Site Map. (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: haul and access roads; railroad spurs, sliding, and internal hauling lines; conveyor belts, chutes, and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; inactive mines and related areas; acidic spoil, refuse, or unreclaimed disturbed areas; and liquid storage tanks containing pollutants such as caustics, hydraulic fluids, and lubricants.

8.H.6.3 Potential Pollutant Sources. (See also Part 5.2.3) Document in your SWPPP the following sources and activities that have potential pollutants associated with them: truck traffic on haul roads and resulting generation of sediment subject to runoff and dust generation; fuel or other liquid storage; pressure lines containing slurry, hydraulic fluid, or other potential harmful liquids; and loading or temporary storage of acidic refuse or spoil.

8.H.6.4 If you are in compliance with dust control requirements under state or county air quality permits, you must include (or summarize, as necessary) what the state or county air quality permit dust control requirements are and how you've achieved compliance with them.

8.H.7 Additional Inspection Requirements. (See also Part 3.1)

8.H.7.1 *Inspections of Active Mining-Related Areas.* (See also Part 3) Except for earth-disturbing activities conducted prior to active mining activities as defined in Part 8.H.3.2(a) and 8.H.3.2(b), which are subject to Part 8.H.4.4, perform routine inspections of active mining areas covered by this permit, corresponding with the inspections as performed by SMCRA inspectors, of all mining-related areas required by SMCRA. Also maintain the records of the SMCRA authority representative. See Part 8.H.8.1 for inspection requirements for inactive and unstaffed sites.

8.H.7.2 *Sediment and Erosion Control.* (See also Part 2.1.2.5) As indicated in Part 8.H.6.1, SMCRA requirements regarding sediment and erosion control measures must be complied with for those areas subject to SMCRA authority, including inspection requirements.

8.H.7.3 *Routine Site Inspections.* (See also Part 3.1) Your inspection program must include inspections for pollutants entering the drainage system from activities located on or near coal mining-related areas. Among the areas to be inspected are haul and access roads; railroad spurs, sliding, and internal hauling lines; conveyor belts, chutes, and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; and inactive mines and related areas.

8.H.8 Sector-Specific Benchmarks. (See also Part 6)

Table 8.H-1 identifies benchmarks that apply to the specific subsectors of Sector H. These benchmarks apply to both your primary industrial activity and any co-located industrial activities. Note: There are no Part 8.H. 8 monitoring and reporting or impaired waters monitoring requirements for inactive and unstaffed sites.

Table 8.H-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector H1. Coal Mines and Related Areas (SIC 1221-1241)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Total Suspended Solids (TSS)	100 mg/L

8.H.8.1 *Inactive and Unstaffed Sites – Conditional Exemption from No Exposure Requirement for Routine Inspections, Quarterly Visual Assessments, and Benchmark and Impaired Waters Monitoring.* As a Sector H facility, if you are seeking to exercise a waiver from either the quarterly visual assessment or the benchmark and/or impaired waters monitoring requirements for inactive and unstaffed sites (including temporarily inactive sites), you are conditionally exempt from the requirement to certify that “there are no industrial materials or activities exposed to stormwater” in Parts 3.2.3, 6.2.1.3, and 6.2.4.2. Additionally, if you are seeking to reduce your required routine inspection frequency, as is allowed under Part 3.1.1, you are also conditionally exempt from the requirement to certify that “there are no industrial materials or activities exposed to stormwater.” These conditional exemptions are based on the following requirements:

- If circumstances change and your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the applicable benchmark monitoring requirements as if you were in your first year of permit coverage, and the quarterly visual assessment requirements; and
- EPA retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to cause or contribute to an instream excursion above an applicable water quality standard, including designated uses.

Subject to the two conditions above, if your facility is inactive and unstaffed, you are waived from the requirement to conduct routine facility inspections, quarterly visual assessments, and benchmark and impaired waters monitoring. You must still conduct an annual site inspection in accordance with Part 3.1. You are encouraged to inspect your site more frequently where you have reason to believe that severe weather or natural disasters may have damaged control measures or increased discharges.

8.H.9 Termination of Permit Coverage

8.H.9.1 *Termination of Permit Coverage for Sites Reclaimed After December 17, 1990.* A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in Part 8.H.3.5.

8.H.9.2 *Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990.* A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if: (1) stormwater runoff that comes into contact with raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards, (2) soil disturbing activities related to mining at the sites or portion of the site have been completed, (3) the site or portion of the site has been stabilized to minimize soil erosion, and (4) as appropriate depending on location, size, and the potential to contribute pollutants to stormwater discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart I – Sector I – Oil and Gas Extraction.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.1.1 Covered Stormwater Discharges.

The requirements in Subpart I apply to stormwater discharges associated with industrial activity from Oil and Gas Extraction facilities as identified by the SIC Codes specified under Sector I in Table D-1 of Appendix D of the permit.

8.1.1.1 ***Discharges of stormwater runoff from field activities or operations associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities are exempt from NPDES permit coverage unless, in accordance with 40 CFR 122.26(c)(1)(iii), the facility:***

- Has had a discharge of stormwater resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at any time since November 16, 1987; or
- Has had a discharge of stormwater resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or
- Contributes to a violation of a water quality standard.

Any stormwater discharges that require permit coverage as a result of meeting one of the conditions of 122.26(c)(1)(iii) may be covered under this permit unless otherwise required to obtain coverage under an alternative NPDES general permit or an individual NPDES permit as specified in Part 1.6.1.

8.1.2 Limitations on Coverage.

8.1.2.1 *Stormwater Discharges Subject to Effluent Limitation Guidelines.* (See also Part 1.1.4.5) This permit does not authorize stormwater discharges from petroleum drilling operations that are subject to nationally established effluent limitation guidelines found at 40 CFR Part 435, respectively.

8.1.2.2 *Non-Stormwater Discharges.* Discharges of vehicle and equipment wash water, including tank cleaning operations, are not authorized by this permit. Alternatively, wash water discharges must be authorized under a separate NPDES permit, or be discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements. (EPA includes this prohibited non-stormwater discharge here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3).

8.1.3 Additional Technology-Based Effluent Limits.

8.1.3.1 *Vegetative Controls.* Implement vegetative practices designed to preserve existing vegetation, where attainable, and revegetate open areas as soon as practicable after grade drilling. Implement appropriate vegetative practices, such as the following (list not exclusive): temporary or permanent seeding, mulching, sod stabilization, vegetative buffer strips, and tree protection practices. Begin implementing appropriate vegetative practices on all disturbed areas within 14 days following the last activity in that area.

8.1.4 Additional SWPPP Requirements.

8.1.4.1 Drainage Area Site Map. (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: Reportable Quantity (RQ) releases; locations used for the treatment, storage, or disposal of wastes; processing areas and storage areas; chemical mixing areas; construction and drilling areas; all areas subject to the effluent guidelines requirements for “No Discharge” in accordance with 40 CFR 435.32; and the structural controls to achieve compliance with the “No Discharge” requirements.

8.1.4.2 Potential Pollutant Sources. (See also Part 5.2.3) Also document in your SWPPP the following sources and activities that have potential pollutants associated with them: chemical, cement, mud, or gel mixing activities; drilling or mining activities; and equipment cleaning and rehabilitation activities. In addition, include information about the reportable quantity (RQ) release that triggered the permit application requirements: the nature of the release (e.g., spill of oil from a drum storage area), amount of oil or hazardous substance released, amount of substance recovered, date of the release, cause of the release (e.g., poor handling techniques and lack of containment in the area), areas affected by the release (i.e., land and water), procedures to clean up release, actions or procedures implemented to prevent or improve response to a release, and remaining potential contamination of stormwater from release (taking into account human health risks, the control of drinking water intakes, and the designated uses of the receiving water).

8.1.4.3 Erosion and Sediment Controls. (See also Part 2.1.2.5) Unless covered by EPA's Construction General Permit (CGP), the additional documentation requirements for sediment and erosion controls for well drillings and sand/shale mining areas include the following:

8.1.4.3.1 Site Description. Also include a description in your SWPPP of the nature of the exploration activity, estimates of the total area of site and area disturbed due to exploration activity, an estimate of runoff coefficient of the site, a site drainage map, including approximate slopes, and the names of all receiving waters.

8.1.4.3.2 Vegetative Controls. Document vegetative practices used consistent with Part 8.1.3.1 in the SWPPP.

8.1.5 Additional Inspection Requirements.

All erosion and sediment controls must be inspected either: 1) every 7 days; or 2) once every 14 calendar days and within 24 hours of a storm event of 0.25 inches or greater.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart J – Sector J – Non-Metallic Mineral Mining and Dressing.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

Note: Where compliance with a requirement in a separate exploration permit, mining permit, reclamation plan, Surface Mining Control and Reclamation Act (SMCRA) requirements, etc. will result in you fully meeting any requirement in this Subpart, you are considered to have complied with the relevant requirement in this Subpart. You must include documentation in your SWPPP describing your rationale for concluding that any particular action on your part is sufficient to comply with the corresponding requirement in this Subpart.

8.J.1 Covered Stormwater Discharges.

The requirements in Subpart J apply to stormwater discharges associated with industrial activity from Active and Inactive Non-Metallic Mineral Mining and Dressing facilities as identified by the SIC Codes specified under Sector J in Table D-1 of Appendix D of the permit.

8.J.1.1 Covered Discharges from Inactive Facilities. All stormwater discharges.

8.J.1.2 Covered Discharges from Active and Temporarily Inactive Facilities. All stormwater discharges, except for most stormwater discharges subject to the existing effluent limitation guideline at 40 CFR Part 436. Mine dewatering discharges composed entirely of stormwater or uncontaminated ground water seepage from: construction sand and gravel, industrial sand, and crushed stone mining facilities.

8.J.1.3 Covered Discharges from Earth-Disturbing Activities Conducted Prior to Active Mining Activities. All stormwater discharges.

8.J.1.4 Covered Discharges from Sites Undergoing Reclamation. All stormwater discharges.

8.J.2 Limitations on Coverage.

Most stormwater discharges subject to an existing effluent limitation guideline at 40 CFR Part 436 are not authorized by this permit. The exceptions to this limitation, which are covered by this permit, are mine dewatering discharges composed entirely of stormwater or uncontaminated ground water seepage from construction sand and gravel, industrial sand, and crushed stone mining facilities.

8.J.3 Definitions.

The following definitions are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

8.J.3.1 Mining operations – For this permit, mining operations are grouped into two distinct categories, with distinct effluent limits and requirements applicable to each: a) earth-disturbing activities conducted prior to active mining activities); and b) active mining activities, which includes reclamation. "Mining operations" can occur at both inactive mining facilities and temporarily inactive mining facilities.

8.J.3.2 Earth-disturbing activities conducted prior to active mining activities – Consists of two classes of earth-disturbing (i.e., clearing, grading and excavation) activities:

a. activities performed for purposes of mine site preparation, including: cutting new rights of way (except when related to access road construction); providing access to a

mine site for vehicles and equipment (except when related to access road construction); other earth disturbances associated with site preparation activities on any areas where active mining activities have not yet commenced (e.g., for heap leach pads, waste rock facilities, tailings impoundments, wastewater treatment plants); and

b. construction of staging areas to prepare for erecting structures such as to house project personnel and equipment, mill buildings, etc., and construction of access roads. Earth-disturbing activities associated with the construction of staging areas and the construction of access roads conducted prior to active mining are considered to be "construction" and have additional effluent limits in Part 8.J .4.2.

8.J.3.3 Active mining activities – Activities related to the extraction, removal or recovery, and beneficiation of *non-metallic minerals* from the earth; removal of overburden and waste rock to expose mineable minerals; and site reclamation and closure activities. All such activities occur within the "active mining area." Reclamation involves activities undertaken, in compliance with applicable mined land reclamation requirements, to return the land to an appropriate post-mining contour and land use in order to meet applicable federal and state reclamation requirements. In addition, once earth-disturbing activities conducted prior to active mining activities have ceased and all related requirements in Part 8.J.4 have been met, and a well-delineated "active mining area" has been established, all activities (including any clearing, grading, and excavation) that occur within the active mining area are "active mining activities"

8.J.3.4 Active mining area – A place where work or other activity related to the extraction, removal or recovery of *non-metallic minerals* is being conducted, except, with respect to surface mines, any area of land on or in which grading has been completed to return the earth to desired contour and reclamation work has begun.

Note: Earth-disturbing activities described in the definition in Part 8.J.3.2 that occur on areas outside the active mining area (e.g., for expansion of the mine into undeveloped territory) are considered "earth-disturbing conducted prior to active mining activities", and must comply with the requirements in Part 8.J.4.

8.J.3.5 Inactive mineral mining facility – A site or portion of a site where mineral mining and/or milling occurred in the past but there are no active mining activities occurring as defined above, and where the inactive portion is not covered by an active mining permit issued by the applicable state or federal agency. An inactive mineral mining facility has an identifiable owner / operator. Sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, and sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim are not considered either active or inactive mining facilities and do not require an NPDES industrial stormwater permit.

8.J.3.6 Temporarily inactive mineral mining facility – A site or portion of a site where *non-metallic mineral mining* and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable state or federal agency.

8.J.4 Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.

Stormwater discharges from earth-disturbing activities conducted prior to active mining activities (defined in Part 8.J.3.2) are covered under this permit. For such earth-disturbing activities, you must comply with all applicable requirements in Parts 1-9 of the MSGP except for

the technology-based effluent limits in Part 8.J.5 and Part 2.1.2, the inspection requirements in Part 8.J.7 and Part 3, and the monitoring requirements in Part 8.J.8 and Part 6.

Authorized discharges from areas where earth-disturbing activities have ceased and stabilization as specified in Part 8.J.4.19 or 8.J.4.2.11, where appropriate, has been completed (stabilization is not required for areas where active mining activities will occur), are no longer subject to the Part 8.J.4 requirements. At such time, authorized discharges become subject to all other applicable requirements in the MSGP, including the effluent limits in Parts 2.1.2 and 8.J.5, the inspection requirements in Parts 3 and 8.J.7, and the monitoring requirements in Parts 6 and 8.J.8.

8.J.4.1 Technology-Based Effluent Limits Applicable to All Earth-Disturbing Activities Conducted Prior to Active mining Activities. The following technology-based effluent limits apply to authorized discharges from all earth-disturbing activities conducted prior to active mining activities defined in Part 8.J.3.2(a) and 8.J.3.2(b). These limits supersede the technology-based limits listed in Part 2.1.2 and Part 8.J.5 of the MSGP.

8.J.4.1.1 Erosion and sediment control installation requirements.

- By the time construction activities commence, install and make operational downgradient sediment controls, unless this timeframe is infeasible. If infeasible you must install and make such controls operational as soon as practicable or as soon as site conditions permit.
- All other stormwater controls described in the SWPPP must be installed and made operational as soon as conditions on each portion of the site allows.

8.J.4.1.2 Erosion and sediment control maintenance requirements. You must:

- Ensure that all erosion and sediment controls remain in effective operating condition.
- Wherever you determine that a stormwater control needs maintenance to continue operating effectively, initiate efforts to fix the problem immediately after its discovery, and complete such work by the end of the next work day.
- When a stormwater control must be replaced or significantly repaired, complete the work within 7 days, unless infeasible. If 7 days is infeasible, you must complete the installation or repair as soon practicable.

8.J.4.1.3 Perimeter controls. You must:

- Install sediment controls along those perimeter areas of your disturbed area that will receive stormwater, except where site conditions prevent the use of such controls (in which case, maximize their installation to the extent practicable).
- Remove sediment before it accumulates to one-half of the above-ground height of any perimeter control.

8.J.4.1.4 Sediment track-out. For construction vehicles and equipment exiting the site directly onto paved roads, you must:

- Use appropriate stabilization techniques to minimize sediment track-out from vehicles and equipment prior to exit;
- Use additional controls to remove sediment from vehicle and equipment tires prior to exit, where necessary;
- Remove sediment that is tracked out onto paved roads by end of the work day.

Note: EPA recognizes that some fine grains may remain visible on the surfaces of off-site streets, other paved areas, and sidewalks even after you have

implemented sediment removal practices. Such “staining” is not a violation of Part 8.J.4.1.4.

8.J.4.1.5 Soil or sediment stockpiles. You must:

- Minimize erosion of stockpiles from stormwater and wind via temporary cover, if feasible.
- Prevent up-slope stormwater flows from causing erosion of stockpiles (e.g., by diverting flows around the stockpile).
- Minimize sediment from stormwater that runs off of stockpiles, using sediment controls (e.g., a sediment barrier or downslope sediment control).

8.J.4.1.6 Sediment basins. If you intend to install a sediment basin to treat stormwater from your earth-disturbing activities, you must:

- Provide storage for either (1) the 2-year, 24-hour storm, or (2) 3,600 cubic feet per acre drained.
- Prevent erosion of (1) basin embankments using stabilization controls (e.g., erosion control blankets), and (2) the inlet and outlet points of the basin using erosion controls and velocity dissipation devices.

8.J.4.1.7 Minimize dust. You must minimize the generation of dust through the appropriate application of water or other dust suppression techniques that minimize pollutants being discharged into surface waters.

8.J.4.1.8 Restrictions on use of treatment chemicals. If you intend to use sediment treatment chemicals at your site, you are subject to the following minimum requirements:

- Use conventional erosion and sediment controls prior to and after application of chemicals;
- Select chemicals suited to soil type, and expected turbidity, pH, flow rate;
- Minimize the discharge risk from stored chemicals;
- Comply with state/local requirements;
- Use chemicals in accordance with good engineering practices and specifications of chemical supplier;
- Ensure proper training;
- Provide proper SWPPP documentation.

If you plan to use cationic treatment chemicals (as defined in Appendix A), you are ineligible for coverage under this permit, unless you notify your applicable EPA Regional Office in advance and the EPA Regional Office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards.

8.J.4.1.9 Site stabilization requirements for earth-disturbing activities performed for purposes of mine site preparation as defined in 8.J.3.2(a) (i.e., not applicable to construction of staging areas for structures and access roads as defined in 8.J.3.2(b)). You must comply with the following stabilization requirements except where the intended function of the site accounts for such disturbed earth (e.g., the earth disturbances will become actively mined, or the controls implemented at the active mining area effectively control the disturbance):

- *Temporary stabilization of disturbed areas.* Stabilization measures must be initiated immediately in portions of the site where earth-disturbing activities performed for purposes of mine site preparation (as defined in

8.J.3.2(a)) have temporarily ceased, but in no case more than 14 days after such activities have temporarily ceased. In arid, semi-arid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after earth-disturbing activities performed for purposes of mine site preparation has temporarily ceased, temporary vegetative stabilization measures must be initiated as soon as practicable. Until temporary vegetative stabilization is achieved, interim measures such as erosion control blankets with an appropriate seed base and tackifiers must be employed. In areas of the site where earth-disturbing activities performed for purposes of mine site preparation have permanently ceased prior to active mining, temporary stabilization measures must be implemented to minimize mobilization of sediment or other pollutants until active mining activities commence.

- *Final stabilization of disturbed areas.* Stabilization measures must be initiated immediately where earth-disturbing activities performed for purposes of mine site preparation (as defined in 8.J.3.2(a)) have permanently ceased, but in no case more than 14 days after the earth-disturbing activities have permanently ceased. In arid, semi-arid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after earth-disturbing activities have permanently ceased, final vegetative stabilization measures must be initiated as soon as possible. Until final stabilization is achieved, temporary stabilization measures, such as erosion control blankets with an appropriate seed base and tackifiers, must be used.

8.J.4.2 Additional Technology-Based Effluent Limits Applicable Only to the Construction of Staging Areas for Structures and Access Roads. The following technology-based effluent limits apply to authorized discharges from earth-disturbing activities associated with the construction of staging areas and the construction of access roads, as defined in Part 8.J.3.2(b). These limits supersede the technology-based limits listed in Part 2.1.2 and Part 8.J.5 of the MSGP. These limits do not apply to earth-disturbing activities performed for purposes of mine site preparation (as defined in 8.J.3.2(a)).

8.J.4.2.1 Area of disturbance. You must minimize the amount of soil exposed during construction activities.

8.J.4.2.2 Erosion and sediment control design requirements. You must:

- Design, install and maintain effective erosion and sediment controls to minimize the discharge of pollutants from construction activities. Account for the following factors in designing your erosion and sediment controls:
 - The expected amount, frequency, intensity and duration of precipitation;
 - The nature of stormwater runoff and run-on at the site, including factors such as impervious surfaces, slopes and site drainage features;
 - The range of soil particle sizes expected to be present on the site.
- Direct discharges from your stormwater controls to vegetated areas of your site to increase sediment removal and maximize stormwater infiltration, including any natural buffers, unless infeasible. Use velocity dissipation devices if necessary to prevent erosion when directing stormwater to vegetated areas.

- If any stormwater flow becomes or will be channelized at your site, you must design erosion and sediment controls to control both peak flowrates and total stormwater volume to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points.
- If you install stormwater conveyance channels, they must be designed to avoid unstabilized areas on the site and to reduce erosion, unless infeasible. In addition, you must minimize erosion of channels and their embankments, outlets, adjacent streambanks, slopes, and downstream waters during discharge conditions through the use of erosion controls and velocity dissipation devices within and along the length of any constructed stormwater conveyance channel, and at any outlet to provide a non-erosive flow velocity.

8.J.4.2.3 Natural Buffers. For any stormwater discharges from construction activities within 50 feet of a water of the U.S., you must comply with one of the following compliance alternatives:

1. Provide a 50-foot undisturbed natural buffer between construction activities and the water of the U.S.; or
2. Provide an undisturbed natural buffer that is less than 50 feet supplemented by additional erosion and sediment controls, which in combination, achieve a sediment load reduction that is equivalent to a 50-foot undisturbed natural buffer; or
3. If it is infeasible to provide an undisturbed natural buffer of any size, implement erosion and sediment controls that achieve a sediment load reduction that is equivalent to a 50-foot undisturbed natural buffer.

There are exceptions when buffer requirements do not apply:

- There is no stormwater discharge from construction disturbances to a water of the U.S.;
- The natural buffer has already been eliminated by preexisting development disturbances;
- The disturbance is for the construction of a water-dependent structure or construction approved under a CWA section 404 permit;
- For linear construction projects, you are not required to comply with the requirements if there are site constraints provided that, to the extent feasible, you limit disturbances within 50 feet of a water of the U.S. and/or you provide supplemental erosion and sediment controls to treat stormwater discharges from any disturbances within 50 feet of a water of the U.S.

See

http://water.epa.gov/polwaste/npdes/stormwater/upload/cgp2012_appendixg.pdf for guidance on complying with these alternatives.

8.J.4.2.4 Soil or sediment stockpiles. In addition to the requirements in Part 8.J.4.1.5, you must locate any piles outside of any natural buffers established under Part 8.J.4.2.3.

8.J.4.2.5 Sediment basins. In addition to the requirements in Part 8.J.4.1.6, you must locate sediment basins outside of any surface waters and any natural buffers established under Part 8.J.4.2.3, and you must utilize outlet structures that withdraw water from the surface, unless infeasible.

8.J.4.2.6 Native topsoil preservation. You must preserve native topsoil removed during clearing, grading, or excavation, unless infeasible. Store topsoil in a manner that will maximize its use in reclamation or final vegetative stabilization (e.g., by keeping the topsoil stabilized with seed or similar measures). This requirement does not apply if the intended function of the disturbed area dictates that topsoil be disturbed or removed.

8.J.4.2.7 Steep slopes. You must minimize the disturbance of steep slopes. The permit does not prevent or prohibit disturbance on steep slopes.

Depending on site conditions and needs, disturbance on steep slopes may be necessary (e.g., a road cut in mountainous terrain; for grading steep slopes prior to erecting the mine office). Where steep slope disturbances are necessary, you can minimize the disturbances to steep slopes through the implementation of a number of standard erosion and sediment control practices, such as by phasing disturbances in these areas and using stabilization practices specifically for steep grades.

8.J.4.2.8 Soil compaction. Where final vegetative stabilization will occur or where infiltration practices will be installed, you must either restrict vehicle/equipment use in these areas to avoid soil compaction or use soil conditioning techniques to support vegetative growth. Minimizing soil compaction is not required where compacted soil is integral to the functionality of the site.

8.J.4.2.9 Dewatering Practices. You are prohibited from discharging ground water or accumulated stormwater that is removed from excavations, trenches, foundations, vaults or other similar points of accumulation, unless such waters are first effectively managed by appropriate controls (e.g., sediment basins or sediment traps, sediment socks, dewatering tanks, tube settlers, weir tanks, or filtration systems). Uncontaminated, non-turbid dewatering water can be discharged without being routed to a control.

You must also meet the following requirements for dewatering activities:

- *Discharge requirements:*
 - No discharging visible floating solids or foam;
 - Remove oil, grease and other pollutants from dewatering water via an oil-water separator or suitable filtration device (such as a cartridge filter);
 - Utilize vegetated upland areas of the site, to the extent feasible, to infiltrate dewatering water before discharge. In no case shall waters of the U.S. be considered part of the treatment area;
 - Implement velocity dissipation devices at all points where dewatering water is discharged;
 - Haul backwash water away for disposal or return it to the beginning of the treatment process; and
 - Clean or replace the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.
- *Treatment chemical restrictions:* If you use polymers, flocculants or other chemicals to treat dewatering water, you must comply with the requirements in Parts 8.J.4.1.8.

8.J.4.2.10 Pollution prevention requirements.

- *Prohibited discharges* (this non-exhaustive list of prohibited non-stormwater discharges is included here as a reminder that only the only allowable non-stormwater discharges are those enumerated in Part 1.1.3):
 - Wastewater from washout of concrete;
 - Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials;
 - Fuels, oils, or other pollutants used for operation and maintenance of vehicles or equipment;
 - Soaps, solvents, or detergents used in vehicle or equipment washing;
 - Toxic or hazardous substances from a spill or other release.
- *Design and location requirements:* Minimize the discharge of pollutants from pollutant sources by:
 - Minimizing exposure;
 - Using secondary containment, spill kits, or other equivalent measures;
 - Locating pollution sources away from surface waters, storm sewer inlets, and drainageways;
 - Cleaning up spills immediately (do not clean by hosing area down).
- *Pollution prevention requirements for wash waters:* Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
- *Pollution prevention requirements for the storage, handling, and disposal of construction products, materials, and wastes:* Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to stormwater. Minimization of exposure is not required in cases where the exposure to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

8.J.4.2.11 Site Stabilization requirements for the construction of staging areas for structures and access roads as defined in 8.J.3.2(b) (i.e., not applicable to earth-disturbing activities performed for purposes of mine site preparation as defined in 8.J.3.2(a)). You must comply with the following stabilization requirements, except where the intended function of the site accounts for such disturbed earth (e.g., the area of construction will become actively mined, or the controls implemented at the active mining area effectively control the disturbance):

- By no later than the end of the next work day after construction work in an area has stopped permanently or temporarily ("temporarily" means the land will be idle for a period of 14 days or more but earth-disturbing activities will resume in the future), immediately initiate stabilization measures;
- If using vegetative measures, by no later than 14 days after initiating stabilization:
 - Seed or plant the area, and provide temporary cover to protect the planted area;
 - Once established, vegetation must be uniform, perennial (if final stabilization), and cover at least 70% of stabilized area based on density of native vegetation.

- If using non-vegetative stabilization, by no later than 14 days after initiating stabilization:
 - Install or apply all non-vegetative measures;
 - Cover all areas of exposed soil.

Note: For the purposes of this permit, EPA will consider any of the following types of activities to constitute the initiation of stabilization: 1. Prepping the soil for vegetative or non-vegetative stabilization; 2. Applying mulch or other non-vegetative product to the exposed area; 3. Seeding or planting the exposed area; 4. Starting any of the activities in # 1 – 3 on a portion of the area to be stabilized, but not on the entire area; and 5. Finalizing arrangements to have stabilization product fully installed in compliance with the applicable deadline for completing stabilization.

Exceptions:

- Arid, semi-arid (if construction occurs during seasonally dry period), or drought-stricken areas:
 - Within 14 days of stopping construction work in an area, install any necessary non-vegetative stabilization measures;
 - Initiate vegetative stabilization as soon as conditions on the site allow;
 - Document the schedule that will be followed for initiating and completing vegetative stabilization;
 - Plant the area so that within 3 years the 70% cover requirement is met.
- Sites affected by severe storm events or other unforeseen circumstances:
 - Initiate vegetative stabilization as soon conditions on the site allow;
 - Document the schedule that will be followed for initiating and completing vegetative stabilization;
 - Plant the area so that so that within 3 years the 70% cover requirement is met.

8.J.4.3 Water Quality-Based Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.

The following water quality-based limits apply to earth-disturbing activities conducted prior to active mining activities defined in Part 8.J.3.2(a) and 8.J.3.2(b), in addition to the water quality-based limits in Part 2.2 of the MSGP.

Stricter requirements apply if your site will discharge to an impaired water or a water that is identified by your state, tribe, or EPA as a Tier 2 or Tier 2.5 for antidegradation purposes:

- More rapid stabilization of exposed areas: Complete initial stabilization activities within 7 days of stopping construction work.
- More frequent site inspections: Once every 7 days and within 24 hours of a storm event of 0.25 inches or greater.

8.J.4.4 Inspection Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.

The following requirements supersede the inspections requirements in Part 3 and 8.J.7 of the MSGP for earth-disturbing activities conducted prior to active mining activities defined in Part 8.J.3.2(a) and 8.J.3.2(b).

8.J.4.4.1 Inspection Frequency

- At least once every 7 calendar days, or
- Once every 14 calendar days and within 24 hours of a storm event of 0.25 inches or greater.

Note:

- Inspections only required during working hours;
- Inspections not required during unsafe conditions; and
- If you choose to inspect once every 14 days, you must have a method for measuring rainfall amount on site (either rain gauge or representative weather station)

Note: To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day.

Note: You are required to specify in your SWPPP which schedule you will be following.

Note: "Within 24 hours of the occurrence of a storm event" means that you are required to conduct an inspection within 24 hours once a storm event has produced 0.25 inches, even if the storm event is still continuing. Thus, if you have elected to inspect bi- and there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, you are required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.

8.J.4.4.2 Reductions in Inspection Frequency

- Stabilized areas: You may reduce the frequency of inspections to once per month in any area of your site where stabilization has occurred pursuant to Part 8.J.4.1.9 or 8.J.4.2.11.
- Arid, semi-arid, and drought stricken areas: If earth-disturbing activities are occurring during the seasonally dry period or during a period in which drought is predicted to occur, you may reduce inspections to once per month and within 24 hours of a 0.25 inch storm event.
- Frozen conditions: You may temporarily suspend or reduce inspections to once per month until thawing conditions occur if frozen conditions are continuous and disturbed areas have been stabilized. For extreme conditions in remote areas, e.g., where transit to the site is perilous/restricted or temperatures are routinely below freezing, you may suspend inspections until the conditions are conducive to safe access, and more frequent inspections can resume.

8.J.4.4.3 Areas to be Inspected. You must at a minimum inspect the all of the following areas:

- Disturbed areas;
- Stormwater controls and pollution prevention measures;
- Locations where stabilization measures have been implemented;
- Material, waste, borrow, or equipment storage and maintenance areas;
- Areas where stormwater flows;
- Points of discharge.

8.J.4.4.4 What to Check for During Inspections. At a minimum you must check:

- Whether all stormwater controls are installed, operational and working as intended;
- Whether any new or modified stormwater controls are needed;
- For conditions that could lead to a spill or leak;

- For visual signs of erosion/sedimentation at points of discharge.

If a discharge is occurring:

- The quality and characteristics of the discharge;
- Whether controls are operating effectively.

8.J.4.4.5 Inspection Report. Within 24 hours of an inspection, complete a report that includes:

- Inspection date;
- Name and title of inspector(s);
- Summary of inspection findings;
- Rainfall amount that triggered the inspection (if applicable);
- If it was unsafe to inspect a portion of the site, include documentation of the reason and the location(s);
- Each inspection report must be signed;
- Keep a current copy of all reports at the site or at an easily accessible location.

8.J.4.5 Cessation of Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities. The requirements in 8.J.4 no longer apply for any earth-disturbing activities conducted prior to active mining activities as defined in 8.J.3.2(a) or 8.J.3.2(b) where:

1. Earth-disturbing activities have ceased; and
2. Stabilization has been met consistent with Part 8.J.4.1.9 or 8.J.4.2.11 (not required for areas where active mining activities will occur).

8.J.5 Technology-Based Effluent Limits for Active Mining Activities.

Note: These requirements do not apply for any discharges from earth-disturbing activities conducted prior to active-mining as defined in 8.J.3.2(a) or 8.J.3.2(b).

8.J.5.1 Employee Training. Conduct employee training at least annually at active and temporarily inactive sites. (See also Part 2.1.2.8).

8.J.5.2 Stormwater Controls. Apart from the control measures you implement to meet your Part 2 effluent limits, where necessary to minimize pollutant discharges in stormwater, implement the following control measures at your site. The potential pollutants identified in Part 8.J.6.3 shall determine the priority and appropriateness of the control measures selected.

Stormwater Diversions: Divert stormwater away from potential pollutant sources through implementation of control measures such as the following, where determined to be feasible (list not exclusive): interceptor or diversion controls (e.g., dikes, swales, curbs, berms); pipe slope drains; subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts); or their equivalents. For mines subject to dust control requirements under state or county air quality permits, provided the requirements are equivalent, compliance with such air permit dust requirements shall constitute compliance with the dust control effluent limit in Part 2.1.2.10.

Capping: When capping is necessary to minimize pollutant discharges in stormwater, identify the source being capped and the material used to construct the cap.

Treatment: If treatment of stormwater (e.g., chemical or physical systems, oil and water separators, artificial wetlands) is necessary to protect water quality, describe the type and location of treatment used. Passive and/or active treatment of stormwater runoff is encouraged. Treated runoff may be discharged as a stormwater source regulated

under this permit provided the discharge is not combined with discharges subject to effluent limitation guidelines for the Mineral Mining and Processing Point Source Category (40 CFR Part 436).

- 8.J.5.3 Discharge Testing.** (See also Part 5.2.3.4) Test or evaluate all outfalls covered under this permit for the presence of specific mining-related but unauthorized non-stormwater discharges such as discharges subject to effluent limitations guidelines (e.g., 40 CFR Part 436). Alternatively (if applicable), you may keep a certification with your SWPPP, per Part 8.J.6.6.

8.J.6 Additional SWPPP Requirements for Mining Operations.

Note: The requirements in Part 8.J.6 are not applicable to inactive mineral mining facilities.

- 8.J.6.1 Nature of Industrial Activities.** (See also Part 5.2.2) Document in your SWPPP the mining and associated activities that can potentially affect the stormwater discharges covered by this permit, including a general description of the location of the site relative to major transportation routes and communities.
- 8.J.6.2 Site Map.** (See also Part 5.2.2) Document in your SWPPP the locations of the following (as appropriate): mining or milling site boundaries; access and haul roads; outline of the drainage areas of each stormwater outfall within the facility with indications of the types of discharges from the drainage areas; location(s) of all permitted discharges covered under an individual NPDES permit; outdoor equipment storage, fueling, and maintenance areas; materials handling areas; outdoor manufacturing, outdoor storage, and material disposal areas; outdoor chemicals and explosives storage areas; overburden, materials, soils, or waste storage areas; location of mine drainage dewatering or other process water; heap leach pads; off-site points of discharge for mine dewatering and process water; surface waters; boundary of tributary areas that are subject to effluent limitations guidelines; and location(s) of reclaimed areas.
- 8.J.6.3 Potential Pollutant Sources.** (See also Part 5.2.3) For each area of the mine or mill site where stormwater discharges associated with industrial activities occur, document in your SWPPP the types of pollutants (e.g., heavy metals, sediment) likely to be present in significant amounts. For example, phosphate mining facilities will likely need to document pollutants such as selenium, which can be present in significant amounts in their discharges. Consider these factors: the mineralogy of the waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced, or discharged; the likelihood of contact with stormwater; vegetation of site (if any); and history of significant leaks or spills of toxic or hazardous pollutants. Also include a summary of any existing waste rock or overburden characterization data and test results for potential generation of acid rock drainage.
- 8.J.6.4 Documentation of Control Measures.** To the extent that you use any of the control measures in Part 8.J.5.2, document them in your SWPPP per Part 5.2.4. If control measures are implemented or planned but are not listed here (e.g., substituting a less toxic chemical for a more toxic one), include descriptions of them in your SWPPP. If you are in compliance with dust control requirements under state or county air quality permits, you must state (or summarize, as necessary) what the state or county air quality permit dust control requirements are and how you've achieved compliance with them.
- 8.J.6.5 Employee Training.** All employee training(s) conducted in accordance with Part 8.J.5.1 must be documented with the SWPPP.
- 8.J.6.6 Certification of Permit Coverage for Commingled Non-Stormwater Discharges.** If you determine that you are able to certify, consistent with Part 8.J.5.3, that a particular

discharge composed of commingled stormwater and non-stormwater is covered under a separate NPDES permit, and that permit subjects the non-stormwater portion to effluent limitations prior to any commingling, you must retain such certification with your SWPPP. This certification must identify the non-stormwater discharges, the applicable NPDES permit(s), the effluent limitations placed on the non-stormwater discharge by the permit(s), and the points at which the limitations are applied.

8.J.7 Additional Inspection Requirements. (See also Part 3.1)

Except for earth-disturbing activities conducted prior to active mining activities as defined in Part 8.J.3.2(a) and 8.J.3.2(b), which are subject to Part 8.J.4.4, perform inspections at least quarterly unless adverse weather conditions make the site inaccessible. Sites which discharge to waters which are designated as Tier 2 or 2.5 or waters which are impaired for sediment or nitrogen must be inspected monthly. See Part 8.J.8.1 for inspection requirements for inactive and unstaffed sites.

8.J.8 Sector-Specific Benchmarks. (See also Part 6)

Table 8.J-1 identifies benchmarks that apply to the specific subsectors of Sector J. These benchmarks apply to both your primary industrial activity and any co-located industrial activities. Note: There are no Part 8.J.8 monitoring and reporting or impaired waters monitoring requirements for inactive and unstaffed sites.

Table 8.J-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector J1. Sand and Gravel Mining (SIC 1442, 1446)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Suspended Solids (TSS)	100 mg/L
Subsector J2. Dimension and Crushed Stone and Nonmetallic Minerals (except fuels) (SIC 1411, 1422-1429, 1481, 1499)	Total Suspended Solids (TSS)	100 mg/L

8.J.8.1 Inactive and Unstaffed Sites – Conditional Exemption from No Exposure Requirement for Routine Inspections, Quarterly Visual Assessments, and Benchmark and Impaired Waters Monitoring. As a Sector J facility, if you are seeking to exercise a waiver from either the routine inspection, quarterly visual assessment or the benchmark and/or impaired monitoring requirements for inactive and unstaffed sites (including temporarily inactive sites), you are conditionally exempt from the requirement to certify that “there are no industrial materials or activities exposed to stormwater” in Parts 3.1.1, 3.2.3, 6.2.1.3, and 6.2.4.3. This exemption is conditioned on the following:

- If circumstances change and your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the applicable benchmark monitoring requirements as if you were in your first year of permit coverage, and the quarterly visual assessment requirements; and
- EPA retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to cause, or contributes to an instream excursion above an applicable water quality standard, including designated uses.

Subject to the two conditions above, if your facility is inactive and unstaffed, you are waived from the requirement to conduct routine facility inspections, quarterly visual assessments, and benchmark and impaired waters monitoring. You must still conduct an annual site inspection in

accordance with Part 3.1. You are encouraged to inspect your site more frequently where you have reason to believe that severe weather or natural disasters may have damaged control measures or increased discharges.

8.J.9 Effluent Limitations Based on Effluent Limitations Guidelines. (See also Part 6.2.2.1).

Table 8.J-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other waste streams that may be covered under this permit.

Table 8.J-2		
Industrial Activity	Parameter	Effluent Limitation¹
Mine dewatering discharges at crushed stone mining facilities (SIC 1422 - 1429)	pH	6.0 - 9.0
Mine dewatering discharges at construction sand and gravel mining facilities (SIC 1442)	pH	6.0 - 9.0
Mine dewatering discharges at industrial sand mining facilities (SIC 1446)	Total Suspended Solids (TSS)	25 mg/L, monthly avg.
		45 mg/L, daily maximum
	pH	6.0 - 9.0

¹Monitor annually.

8.J.10 Termination of Permit Coverage.

8.J.10.1 Termination of Permit Coverage for Sites Reclaimed After December 17, 1990. A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in Part 8.J.3.5.

8.J.10.2 Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990. A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if: (1) stormwater runoff that comes into contact with raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards, (2) soil disturbing activities related to mining at the sites or portion of the site have been completed, (3) the site or portion of the site has been stabilized to minimize soil erosion, and (4) as appropriate depending on location, size, and the potential to contribute pollutants to stormwater discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart K – Sector K – Hazardous Waste Treatment, Storage, or Disposal Facilities.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.K.1 Covered Stormwater Discharges.

The requirements in Subpart K apply to stormwater discharges associated with industrial activity from Hazardous Waste Treatment, Storage, or Disposal facilities (TSDFs) as identified by the Activity Code specified under Sector K in Table D-1 of Appendix D of the permit.

8.K.2 Industrial Activities Covered by Sector K.

This permit authorizes stormwater discharges associated with industrial activity from facilities that treat, store, or dispose of hazardous wastes and that are operating under interim status or a permit under subtitle C of RCRA.

Disposal facilities that have been properly closed and capped, and have no significant materials exposed to stormwater, are considered inactive and do not require permits.

8.K.3 Limitations on Coverage.

8.K.3.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.1.4) The following are not authorized by this permit: leachate, gas collection condensate, drained free liquids, contaminated ground water, laboratory-derived wastewater, and contact wash water from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.K.3.2 Limitations on Coverage for Facilities Providing Commercial TSDF Services. For facilities located in Region 6 (see Appendix C) coverage is limited to hazardous waste TSDFs that are self-generating (including occasionally accepting wastes from community household hazardous waste collection events as public service), handle only residential wastes, and/or only store hazardous wastes and do not treat or dispose of them. Coverage under this permit is not available to commercial waste disposal and treatment facilities located in Region 6 that dispose and treat on a commercial basis any produced hazardous wastes (i.e., not their own) as a service to commercial or industrial generators.

8.K.4 Definitions.

8.K.4.1 Contaminated stormwater – stormwater that comes into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in Part 8.K.4.4. Some specific areas of a landfill that may produce contaminated stormwater include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

8.K.4.2 Drained free liquids – aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

8.K.4.3 Landfill – an area of land or an excavation in which wastes are placed for permanent disposal, but that is not a land application or land treatment unit, surface

impoundment, underground injection well, waste pile, salt dome formation, salt bed formation, underground mine, or cave as these terms are defined in 40 CFR 257.2, 258.2, and 260.10.

8.K.4.4 Landfill wastewater – as defined in 40 CFR Part 445 (Landfills Point Source Category), all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated stormwater, contaminated ground water, and wastewater from recovery pumping wells. Landfill wastewater includes, but is not limited to, leachate, gas collection condensate, drained free liquids, laboratory derived wastewater, contaminated stormwater, and contact wash water from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

8.K.4.5 Leachate – liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

8.K.4.6 Non-contaminated stormwater – stormwater that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in Part 8.K.4.4. Non-contaminated stormwater includes stormwater that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

8.K.5 Sector-Specific Benchmarks. (See also Part 6)

Table 8.K-1 identifies benchmarks that apply to the specific subsectors of Sector K. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.K-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector K1. ALL - Industrial Activity Code "HZ" (Note: permit coverage limited in some states). Benchmarks only applicable to discharges not subject to effluent limitations in 40 CFR Part 445 Subpart A (see below).	Ammonia	2.14 mg/L
	Total Magnesium	0.064 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L
	Total Arsenic (freshwater)	0.15 mg/L
	Total Arsenic (saltwater) ¹	0.069 mg/L
	Total Cadmium (freshwater) ²	Hardness Dependent
	Total Cadmium (saltwater) ¹	0.04 mg/L
	Total Cyanide (freshwater)	0.022 mg/L
	Total Cyanide (saltwater) ¹	0.001 mg/L
	Total Lead (freshwater) ²	Hardness Dependent
	Total Lead (saltwater) ¹	0.21 mg/L
	Total Mercury (freshwater)	0.0014 mg/L
	Total Mercury (saltwater) ¹	0.0018 mg/L
	Total Selenium (freshwater)	0.005 mg/L
	Total Selenium (saltwater) ¹	0.29 mg/L
	Total Silver (freshwater) ²	Hardness Dependent
	Total Silver (saltwater) ¹	0.0019 mg/L

¹ Saltwater benchmark values apply to stormwater discharges into saline waters where indicated.

² The freshwater benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. Hardness Dependent Benchmarks follow in the table below:

Freshwater Hardness Range	Cadmium (mg/L)	Lead (mg/L)	Silver (mg/L)
0-24.99 mg/L	0.0005	0.014	0.0007
25-49.99 mg/L	0.0008	0.023	0.0007
50-74.99 mg/L	0.0013	0.045	0.0017
75-99.99 mg/L	0.0018	0.069	0.0030
100-124.99 mg/L	0.0023	0.095	0.0046
125-149.99 mg/L	0.0029	0.122	0.0065
150-174.99 mg/L	0.0034	0.151	0.0087
175-199.99 mg/L	0.0039	0.182	0.0112
200-224.99 mg/L	0.0045	0.213	0.0138
225-249.99 mg/L	0.0050	0.246	0.0168
250+ mg/L	0.0053	0.262	0.0183

8.K.6 Effluent Limitations Based on Effluent Limitations Guidelines. (See also Part 6.2.2.1)

Table 8.K-2 identifies effluent limitations that apply to the industrial activities described below. Compliance with these effluent limitations is to be determined based on discharges from these industrial activities independent of commingling with any other waste streams that may be covered under this permit.

Table 8.K-2¹

Industrial Activity	Parameter	Effluent Limitation
Discharges from hazardous waste landfills subject to effluent limitations in 40 CFR Part 445 Subpart A (see footnote).	Biochemical Oxygen Demand (BOD ₅)	220 mg/L, daily maximum
		56 mg/L, monthly avg. maximum
	Total Suspended Solids (TSS)	88 mg/L, daily maximum
		27 mg/L, monthly avg. maximum
	Ammonia	10 mg/L, daily maximum
		4.9 mg/L, monthly avg. maximum
	Alpha Terpineol	0.042 mg/L, daily maximum
		0.019 mg/L, monthly avg. maximum
	Aniline	0.024 mg/L, daily maximum
		0.015 mg/L, monthly avg. maximum
	Benzoic Acid	0.119 mg/L, daily maximum
		0.073 mg/L, monthly avg. maximum
	Naphthalene	0.059 mg/L, daily maximum
		0.022 mg/L, monthly avg. maximum
	p-Cresol	0.024 mg/L, daily maximum
		0.015 mg/L, monthly avg. maximum
	Phenol	0.048 mg/L, daily maximum
		0.029 mg/L, monthly avg. maximum
	Pyridine	0.072 mg/L, daily maximum
		0.025 mg/L, monthly avg. maximum
	Total Arsenic	1.1 mg/L, daily maximum
		0.54 mg/L, monthly avg. maximum
	Total Chromium	1.1 mg/L, daily maximum
		0.46 mg/L, monthly avg. maximum
	Total Zinc	0.535 mg/L, daily maximum
		0.296 mg/L, monthly avg. maximum
	pH	Within the range of 6-9 standard pH units (s.u.)

¹ Monitor annually. As set forth at 40 CFR Part 445 Subpart A, these numeric limitations apply to contaminated stormwater discharges from hazardous waste landfills subject to the provisions of RCRA Subtitle C at 40 CFR Parts 264 (Subpart N) and 265 (Subpart N) except for any of the following facilities:

- (a) landfills operated in conjunction with other industrial or commercial operations when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;
- (b) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;
- (c) landfills operated in conjunction with Centralized Waste Treatment (CWT) facilities subject to 40 CFR Part 437, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or
- (d) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart L – Sector L – Landfills, Land Application Sites, and Open Dumps.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.L.1 Covered Stormwater Discharges.

The requirements in Subpart L apply to stormwater discharges associated with industrial activity from Landfills and Land Application Sites as identified by the Activity Code specified under Sector L in Table D-1 of Appendix D of the permit.

8.L.2 Industrial Activities Covered by Sector L.

This permit may authorize stormwater discharges for Sector L facilities associated with waste disposal at landfills, land application sites that receive or have received industrial waste, including sites subject to regulation under Subtitle D of RCRA. This permit does not cover discharges from landfills that receive only municipal wastes.

8.L.3 Limitations on Coverage.

8.L.3.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.1.4) The following discharges are not authorized by this permit: leachate, gas collection condensate, drained free liquids, contaminated ground water, laboratory wastewater, and contact wash water from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.L.3.2 Prohibition Stormwater Discharges from Open Dumps. Discharges from open dumps as defined under RCRA are also not authorized under this permit.

8.L.4 Definitions.

8.L.4.1 Contaminated stormwater – stormwater that comes into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Some areas of a landfill that may produce contaminated stormwater include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

8.L.4.2 Drained free liquids – aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

8.L.4.3 Landfill wastewater – as defined in 40 CFR Part 445 (Landfills Point Source Category) all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated stormwater, contaminated ground water, and wastewater from recovery pumping wells. Landfill process wastewater includes, but is not limited to, leachate; gas collection condensate; drained free liquids; laboratory-derived wastewater; contaminated stormwater; and contact wash water from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

8.L.4.4 Leachate – liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

8.L.4.5 *Non-contaminated stormwater* – stormwater that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Non-contaminated stormwater includes stormwater that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

8.L.5 Additional Technology-Based Effluent Limits.

8.L.5.1 *Preventive Maintenance Program.* (See also Part 2.1.2.3) As part of your preventive maintenance program, maintain the following: all elements of leachate collection and treatment systems, to prevent commingling of leachate with stormwater; the integrity and effectiveness of any intermediate or final cover (including repairing the cover as necessary), to minimize the effects of settlement, sinking, and erosion.

8.L.5.2 *Erosion and Sedimentation Control.* (See also Part 2.1.2.5) Provide temporary stabilization (e.g., temporary seeding, mulching, and placing geotextiles on the inactive portions of stockpiles) for the following in order to minimize discharges of pollutants in stormwater: materials stockpiled for daily, intermediate, and final cover; inactive areas of the landfill or open dump; landfills or open dump areas that have gotten final covers but where vegetation has yet to establish itself; and land application sites where waste application has been completed but final vegetation has not yet been established.

8.L.6 Additional SWPPP Requirements.

8.L.5.1 *Drainage Area Site Map.* (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: active and closed landfill cells or trenches, active and closed land application areas, locations where open dumping is occurring or has occurred, locations of any known leachate springs or other areas where uncontrolled leachate may commingle with runoff, and leachate collection and handling systems.

8.L.5.2 *Summary of Potential Pollutant Sources.* (See also Part 5.2.3) Document in your SWPPP the following sources and activities that have potential pollutants associated with them: fertilizer, herbicide, and pesticide application; earth and soil moving; waste hauling and loading or unloading; outdoor storage of significant materials, including daily, interim, and final cover material stockpiles as well as temporary waste storage areas; exposure of active and inactive landfill and land application areas; uncontrolled leachate flows; and failure or leaks from leachate collection and treatment systems.

8.L.7 Additional Inspection Requirements. (See also Part 3)

8.L.7.1 *Inspections of Active Sites.* Except in arid and semi-arid climates, inspect operating landfills, open dumps, and land application sites at least once every 7 days. Focus on areas of landfills that have not yet been finally stabilized; active land application areas, areas used for storage of material and wastes that are exposed to precipitation, stabilization, and structural control measures; leachate collection and treatment systems; and locations where equipment and waste trucks enter and exit the site. Ensure that sediment and erosion control measures are operating properly. For stabilized sites and areas where land application has been completed, or where the climate is arid or semi-arid, conduct inspections at least once every month.

8.L.7.2 *Inspections of Inactive Sites.* Inspect inactive landfills, open dumps, and land application sites at least quarterly. Qualified personnel must inspect landfill (or open dump) stabilization and structural erosion control measures, leachate collection and treatment systems, and all closed land application areas.

8.L.8 Additional Post-Authorization Documentation Requirements.

8.L.8.1 Recordkeeping and Internal Reporting. Keep records with your SWPPP of the types of wastes disposed of in each cell or trench of a landfill or open dump. For land application sites, track the types and quantities of wastes applied in specific areas.

8.L.9 Sector-Specific Benchmarks. (See also Part 6)

Table 8.L-1 identifies benchmarks that apply to the specific subsectors of Sector L. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.L-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration¹
Subsector L1. All Landfill, Land Application Sites and Open Dumps (Industrial Activity Code "LF")	Total Suspended Solids (TSS)	100 mg/L
Subsector L2. All Landfill, Land Application Sites and Open Dumps, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.60 (Industrial Activity Code "LF")	Total Iron	1.0 mg/L

¹Benchmark monitoring required only for discharges not subject to effluent limitations in 40 CFR Part 445 Subpart B (see Table L-2 below).

8.L.10. Effluent Limitations Based on Effluent Limitations Guidelines. (See also Part 6.2.2.1)

Table 8.L-2 identifies effluent limitations that apply to the industrial activities described below. Compliance with these effluent limitations is to be determined based on discharges from these industrial activities independent of commingling with any other waste streams that may be covered under this permit.

Table 8.L-2¹		
Industrial Activity	Parameter	Effluent Limitation
Discharges from non-hazardous waste landfills subject to effluent limitations in 40 CFR Part 445 Subpart B.	Biochemical Oxygen Demand (BOD ₅)	140 mg/L, daily maximum
		37 mg/L, monthly avg. maximum
	Total Suspended Solids (TSS)	88 mg/L, daily maximum
		27 mg/L, monthly avg. maximum
	Ammonia	10 mg/L, daily maximum
		4.9 mg/L, monthly avg. maximum
	Alpha Terpineol	0.033 mg/L, daily maximum
		0.016 mg/L monthly avg. maximum
	Benzoic Acid	0.12 mg/L, daily maximum
		0.071 mg/L, monthly avg. maximum
	p-Cresol	0.025 mg/L, daily maximum
		0.014 mg/L, monthly avg. maximum

Table 8.L-2 ¹		
Industrial Activity	Parameter	Effluent Limitation
	Phenol	0.026 mg/L, daily maximum
		0.015 mg/L, monthly avg. maximum
	Total Zinc	0.20 mg/L, daily maximum
		0.11 mg/L, monthly avg. maximum
	pH	Within the range of 6-9 standard pH units (s.u.)

¹ Monitor annually. As set forth at 40 CFR Part 445 Subpart B, these numeric limitations apply to contaminated stormwater discharges from MSWLFs that have not been closed in accordance with 40 CFR 258.60, and to contaminated stormwater discharges from those landfills that are subject to the provisions of 40 CFR Part 257 except for discharges from any of the following facilities:

- (a) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;
- (b) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation, or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;
- (c) landfills operated in conjunction with CWT facilities subject to 40 CFR Part 437, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or
- (d) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart M – Sector M – Automobile Salvage Yards.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.M.1 Covered Stormwater Discharges.

The requirements in Subpart M apply to stormwater discharges associated with industrial activity from Automobile Salvage Yards as identified by the SIC Code specified under Sector M in Table D-1 of Appendix D of this permit.

8.M.2 Additional Technology-Based Effluent Limits.

8.M.2.1 *Spill and Leak Prevention Procedures.* (See also Part 2.1.2.4) Drain vehicles intended to be dismantled of all fluids upon arrival at the site (or as soon thereafter as practicable), or employ some other equivalent means to prevent spills and leaks.

8.M.2.2 *Employee Training.* (See also Part 2.1.2.8) If applicable to your facility, address the following areas (at a minimum) in your employee training program: proper handling (collection, storage, and disposal) of oil, used mineral spirits, anti-freeze, mercury switches, and solvents.

8.M.2.3 *Management of Runoff.* (See also Part 2.1.2.6) Implement control measures to minimize discharges of pollutants in runoff such as the following, where determined to be feasible (list not exclusive): berms or drainage ditches on the property line (to help prevent run-on from neighboring properties); berms for uncovered outdoor storage of oily parts, engine blocks, and above-ground liquid storage; installation of detention ponds; and installation of filtering devices and oil and water separators.

8.M.3 Additional SWPPP Requirements.

8.M.3.1 *Drainage Area Site Map.* (See also Part 5.2.2) Identify locations used for dismantling, storing, and maintaining used motor vehicle parts. Also identify where any of the following may be exposed to precipitation or surface runoff: dismantling areas, parts (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers) storage areas, and liquid storage tanks and drums for fuel and other fluids.

8.M.3.2 *Potential Pollutant Sources.* (See also Part 5.2.3) Assess the potential for the following to contribute pollutants to stormwater discharges: vehicle storage areas, dismantling areas, parts storage areas (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers), and fueling stations.

8.M.4 Additional Inspection Requirements. (See also Part 3.1)

Immediately (or as soon thereafter as practicable) inspect vehicles arriving at the site for leaks. Inspect quarterly for signs of leakage all equipment containing oily parts, hydraulic fluids, any other types of fluids, or mercury switches. Also, inspect quarterly for signs of leakage all vessels and areas where hazardous materials and general automotive fluids are stored, including, but not limited to, mercury switches, brake fluid, transmission fluid, radiator water, and antifreeze.

8.M.5 Sector-Specific Benchmarks. (See also Part 6)

Table 8.M-1 identifies benchmarks that apply to Sector M. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.M-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector M1. Automobile Salvage Yards (SIC 5015)	Total Suspended Solids (TSS)	100 mg/L
	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Total Lead (freshwater) ² Total Lead (saltwater) ¹	Hardness Dependent 0.21 mg/L

¹Saltwater benchmark values apply to stormwater discharges into saline waters where indicated.

² The freshwater benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. Hardness Dependent Benchmarks follow in the table below:

Freshwater Hardness Range	Lead (mg/L)
0-24.99 mg/L	0.014
25-49.99 mg/L	0.023
50-74.99 mg/L	0.045
75-99.99 mg/L	0.069
100-124.99 mg/L	0.095
125-149.99 mg/L	0.122
150-174.99 mg/L	0.151
175-199.99 mg/L	0.182
200-224.99 mg/L	0.213
225-249.99 mg/L	0.246
250+ mg/L	0.262

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart N – Sector N – Scrap Recycling and Waste Recycling Facilities.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.N.1 Covered Stormwater Discharges.

The requirements in Subpart N apply to stormwater discharges associated with industrial activity from Scrap Recycling and Waste Recycling facilities as identified by the SIC Code specified under Sector N in Table D-1 of Appendix D of the permit.

8.N.2 Limitation on Coverage.

Separate permit requirements have been established for recycling facilities that receive, process, and do wholesale distribution of only source-separated recyclable materials primarily from non-industrial and residential sources (i.e., common consumer products including paper, newspaper, glass, cardboard, plastic containers, and aluminum and tin cans). This includes recycling facilities commonly referred to as material recovery facilities (MRF). See Part 8.N.3.3.

8.N.2.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.1.4) Non-stormwater discharges from turnings containment areas are not covered by this permit (see also Part 8.N.3.1.3). Discharges from containment areas in the absence of a storm event are prohibited unless covered by a separate NPDES permit. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.N.3 Additional Technology-Based Effluent Limits.

8.N.3.1 Scrap and Waste Recycling Facilities (Non-Source Separated, Nonliquid Recyclable Materials). The following requirements are for facilities that receive, process, and do wholesale distribution of non-source separated, nonliquid recyclable wastes (e.g., ferrous and nonferrous metals, plastics, glass, cardboard, and paper). These facilities may receive both nonrecyclable and recyclable materials. This section is not intended for those facilities that accept recyclables only from primarily non-industrial and residential sources.

8.N.3.1.1 Inbound Recyclable and Waste Material Control Program. Minimize the chance of accepting materials that could be significant sources of pollutants by conducting inspections of inbound recyclables and waste materials and through implementation of control measures such as the following, where determined to be feasible (list not exclusive): providing information and education to suppliers of scrap and recyclable waste materials on draining and properly disposing of residual fluids (e.g., from vehicles and equipment engines, radiators and transmissions, oil filled transformers, and individual containers or drums) and removal of mercury switches from vehicles before delivery to your facility; establishing procedures to minimize the potential of any residual fluids from coming into contact with precipitation or runoff; establishing procedures for accepting scrap lead-acid batteries (additional requirements for the handling, storage, and disposal or recycling of batteries are contained in the scrap lead-acid battery program provisions in Part 8.N.3.1.6); providing training targeted for those personnel engaged in the inspection and acceptance of inbound recyclable materials; and

establishing procedures to ensure that liquid wastes, including used oil, are stored in materially compatible and non-leaking containers and are disposed of or recycled in accordance with the Resource Conservation and Recovery Act (RCRA).

- 8.N.3.1.2 *Scrap and Waste Material Stockpiles and Storage (Outdoor)*.** Minimize contact of stormwater runoff with stockpiled materials, processed materials, and nonrecyclable wastes through implementation of control measures such as the following, where determined to be feasible (list not exclusive): permanent or semi-permanent covers; sediment traps, vegetated swales and strips, catch basin filters, and sand filters to facilitate settling or filtering of pollutants; dikes, berms, containment trenches, culverts, and surface grading to divert runoff from storage areas; silt fencing; and oil and water separators, sumps, and dry absorbents for areas where potential sources of residual fluids are stockpiled (e.g., automobile engine storage areas).
- 8.N.3.1.3 *Stockpiling of Turnings Exposed to Cutting Fluids (Outdoor Storage)*.** Minimize contact of surface runoff with residual cutting fluids by storing all turnings exposed to cutting fluids under some form of permanent or semi-permanent cover, or establishing dedicated containment areas for all turnings that have been exposed to cutting fluids. Any containment areas must be constructed of concrete, asphalt, or other equivalent types of impermeable material and include a barrier (e.g., berms, curbing, elevated pads) to prevent contact with stormwater run-on. Stormwater runoff from these areas can be discharged, provided that any runoff is first collected and treated by an oil and water separator or its equivalent. You must regularly maintain the oil and water separator (or its equivalent) and properly dispose of or recycle collected residual fluids.
- 8.N.3.1.4 *Scrap and Waste Material Stockpiles and Storage (Covered or Indoor Storage)*.** Minimize contact of residual liquids and particulate matter from materials stored indoors or under cover with surface runoff through implementation of control measures such as the following, where determined to be feasible (list not exclusive): good housekeeping measures, including the use of dry absorbents or wet vacuuming to contain, dispose of, or recycle residual liquids originating from recyclable containers, and mercury spill kits for spills from storage of mercury switches; not allowing wash water from tipping floors or other processing areas to discharge to the storm sewer system; and disconnecting or sealing off all floor drains connected to the storm sewer system.
- 8.N.3.1.5 *Scrap and Recyclable Waste Processing Areas*.** Minimize surface runoff from coming in contact with scrap processing equipment. Pay attention to operations that generate visible amounts of particulate residue (e.g., shredding) to minimize the contact of accumulated particulate matter and residual fluids with runoff (i.e., through good housekeeping, preventive maintenance). To minimize discharges of pollutants in stormwater from scrap and recyclable waste processing areas, implement control measures such as the following, where determined to be feasible (list not exclusive): at least once per month inspecting equipment for spills or leaks and malfunctioning, worn, or corroded parts or equipment; establishing a preventive maintenance program for processing equipment; using dry-absorbents or other cleanup practices to collect and dispose of or recycle spilled or leaking fluids or use mercury spill kits for spills from storage of mercury switches; on unattended

hydraulic reservoirs over 150 gallons in capacity, installing protection devices such as low-level alarms or equivalent devices, or secondary containment that can hold the entire volume of the reservoir; implementing containment or diversion structures such as dikes, berms, culverts, trenches, elevated concrete pads, and grading to minimize contact of stormwater runoff with outdoor processing equipment or stored materials; using oil and water separators or sumps; installing permanent or semi-permanent covers in processing areas where there are residual fluids and grease; and using retention or detention ponds or basins, sediment traps, vegetated swales or strips, and/or catch basin filters or sand filters for pollutant settling and filtration.

8.N.3.1.6 Scrap Lead-Acid Battery Program. To minimize the discharge of pollutants in stormwater from lead-acid batteries, properly handle, store, and dispose of scrap lead-acid batteries, and implement control measures such as the following, where determined to be feasible (list not exclusive): segregating scrap lead-acid batteries from other scrap materials; properly handling, storing, and disposing of cracked or broken batteries; collecting and disposing of leaking lead-acid battery fluid; minimizing or eliminating (if possible) exposure of scrap lead-acid batteries to precipitation or runoff; and providing employee training for the management of scrap batteries.

8.N.3.1.7 Spill Prevention and Response Procedures. (See also Part 2.1.2.4) Install alarms and/or pump shutoff systems on outdoor equipment with hydraulic reservoirs exceeding 150 gallons in the event of a line break. Alternatively, a secondary containment system capable of holding the entire contents of the reservoir plus room for precipitation can be used. Use a mercury spill kit for any release of mercury from switches, anti-lock brake systems, and switch storage areas.

8.N.3.1.8 Supplier Notification Program. As appropriate, notify major suppliers which scrap materials will not be accepted at the facility or will be accepted only under certain conditions.

8.N.3.2 Waste Recycling Facilities (Liquid Recyclable Materials).

8.N.3.2.1 Waste Material Storage (Indoor). Minimize or eliminate contact between residual liquids from waste materials stored indoors and from surface runoff. The plan may refer to applicable portions of other existing plans, such as Spill Prevention, Control, and Countermeasure (SPCC) plans required under 40 CFR Part 112. To minimize discharges of pollutants in stormwater from indoor waste material storage areas, implement control measures such as the following, where determined to be feasible (list not exclusive): implementing procedures for material handling (including labeling and marking); cleaning up spills and leaks with dry absorbent materials and/or a wet vacuum system; installing appropriate containment structures (e.g., trenching, curbing, gutters, etc.); and installing a drainage system, including appurtenances (e.g., pumps or ejectors, manually operated valves), to handle discharges from diked or bermed areas. Drainage should be discharged to an appropriate treatment facility or sanitary sewer system, or otherwise disposed of properly. These discharges may require coverage under a separate NPDES wastewater permit or industrial user permit under the pretreatment program.

8.N.3.2.2 Waste Material Storage (Outdoor). Minimize contact between stored residual liquids and precipitation or runoff. The plan may refer to applicable portions of other existing plans, such as SPCC plans required under 40 CFR Part 112.

Discharges of stormwater from containment areas containing used oil must also be in accordance with applicable sections of 40 CFR Part 112. To minimize discharges of pollutants in stormwater from outdoor waste material storage areas, implement control measures such as the following, where determined to be feasible (list not exclusive): appropriate containment structures (e.g., dikes, berms, curbing, pits) to store the volume of the largest tank, with sufficient extra capacity for precipitation; drainage control and other diversionary structures; corrosion protection and/or leak detection systems for storage tanks; and dry-absorbent materials or a wet vacuum system to collect spills.

8.N.3.2.3 Trucks and Rail Car Waste Transfer Areas. Minimize pollutants in stormwater discharges from truck and rail car loading and unloading areas. Include measures to clean up minor spills and leaks resulting from the transfer of liquid wastes. To minimize discharges of pollutants in stormwater from truck and rail car waste transfer areas, implement control measures such as the following, where determined to be feasible (list not exclusive): containment and diversionary structures to minimize contact with precipitation or runoff; and dry clean-up methods, wet vacuuming, roof coverings, and/or runoff controls.

8.N.3.3 Recycling Facilities (Source-Separated Materials). The following requirements are for facilities that receive only source-separated recyclables, primarily from non-industrial and residential sources.

8.N.3.3.1 Inbound Recyclable Material Control. Minimize the chance of accepting nonrecyclables (e.g., hazardous materials) that could be a significant source of pollutants by conducting inspections of inbound materials and through the implementation of control measures such as the following, where determined to be feasible (list not exclusive): providing information and education measures to inform suppliers of recyclables about acceptable and non-acceptable materials; training drivers responsible for pickup of recycled material; clearly marking public drop-off containers regarding which materials can be accepted; rejecting nonrecyclable wastes or household hazardous wastes at the source; and establishing procedures for handling and disposal of nonrecyclable material.

8.N.3.3.2 Outdoor Storage. Minimize exposure of recyclables to precipitation and runoff by using good housekeeping measures to prevent accumulation of particulate matter and fluids, particularly in high traffic areas and through implementation of control measure such as the following, where determined to be feasible (list not exclusive): providing totally enclosed drop-off containers for the public; installing a sump and pump with each container pit and treat or discharge collected fluids to a sanitary sewer system; providing dikes and curbs for secondary containment (e.g., around bales of recyclable waste paper); diverting surface water runoff away from outside material storage areas; providing covers over containment bins, dumpsters, and roll-off boxes; and storing the equivalent of one day's volume of recyclable material indoors.

8.N.3.3.3 Indoor Storage and Material Processing. Minimize the release of pollutants from indoor storage and processing areas through implementation of control measures such as the following, where determined to be feasible (list not exclusive): scheduling routine good housekeeping measures for all storage and processing areas; prohibiting tipping floor wash water from draining to

the storm sewer system; and providing employee training on pollution prevention practices.

8.N.3.3.4 Vehicle and Equipment Maintenance. Minimize the discharge of pollutants in stormwater from areas where vehicle and equipment maintenance occur outdoors through implementation of control measures such as the following, where determined to be feasible (list not exclusive): minimizing or eliminating outdoor maintenance areas; establishing spill prevention and clean-up procedures in fueling areas; avoiding topping off fuel tanks; diverting runoff from fueling areas; storing lubricants and hydraulic fluids indoors; and providing employee training on proper handling and storage of hydraulic fluids and lubricants.

8.N.4 Additional SWPPP Requirements.

8.N.4.1 Drainage Area Site Map. (See also Part 5.2.2) Document in your SWPPP the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: scrap and waste material storage; outdoor scrap and waste processing equipment; and containment areas for turnings exposed to cutting fluids.

8.N.4.2 Maintenance Schedules/Procedures for Collection, Handling, and Disposal or Recycling of Residual Fluids at Scrap and Waste Recycling Facilities. If you are subject to Part 8.N.3.1.3, your SWPPP must identify any applicable maintenance schedule and the procedures to collect, handle, and dispose of or recycle residual fluids.

8.N.5 Additional Inspection Requirements.

8.N.5.1 Inspections for Waste Recycling Facilities. The inspections must be performed quarterly, per Part 3.1, and include, at a minimum, all areas where waste is generated, received, stored, treated, or disposed of and that are exposed to either precipitation or stormwater runoff.

8.N.6 Sector-Specific Benchmarks. (See also Part 6)

Table 8.N-1 identifies benchmarks that apply to Sector N. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.N-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector N1. Scrap Recycling and Waste Recycling Facilities except those only receiving source-separate recyclable materials primarily from non-industrial and residential sources (SIC 5093)	Chemical Oxygen Demand (COD)	120 mg/L
	Total Suspended Solids (TSS)	100 mg/L
	Aluminum Total Recoverable	0.75 mg/L
	Total Copper (freshwater) ²	Hardness Dependent
	Total Copper (saltwater) ¹	0.0048 mg/L
	Total Recoverable Iron	1.0 mg/L
	Total Lead (freshwater) ²	Hardness Dependent
	Total Lead (saltwater) ¹	0.21 mg/L
	Total Zinc (freshwater) ²	Hardness Dependent
	Total Zinc (saltwater) ¹	0.09 mg/L

¹ Saltwater benchmark values apply to stormwater discharges into saline waters where indicated.

² The freshwater benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. Hardness Dependent Benchmarks follow in the table below:

Freshwater Hardness Range	Copper (mg/L)	Lead (mg/L)	Zinc (mg/L)
0-24.99 mg/L	0.0038	0.014	0.04
25-49.99 mg/L	0.0056	0.023	0.05
50-74.99 mg/L	0.0090	0.045	0.08
75-99.99 mg/L	0.0123	0.069	0.11
100-124.99 mg/L	0.0156	0.095	0.13
125-149.99 mg/L	0.0189	0.122	0.16
150-174.99 mg/L	0.0221	0.151	0.18
175-199.99 mg/L	0.0253	0.182	0.20
200-224.99 mg/L	0.0285	0.213	0.23
225-249.99 mg/L	0.0316	0.246	0.25
250+ mg/L	0.0332	0.262	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity**Subpart O – Sector O – Steam Electric Generating Facilities.**

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.O.1 Covered Stormwater Discharges.

The requirements in Subpart O apply to stormwater discharges associated with industrial activity from Steam Electric Power Generating Facilities as identified by the Activity Code specified under Sector O in Table D-1 of Appendix D.

8.O.2 Industrial Activities Covered by Sector O.

This permit authorizes stormwater discharges from the following industrial activities at Sector O facilities:

8.O.2.1 *Steam electric power generation using coal, natural gas, oil, nuclear energy, etc., to produce a steam source, including coal handling areas (does not include geothermal power);*

8.O.2.2 *Coal pile runoff, including effluent limitations established by 40 CFR Part 423;*

8.O.2.3 *Dual fuel facilities that could employ a steam boiler.*

8.O.3 Limitations on Coverage.

8.O.3.1 *Prohibition of Non-Stormwater Discharges.* Non-stormwater discharges subject to effluent limitations guidelines are not covered by this permit. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.O.3.2 *Prohibition of Stormwater Discharges.* Stormwater discharges from the following are not covered by this permit:

8.O.3.2.1 *Ancillary facilities (e.g., fleet centers and substations) that are not contiguous to a steam electric power generating facility;*

8.O.3.2.2 *Gas turbine facilities (provided the facility is not a dual-fuel facility that includes a steam boiler), and combined-cycle facilities where no supplemental fuel oil is burned (and the facility is not a dual-fuel facility that includes a steam boiler);*

8.O.3.2.3 *Cogeneration (combined heat and power) facilities utilizing a gas turbine.*

8.O.4 Additional Technology-Based Effluent Limits. The following good housekeeping measures are required in addition to Part 2.1.2.2:

8.O.4.1 *Fugitive Dust Emissions.* Minimize fugitive dust emissions from coal handling areas to minimize the tracking of coal dust offsite that could be discharged in stormwater through implementation of control measures such as the following, where determined to be feasible, (list not exclusive): installing specially designed tires; and washing vehicles in a designated area before they leave the site and controlling the wash water.

- 8.O.4.2 Delivery Vehicles.** Minimize contamination of stormwater runoff from delivery vehicles arriving at the plant site. Implement procedures to inspect delivery vehicles arriving at the plant site as necessary to minimize discharges of pollutants in stormwater. Ensure the overall integrity of the body or container of the delivery vehicle and implement procedures to deal with leakage or spillage from delivery vehicles.
- 8.O.4.3 Fuel Oil Unloading Areas.** Minimize contamination of precipitation or surface runoff from fuel oil unloading areas. Use containment curbs in unloading areas where feasible. In addition, ensure personnel familiar with spill prevention and response procedures are available to respond expeditiously in the event of a leak or spill during deliveries. Ensure that any leaks or spills are immediately contained and cleaned up, and use spill and overflow protection devices (e.g., drip pans, drip diapers, or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).
- 8.O.4.4 Chemical Loading and Unloading.** Minimize contamination of precipitation or surface runoff from chemical loading and unloading areas. Use containment curbs at chemical loading and unloading areas to contain spills, where practicable. In addition, ensure personnel familiar with spill prevention and response procedures are available to respond expeditiously in the event of a leak or spill during deliveries. Ensure leaks and spills are immediately contained and cleaned up and, where practicable, load and unload in covered areas and store chemicals indoors.
- 8.O.4.5 Miscellaneous Loading and Unloading Areas.** Minimize contamination of precipitation or surface runoff from loading and unloading areas through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering the loading area; grading, curbing, or berming around the loading area to divert run-on; locating the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems; or equivalent procedures.
- 8.O.4.6 Liquid Storage Tanks.** Minimize contamination of surface runoff from above-ground liquid storage tanks through implementation of control measures such as the following, where determined to be feasible, the following (list not exclusive): using protective guards around tanks; using containment curbs; installing spill and overflow protection; using dry cleanup methods; or equivalent measures.
- 8.O.4.7 Large Bulk Fuel Storage Tanks.** Minimize contamination of surface runoff from large bulk fuel storage tanks. Use containment berms (or their equivalent). You must also comply with applicable state and federal laws, including Spill Prevention, Control and Countermeasure (SPCC) Plan requirements.
- 8.O.4.8 Spill Reduction Measures.** Minimize the potential for an oil or chemical spill, or reference the appropriate part of your SPCC plan. Visually inspect as part of your routine facility inspection the structural integrity of all above-ground tanks, pipelines, pumps, and related equipment that may be exposed to stormwater, and make any necessary repairs immediately.
- 8.O.4.9 Oil-Bearing Equipment in Switchyards.** Minimize contamination of surface runoff from oil-bearing equipment in switchyard areas. Use level grades and gravel surfaces to retard flows and limit the spread of spills, or collect runoff in perimeter ditches.
- 8.O.4.10 Residue-Hauling Vehicles.** Inspect all residue-hauling vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the container body. Repair vehicles without load covering or adequate gate sealing, or with leaking containers or beds.

8.O.4.11 Ash Loading Areas. Reduce or control the tracking of ash and residue from ash loading areas. Clear the ash building floor and immediately adjacent roadways of spillage, debris, and excess water as necessary to minimize discharges of pollutants in stormwater.

8.O.4.12 Areas Adjacent to Disposal Ponds or Landfills. Minimize contamination of surface runoff from areas adjacent to disposal ponds or landfills. Reduce ash residue that may be tracked on to access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.

8.O.4.13 Landfills, Scrap Yards, Surface Impoundments, Open Dumps, General Refuse Sites. Minimize the potential for contamination of runoff from these areas.

8.O.5 Additional SWPPP Requirements.

8.O.5.1 Drainage Area Site Map. (See also Part 5.2.2) Document in your SWPPP the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: storage tanks, scrap yards, and general refuse areas; short- and long-term storage of general materials (including but not limited to supplies, construction materials, paint equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizer, and pesticides); landfills and construction sites; and stock pile areas (e.g., coal or limestone piles).

8.O.5.2 Documentation of Good Housekeeping Measures. You must document in your SWPPP the good housekeeping measures implemented to meet the effluent limits in Part 8.O.4.

8.O.6 Additional Inspection Requirements.

As part of your inspection, inspect the following areas monthly: coal handling areas, loading or unloading areas, switchyards, fueling areas, bulk storage areas, ash handling areas, areas adjacent to disposal ponds and landfills, maintenance areas, liquid storage tanks, and long term and short term material storage areas.

8.O.7 Sector-Specific Benchmarks. (See also Part 6)

Table 8.O-1 identifies benchmarks that apply to Sector O. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.O-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector O1. Steam Electric Generating Facilities (Industrial Activity Code "SE")	Total Iron	1.0 mg/L

8.O.8 Effluent Limitations Based on Effluent Limitations Guidelines. (See also Part 6.2.2.1)

Table 8.O-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other waste streams that may be covered under this permit.

Table 8.O-2 ¹		
Industrial Activity	Parameter	Effluent Limitation
Discharges from coal storage piles at Steam Electric Generating Facilities	TSS	50 mg/l ²
	pH	6.0 min - 9.0 max
¹ Monitor annually. ² If your facility is designed, constructed, and operated to treat the volume of coal pile runoff that is associated with a 10-year, 24-hour rainfall event, any untreated overflow of coal pile runoff from the treatment unit is not subject to the 50 mg/L limitation for total suspended solids.		

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart P – Sector P – Land Transportation and Warehousing.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.P.1 Covered Stormwater Discharges.

The requirements in Subpart P apply to stormwater discharges associated with industrial activity from Land Transportation and Warehousing facilities as identified by the SIC Codes specified under Sector P in Table D-1 of Appendix D of the permit.

8.P.2 Limitation on Coverage.

8.P.2.1 Prohibited Discharges (see also Parts 1.1.4 and 8.P.3.1.4) This permit does not authorize the discharge of vehicle/equipment/surface wash water, including tank cleaning operations. Such discharges must be authorized under a separate NPDES permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or recycled on-site.

8.P.3 Additional Technology-Based Effluent Limits.

8.P.3.1 Good Housekeeping Measures. (See also Part 2.1.2.2) In addition to the Good Housekeeping requirements in Part 2.1.2.2, you must do the following.

8.P.3.1.1 Vehicle and Equipment Storage Areas. Minimize the potential for stormwater exposure to leaky or leak-prone vehicles/equipment awaiting maintenance through implementation of control measures such as the following, where determined to be feasible (list not exclusive): using of drip pans under vehicles/equipment; storing vehicles and equipment indoors; installing berms or dikes; using of absorbents; roofing or covering storage areas; and cleaning pavement surfaces to remove oil and grease.

8.P.3.1.2 Fueling Areas. Minimize contamination of stormwater runoff from fueling areas through implementation of control measures such as the following, where determined to be feasible: covering the fueling area; using spill/overflow protection and cleanup equipment; minimizing stormwater run-on/runoff to the fueling area; using dry cleanup methods; and treating and/or recycling collected stormwater runoff.

8.P.3.1.3 Material Storage Areas. Maintain all material storage vessels (e.g., for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) to prevent contamination of stormwater and plainly label them (e.g., "Used Oil," "Spent Solvents"). To minimize discharges of pollutants in stormwater from material storage areas, implement control measures such as the following, where determined to be feasible (list not exclusive): storing the materials indoors; installing berms/dikes around the areas; minimizing runoff of stormwater to the areas; using dry cleanup methods; and treating and/or recycling collected stormwater runoff.

8.P.3.1.4 Vehicle and Equipment Cleaning Areas. Minimize contamination of stormwater runoff from all areas used for vehicle/equipment cleaning through implementation of control measures such as the following, where determined to be feasible (list not exclusive): performing all cleaning operations indoors;

covering the cleaning operation, ensuring that all wash water drains to a proper collection system (i.e., not the stormwater drainage system); treating and/or recycling collected wash water; or other equivalent measures. Discharges of vehicle and equipment wash water, including tank cleaning operations, are not authorized by this permit for this sector.

8.P.3.1.5 Vehicle and Equipment Maintenance Areas. Minimize contamination of stormwater runoff from all areas used for vehicle/equipment maintenance through implementation of control measures such as the following, where determined to be feasible (list not exclusive): performing maintenance activities indoors; using drip pans; keeping an organized inventory of materials used in the shop; draining all parts of fluid prior to disposal; prohibiting wet clean up practices if these practices would result in the discharge of pollutants to stormwater drainage systems; using dry cleanup methods; treating and/or recycling collected stormwater runoff; and minimizing run on/runoff of stormwater to maintenance areas.

8.P.3.1.6 Locomotive Sanding (Loading Sand for Traction) Areas. Minimize discharges of pollutants in stormwater from locomotive sanding areas through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering sanding areas; minimizing stormwater run on/runoff; or appropriate sediment removal practices to minimize the offsite transport of sanding material by stormwater.

8.P.3.2 Employee Training. (See also Part 2.1.2.8) Train personnel at least once a year and address the following activities, as applicable: used oil and spent solvent management; fueling procedures; general good housekeeping practices; proper painting procedures; and used battery management.

8.P.4 Additional SWPPP Requirements.

8.P.4.1 Drainage Area Site Map. (See also Part 5.2.2) Identify in the SWPPP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: fueling stations; vehicle/equipment maintenance or cleaning areas; storage areas for vehicle/equipment with actual or potential fluid leaks; loading/unloading areas; areas where treatment, storage or disposal of wastes occur; liquid storage tanks; processing areas; and storage areas.

8.P.4.2 Potential Pollutant Sources. (See also Part 5.2.3) Assess the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: onsite waste storage or disposal; dirt/gravel parking areas for vehicles awaiting maintenance; illicit plumbing connections between shop floor drains and the stormwater conveyance system(s); and fueling areas. Describe these activities in the SWPPP.

8.P.4.3 Description of Good Housekeeping Measures. You must document in your SWPPP the good housekeeping measures you implement consistent with Part 8.P.3.

8.P.4.4 Vehicle and Equipment Wash Water Requirements. If wash water is handled in a manner that does not involve separate NPDES permitting (e.g., hauled offsite), describe the disposal method and include all pertinent information (e.g., frequency, volume, destination, etc.) in your SWPPP. Discharges of vehicle and equipment wash water, including tank cleaning operations, are not authorized by this permit for this sector.

8.P.5 Additional Inspection Requirements. (See also Part 3.1)

Inspect all the following areas/activities: storage areas for vehicles/equipment awaiting maintenance, fueling areas, indoor and outdoor vehicle/equipment maintenance areas, material storage areas, vehicle/equipment cleaning areas and loading/unloading areas.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart Q – Sector Q – Water Transportation.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.Q.1 Covered Stormwater Discharges.

The requirements in Subpart Q apply to stormwater discharges associated with industrial activity from Water Transportation facilities as identified by the SIC Codes specified under Sector Q in Table D-1 of Appendix D of the permit.

8.Q.2 Limitations on Coverage.

8.Q.2.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.1.4) Not covered by this permit: discharges from vessels including bilge and ballast water, sanitary wastes, pressure wash water, and cooling water. Any discharge of pollutants from a point source to a water of the U.S. requires coverage under an NPDES permit. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.Q.3 Additional Technology-Based Effluent Limits.

8.Q.3.1 Good Housekeeping Measures. You must implement the following good housekeeping measures in addition to the requirements of Part 2.1.2.2:

8.Q.3.1.1 Pressure Washing Area. If pressure washing is used to remove marine growth from vessels, the discharge water must be permitted by a separate NPDES permit. Collect or contain the discharges from the pressure washing area so that they are not commingled with stormwater discharges authorized by this permit.

8.Q.3.1.2 Blasting and Painting Area. Minimize the potential for spent abrasives, paint chips, and overspray to be discharged into receiving waters or the storm sewer system. Contain all blasting and painting activities, or use other measures, to minimize the discharge of contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). At least once per month, you must clean stormwater conveyances of deposits of abrasive blasting debris and paint chips.

8.Q.3.1.3 Material Storage Areas. Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Minimize the contamination of precipitation or surface runoff from the storage areas. Specify which materials are stored indoors, and contain or enclose or use other measures for those stored outdoors. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Implement an inventory control plan to limit the presence of potentially hazardous materials onsite.

8.Q.3.1.4 Engine Maintenance and Repair Areas. Minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair through implementation of control measures such as the following,

where determined to be feasible (list not exclusive): performing all maintenance activities indoors; maintaining an organized inventory of materials used in the shop; draining all parts of fluid prior to disposal; prohibiting the practice of hosing down the shop floor; using dry cleanup methods; and treating and/or recycling stormwater runoff collected from the maintenance area.

8.Q.3.1.5 Material Handling Area. Minimize the contamination of precipitation or surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels) through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering fueling areas; using spill and overflow protection; mixing paints and solvents in a designated area (preferably indoors or under a shed); and minimizing runoff of stormwater to material handling areas.

8.Q.3.1.6 Drydock Activities. Routinely maintain and clean the drydock to minimize discharges of pollutants in stormwater. Address the cleaning of accessible areas of the drydock prior to flooding, and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, and fuel spills occurring on the drydock. To minimize discharges of pollutants in stormwater from drydock activities, implement control measures such as the following, where determined to be feasible (list not exclusive): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding; and making absorbent materials and oil containment booms readily available to clean up or contain any spills.

8.Q.3.2 Employee Training. (See also Part 2.1.2.8) As part of your employee training program, address, at a minimum, the following activities (as applicable): used oil management; spent solvent management; disposal of spent abrasives; disposal of vessel wastewaters; spill prevention and control; fueling procedures; general good housekeeping practices; painting and blasting procedures; and used battery management.

8.Q.3.3 Preventive Maintenance. (See also Part 2.1.2.3) As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

8.Q.4 Additional SWPPP Requirements.

8.Q.4.1 Drainage Area Site Map. (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: fueling; engine maintenance and repair; vessel maintenance and repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading and unloading areas; locations used for the treatment, storage, or disposal of wastes; liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

8.Q.4.2 Summary of Potential Pollutant Sources. (See also Part 5.2.3) Document in the SWPPP the following additional sources and activities that have potential pollutants associated with them: outdoor manufacturing or processing activities (e.g., welding, metal

fabricating) and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, and painting).

8.Q.5 Additional Inspection Requirements. (See also Part 3.1)

Include the following in all quarterly routine facility inspections: pressure washing areas; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.

8.Q.6 Sector-Specific Benchmarks. (See also Part 6)

Table 8.Q-1 identifies benchmarks that apply to Sector Q. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.Q-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector Q1. Water Transportation Facilities (SIC 4412-4499)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Total Lead (freshwater) ²	Hardness Dependent
	Total Lead (saltwater) ¹	0.21 mg/L
	Total Zinc (freshwater) ²	Hardness Dependent
	Total Zinc (saltwater) ¹	0.09 mg/L

¹Saltwater benchmark values apply to stormwater discharges into saline waters where indicated.

² The freshwater benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. Hardness Dependent Benchmarks follow in the table below:

Freshwater Hardness Range	Lead (mg/L)	Zinc (mg/L)
0-24.99 mg/L	0.014	0.04
25-49.99 mg/L	0.023	0.05
50-74.99 mg/L	0.045	0.08
75-99.99 mg/L	0.069	0.11
100-124.99 mg/L	0.095	0.13
125-149.99 mg/L	0.122	0.16
150-174.99 mg/L	0.151	0.18
175-199.99 mg/L	0.182	0.20
200-224.99 mg/L	0.213	0.23
225-249.99 mg/L	0.246	0.25
250+ mg/L	0.262	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart R – Sector R – Ship and Boat Building and Repair Yards.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.R.1 Covered Stormwater Discharges.

The requirements in Subpart R apply to stormwater discharges associated with industrial activity from Ship and Boat Building and Repair Yards as identified by the SIC Codes specified under Sector R in Table D-1 of Appendix D of the permit.

8.R.2 Limitations on Coverage.

8.R.2.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.1.4) Not covered by this permit: discharges from vessels including bilge and ballast water, sanitary wastes, pressure wash water, and cooling water. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.R.3 Additional Technology-Based Effluent Limits.

8.R.3.1 Good Housekeeping Measures. (See also Part 2.1.2.2)

8.R.3.1.1 Pressure Washing Area. If pressure washing is used to remove marine growth from vessels, the discharged water must be permitted as a process wastewater by a separate NPDES permit.

8.R.3.1.2 Blasting and Painting Area. Minimize the potential for spent abrasives, paint chips, and overspray to be discharged into receiving waters or the storm sewer system. Contain all blasting and painting activities, or use other measures, to prevent the discharge of the contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). When necessary, regularly clean stormwater conveyances of deposits of abrasive blasting debris and paint chips.

8.R.3.1.3 Material Storage Areas. Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Minimize the contamination of precipitation or surface runoff from the storage areas. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Implement an inventory control plan to limit the presence of potentially hazardous materials onsite.

8.R.3.1.4 Engine Maintenance and Repair Areas. Minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair through implementation of control measures such as the following, where determined to be feasible (list not exclusive): performing all maintenance activities indoors; maintaining an organized inventory of materials used in the shop; draining all parts of fluid prior to disposal; prohibiting the practice of hosing down the shop floor; using dry cleanup methods; and treating and/or recycling stormwater runoff collected from the maintenance area.

- 8.R.3.1.5 Material Handling Area.** Minimize the discharge of pollutants in stormwater from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels) through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering fueling areas, using spill and overflow protection, mixing paints and solvents in a designated area (preferably indoors or under a shed), and minimizing stormwater run-on to material handling areas.
- 8.R.3.1.6 Drydock Activities.** Routinely maintain and clean the drydock to minimize pollutants in stormwater runoff. Clean accessible areas of the drydock prior to flooding and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, or fuel spills occurring on the drydock. To minimize discharges of pollutants in stormwater from drydock activities, implement control measures such as the following, where determined to be feasible (list not exclusive): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding; and having absorbent materials and oil containment booms readily available to clean up and contain any spills.
- 8.R.3.2 Employee Training.** (See also Part 2.1.2.8) As part of your employee training program, address, at a minimum, the following activities (as applicable): used oil management, spent solvent management, disposal of spent abrasives, disposal of vessel wastewaters, spill prevention and control, fueling procedures, general good housekeeping practices, painting and blasting procedures, and used battery management.
- 8.R.3.4 Preventive Maintenance.** (See also Part 2.1.2.3) As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.
- 8.R.4 Additional SWPPP Requirements.**
- 8.R.4.1 Drainage Area Site Map.** (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: fueling; engine maintenance or repair; vessel maintenance or repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading and unloading areas; treatment, storage, and waste disposal areas; liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).
- 8.R.4.2 Potential Pollutant Sources.** (See also Part 5.2.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them (if applicable): outdoor manufacturing or processing activities (e.g., welding, metal fabricating) and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, and painting).
- 8.R.4.3 Documentation of Good Housekeeping Measures.** Document in your SWPPP any good housekeeping measures implemented to meet the effluent limits in Part 8.R.3.

8.R.4.3.1 *Blasting and Painting Areas.* Document in the SWPPP any standard operating practices relating to blasting and painting (e.g., prohibiting uncontained blasting and painting over open water or prohibiting blasting and painting during windy conditions, which can render containment ineffective).

8.R.4.3.2 *Storage Areas.* Specify in your SWPPP which materials are stored indoors, and contain or enclose or use other measures for those stored outdoors.

8.R.5 *Additional Inspection Requirements.* (See also Part 3.1)

Include the following in all quarterly routine facility inspections: pressure washing areas; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart S – Sector S – Air Transportation.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.S.1 Covered Stormwater Discharges.

The requirements in Subpart S apply to stormwater discharges associated with industrial activity from Air Transportation facilities identified by the SIC Codes specified under Sector S in Table D-1 of Appendix D of the permit.

8.S.2 Limitation on Coverage.

8.S.2.1 Limitations on Coverage. This permit authorizes stormwater discharges from only those portions of the air transportation facility that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations or deicing operations.

Note: the term “deicing” in this permit will generally be used to mean both deicing (removing frost, snow or ice) and anti-icing (preventing accumulation of frost, snow or ice) activities, unless specific mention is made otherwise.

8.S.2.2 Prohibition of Non-Stormwater Discharges. (See also Part 1.1.4 and Part 8.S.5.3) This permit does not authorize the discharge of aircraft, ground vehicle, runway and equipment wash waters; nor the dry weather discharge of deicing chemicals. Such discharges must be covered by separate NPDES permit(s). Note that a discharge resulting from snowmelt is not a dry weather discharge. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.S.3 Multiple Operators at Air Transportation Facilities.

Air transportation facilities often have more than one operator who could discharge stormwater associated with industrial activity. Operators include the airport authority and airport tenants, including air passenger or cargo companies, fixed based operators, and other parties who routinely perform industrial activities on airport property.

8.S.3.1 Permit Coverage/Submittal of NOIs. Where an airport transportation facility has multiple industrial operators that discharge stormwater, each individual operator must obtain coverage under an NPDES stormwater permit. To obtain coverage under the MSGP, all such operators must meet the eligibility requirements in Part 1 and must submit an NOI, per Part 1.2.1.1 (or, if appropriate, a no exposure certification per Part 1.4).

8.S.3.2 MSGP Implementation Responsibilities for Airport Authority and Tenants. The airport authority, in collaboration with its tenants, may choose to implement certain MSGP requirements on behalf of its tenants in order to increase efficiency and eliminate redundancy or duplication of effort. Options available to the airport authority and its tenants for implementation of MSGP requirements include:

- The airport authority performs certain activities on behalf of itself and its tenants and reports on its activities;
- Tenants provide the airport authority with relevant inputs about tenants' activities, including deicing chemical usage*, and the airport authority compiles and reports on tenants' and its own activities;

- Tenants independently perform, document and submit required information on their activities.

*Tenants who report their deicing chemical usage to the airport authority and rely on the airport authority to perform monitoring should not check the glycol and urea use box on their NOI forms.

8.S.3.3 SWPPP Requirements. A single comprehensive SWPPP must be developed for all stormwater discharges associated with industrial activity at the airport before submittal of any NOIs. The comprehensive SWPPP should be developed collaboratively by the airport authority and tenants. If any operator develops a SWPPP for discharges from its own areas of the airport, that SWPPP must be coordinated and integrated with the comprehensive SWPPP. All operators and their separate SWPPP contributions and compliance responsibilities must be clearly identified in the comprehensive SWPPP, which all operators must sign and certify per Part 5.2.7. As applicable, the SWPPP must clearly specify the MSGP requirements to be complied with by:

- The airport authority for itself;
- The airport authority on behalf of its tenants;
- Tenants for themselves.

For each activity that an operator (e.g., the airport authority) conducts on behalf of another operator (e.g., a tenant), the SWPPP must describe a process for reporting results to the latter operator and for ensuring appropriate follow-up, if necessary, by all affected operators. This is to ensure all actions are taken to correct any potential deficiencies or permit violations. For example, where the airport authority is conducting monitoring for itself and its tenants, the SWPPP must identify how the airport authority will share the monitoring results with its tenants, and then follow-up with its tenants where there are any exceedances of benchmarks, effluent limits, or water quality standards. In turn, the SWPPP must describe how the tenants will also follow-up to ensure permit compliance.

8.S.3.4 Duty to Comply. All individual operators are responsible for implementing their assigned portion of the comprehensive SWPPP, and operators must ensure that their individual activities do not render another operator's stormwater controls ineffective. In addition, the standard permit conditions found in Appendix B apply to each individual operator, including B.1 Duty to Comply (which states, in part, "You [each individual operator] must comply with all conditions of this permit."). For multiple operators at an airport this means that each individual operator remains responsible for ensuring all requirements of its own MSGP coverage are met regardless of whether the comprehensive SWPPP allocates the actual implementation of any of those responsibilities to another entity. That is, the failure of the entity allocated responsibility in the SWPPP to implement an MSGP requirement on behalf of other operators does not negate the other operators' ultimate liability.

8.S.4 Additional Technology-Based Effluent Limits.

8.S.4.1 Good Housekeeping Measures. (See also Part 2.1.2.2)

8.S.4.1.1 Aircraft, Ground Vehicle and Equipment Maintenance Areas. Minimize the contamination of stormwater runoff from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangars) through implementation of control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive):

performing maintenance activities indoors; maintaining an organized inventory of material used in the maintenance areas; draining all parts of fluids prior to disposal; prohibiting the practice of hosing down the apron or hanger floor; using dry cleanup methods; and collecting the stormwater runoff from the maintenance area and providing treatment or recycling.

8.S.4.1.2 Aircraft, Ground Vehicle and Equipment Cleaning Areas. (See also Part 8.S.4.6) Clearly demarcate these areas on the ground using signage or other appropriate means. Minimize the contamination of stormwater runoff from cleaning areas.

8.S.4.1.3 Aircraft, Ground Vehicle and Equipment Storage Areas. Store all aircraft, ground vehicles and equipment awaiting maintenance in designated areas only and implement control measures to minimize the discharge of pollutants in stormwater from these storage areas such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): storing aircraft and ground vehicles indoors; using drip pans for the collection of fluid leaks; and perimeter drains, dikes or berms surrounding the storage areas.

8.S.4.1.4 Material Storage Areas. Maintain the vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition to prevent or minimize contamination of stormwater. Also plainly label the vessels (e.g., "used oil," "Contaminated Jet A"). To minimize contamination of precipitation/runoff from these areas, implement control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): storing materials indoors; storing waste materials in a centralized location; and installing berms/dikes around storage areas.

8.S.4.1.5 Airport Fuel System and Fueling Areas. Minimize the discharge of pollutants in stormwater from airport fuel system and fueling areas through implementation of control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): implementing spill and overflow practices (e.g., placing absorptive materials beneath aircraft during fueling operations); using only dry cleanup methods; and collecting stormwater runoff. If you have implemented a SPCC plan developed in accordance with the 2006 amendments to the SPCC rule, you may cite the relevant aspects from your SPCC plan that comply with the requirements of this section in your SWPPP.

8.S.4.1.6 Source Reduction. Consistent with safety considerations, minimize the use of urea and glycol-based deicing chemicals to reduce the aggregate amount of deicing chemicals used that could add pollutants to stormwater discharges. Chemical options to replace pavement deicers (urea or glycol) include (list not exclusive): potassium acetate; magnesium acetate; calcium acetate; and anhydrous sodium acetate.

8.S.4.1.6.1 Runway Deicing Operations. To minimize the discharge of pollutants in stormwater from runway deicing operations, implement source reduction control measures such as the following, where determined to be feasible and that

accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): metered application of chemicals; pre-wetting dry chemical constituents prior to application; installing a runway ice detection system; implementing anti-icing operations as a preventive measure against ice buildup; heating sand; and product substitution.

8.S.4.1.6.2 Aircraft Deicing Operations. Minimize the discharge of pollutants in stormwater from aircraft deicing operations. Determine whether excessive application of deicing chemicals occurs and adjust as necessary, consistent with considerations of flight safety. Determine whether alternatives to glycol and whether containment measures for applied chemicals are feasible. Implement control measures for reducing deicing fluid such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): forced-air deicing systems, computer-controlled fixed-gantry systems, infrared technology, hot water, varying glycol content to air temperature, enclosed-basket deicing trucks, mechanical methods, solar radiation, hangar storage, aircraft covers, and thermal blankets for MD-80s and DC-9s. Consider using ice-detection systems and airport traffic flow strategies and departure slot allocation systems where feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations. The evaluations and determinations required by this Part should be carried out by the personnel most familiar with the particular aircraft and flight operations and related systems in question (versus an outside entity such as the airport authority).

8.S.4.1.7 Management of Runoff. (See also Part 2.1.2.6) Minimize the discharge of pollutants in stormwater from deicing chemicals in runoff. To minimize discharges of pollutants in stormwater from aircraft deicing, implement runoff management control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): installing a centralized deicing pad to recover deicing fluid following application; plug-and-pump (PnP); using vacuum/collection trucks (glycol recovery vehicles); storing contaminated stormwater/deicing fluids in tanks; recycling collected deicing fluid where feasible; releasing controlled amounts to a publicly owned treatment works; separation of contaminated snow; conveying contaminated runoff into a stormwater impoundment for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations); and directing runoff into vegetative swales or other infiltration measures. To minimize discharges of pollutants in stormwater from runway deicing, implement runoff management control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): mechanical systems (snow plows, brushes); conveying contaminated runoff into swales and/or a stormwater impoundment; and pollution prevention practices such as ice detection systems, and airfield prewetting.

When applying deicing fluids during non-precipitation events (also referred to as “clear ice deicing”), implement control measures to prevent unauthorized discharge of pollutants (dry-weather discharges of pollutants would need coverage under an NPDES wastewater permit), or to minimize the discharge of pollutants from deicing fluids in later stormwater discharges, implement control measures such as the following, where determined to be feasible and that accommodate considerations safety, space, operational constraints, and flight considerations (list not exclusive): recovering deicing fluids; preventing the fluids from entering storm sewers or other stormwater discharge conveyances (e.g., covering storm sewer inlets, using booms, installing absorptive interceptors in the drains); releasing controlled amounts to a publicly owned treatment works Used deicing fluid should be recycled whenever practicable.

8.S.4.2 Deicing Season. You must determine the seasonal timeframe (e.g., December-February, October - March) during which deicing activities typically occur at the facility. Implementation of control measures, including any BMPs, facility inspections and monitoring must be conducted with particular emphasis throughout the defined deicing season. If you meet the deicing chemical usage thresholds of 100,000 gallons glycol and/or 100 tons of urea, the deicing season you identified is the timeframe during which you must obtain the four required benchmark monitoring event results for deicing-related parameters, i.e., BOD, COD, ammonia and pH. See also Part 8.S.7.

8.S.5 Additional SWPPP Requirements.

8.S.5.1 Drainage Area Site Map. (See also Part 5.2.2) Document in the SWPPP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: aircraft and runway deicing operations; fueling stations; aircraft, ground vehicle and equipment maintenance/cleaning areas; and storage areas for aircraft, ground vehicles and equipment awaiting maintenance.

8.S.5.2 Potential Pollutant Sources. (See also Part 5.2.3) In the inventory of exposed materials, describe in the SWPPP the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: aircraft, runway, ground vehicle and equipment maintenance and cleaning; and aircraft and runway deicing operations (including apron and centralized aircraft deicing stations, runways, taxiways and ramps). If deicing chemicals are used, a record of the types (including the Safety Data Sheets [SDS]) used and the monthly quantities, either as measured or, in the absence of metering, using best estimates, must be maintained. This includes all deicing chemicals, not just glycols and urea (e.g., potassium acetate), because large quantities of these other chemicals can still have an adverse impact on receiving waters. Deicing operators must provide the above information to the airport authority for inclusion with any comprehensive airport SWPPPs.

8.S.5.3 Vehicle and Equipment Wash Water Requirements. If wash water is handled in a manner that does not involve separate NPDES permitting or local pretreatment requirements (e.g., hauled offsite, retained onsite), describe the disposal method and include all pertinent information (e.g., frequency, volume, destination) in your SWPPP. Discharges of vehicle and equipment wash water are not authorized by this permit for this sector.

8.S.5.4 Documentation of Control Measures Used for Management of Runoff. Document in your SWPPP the control measures used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow.

8.S.6 Additional Inspection Requirements.

At a minimum conduct facility inspections at least monthly during the deicing season (e.g., October through April for most mid-latitude airports). If your facility needs to deice before or after this period, expand the monthly inspections to include all months during which deicing chemicals may be used. The Director may specifically require you to increase inspection frequencies.

8.S.7 Sector-Specific Benchmarks. (See also Part 6)

Table 8.S-1 identifies benchmarks that apply to Sector S. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.S-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
For airports where a single permittee, or a combination of permitted facilities use more than 100,000 gallons of pure glycol in glycol-based deicing fluids and/or 100 tons or more of urea on an average annual basis, monitor the first four parameters in ONLY those outfalls that collect runoff from areas where deicing activities occur (SIC 4512-4581).	Biochemical Oxygen Demand (BOD ₅) ¹	30 mg/L
	Chemical Oxygen Demand (COD) ¹	120 mg/L
	Ammonia ¹	2.14 mg/L
	pH ¹	6.0 - 9.0 s.u.

¹ These are deicing-related parameters. Collect the four benchmark samples, and any required follow-up benchmark samples, during the timeframe defined in Part 8.S.4.2 when deicing activities are occurring.

8.S.8 Effluent Limitations Based on Effluent Limitations Guidelines and New Source Performance Standards. (See also Part 6.2.2.1)

8.S.8.1 Airfield Pavement Deicing. For both existing and new "primary airports" (as defined at 40 CFR 449.2) with 1,000 or more annual non-propeller aircraft departures that discharge stormwater from airfield pavement deicing activities, there shall be no discharge of airfield pavement deicers containing urea. To comply with this limitation, such airports must do one of the following: (1) certify annually on the annual report that you do not use pavement deicers containing urea, or (2) meet the effluent limitation in Table 8.S-2.

8.S.8.2 Aircraft Deicing. Airports that are both "primary airports" (as defined at 40 CFR 449.2) and new sources ("new airports") with 1,000 or more annual non-propeller aircraft departures must meet the applicable requirements for aircraft deicing at 40 CFR 449.11 (a). Discharges of the collected aircraft deicing fluid directly to waters of the U.S. are not eligible for coverage under this permit.

8.S.8.3 Monitoring, Reporting and Recordkeeping. For new and existing airports subject to the effluent limitations in Part 8.S.8.1 or 8.S.8.2 of this permit, you must comply with the applicable monitoring, reporting and recordkeeping requirements outlined in 40 CFR 449.20.

Table 8.S-2		
Industrial Activity	Parameter	Effluent Limitation
Runoff containing urea from airfield pavement deicing at existing and new primary airports with 1,000 or more annual non-propeller aircraft departures	Ammonia as Nitrogen	14.7 mg/L, daily maximum

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart T – Sector T – Treatment Works.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.T.1 Covered Stormwater Discharges.

The requirements in Subpart T apply to stormwater discharges associated with industrial activity from Treatment Works as identified by the Activity Code specified under Sector T in Table D-1 of Appendix D of the permit.

8.T.2 Industrial Activities Covered by Sector T.

The requirements listed under this part apply to all existing point source stormwater discharges associated with the following activities:

8.T.2.1 *Treatment works treating domestic sewage, or any other sewage sludge or wastewater treatment device or system used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge; that are located within the confines of a facility with a design flow of 1.0 million gallons per day (MGD) or more; or are required to have an approved pretreatment program under 40 CFR Part 403.*

8.T.2.2 *The following are not required to have permit coverage: farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located within the facility, or areas that are in compliance with Section 405 of the CWA.*

8.T.3 Limitations on Coverage.

8.T.3.1 *Prohibition of Non-Stormwater Discharges.* (See also Part 1.1.4) Sanitary and industrial wastewater and equipment and vehicle wash water are not authorized by this permit. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.T.4 Additional Technology-Based Effluent Limits.

8.T.4.1 *Control Measures.* (See also Part 2.1.2) To minimize the discharge of pollutants in stormwater, implement control measures such as the following, where determined to be feasible (list not exclusive): routing stormwater to the treatment works; or covering exposed materials (i.e., from the following areas: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste receiving station).

8.T.4.2 *Employee Training.* (See also Part 2.1.2.8) At a minimum, training must address the following areas when applicable to a facility: petroleum product management; process chemical management; spill prevention and controls; fueling procedures; general good housekeeping practices; and proper procedures for using fertilizer, herbicides, and pesticides.

8.T.5 Additional SWPPP Requirements.

8.T.5.1 Site Map. (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and storage areas for process chemicals, petroleum products, solvents, fertilizers, herbicides, and pesticides.

8.T.5.2 Potential Pollutant Sources. (See also Part 5.2.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them, as applicable: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and access roads and rail lines.

8.T.5.3 Wastewater and Wash Water Requirements. If wastewater and/or vehicle and equipment wash water is not covered by another NPDES permit but is handled in another manner (e.g., hauled offsite, retained onsite), the disposal method must be described and all pertinent information (e.g., frequency, volume, destination) must be included in your SWPPP. Discharges of vehicle and equipment wash water, including tank cleaning operations, are not authorized by this permit for this sector.

8.T.6 Additional Inspection Requirements. (See also Part 3.1)

Include the following areas in all inspections: access roads and rail lines; grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste receiving station.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart U – Sector U – Food and Kindred Products.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.U.1 Covered Stormwater Discharges.

The requirements in Subpart U apply to stormwater discharges associated with industrial activity from Food and Kindred Products facilities as identified by the SIC Codes specified in Table D-1 of Appendix D of the permit.

8.U.2 Limitations on Coverage.

8.U.2.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.1.4) The following discharges are not authorized by this permit: discharges containing boiler blowdown, cooling tower overflow and blowdown, ammonia refrigeration purging, and vehicle washing and clean-out operations. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.U.3 Additional Technology-Based Limitations.

8.U.3.1 Employee Training. (See also Part 2.1.2.8) Address pest control in your employee training program.

8.U.4 Additional SWPPP Requirements.

8.U.4.1 Drainage Area Site Map. (See also Part 5.2.2) Document in your SWPPP the locations of the following activities if they are exposed to precipitation or runoff: vents and stacks from cooking, drying, and similar operations; dry product vacuum transfer lines; animal holding pens; spoiled product; and broken product container storage areas.

8.U.4.2 Potential Pollutant Sources. (See also Part 5.2.3) Document in your SWPPP, in addition to food and kindred products processing-related industrial activities, application and storage of pest control chemicals (e.g., rodenticides, insecticides, fungicides) used on plant grounds.

8.U.5 Additional Inspection Requirements. (See also Part 3.1)

Inspect on a quarterly basis, at a minimum, the following areas where the potential for exposure to stormwater exists: loading and unloading areas for all significant materials; storage areas, including associated containment areas; waste management units; vents and stacks emanating from industrial activities; spoiled product and broken product container holding areas; animal holding pens; staging areas; and air pollution control equipment.

8.U.6 Sector-Specific Benchmarks. (See also Part 6)

Table 8.U-1 identifies benchmarks that apply to the specific subsectors of Sector U. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.U-1.		
Subsector (You may be subject to requirements for more than one Sector / Subsector)	Parameter	Benchmark Monitoring Concentration
Subsector U1. Grain Mill Products (SIC 2041-2048)	Total Suspended Solids (TSS)	100 mg/L
Subsector U2. Fats and Oils Products (SIC 2074-2079)	Biochemical Oxygen Demand (BOD ₅)	30 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Suspended Solids (TSS)	100 mg/L

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart V – Sector V – Textile Mills, Apparel, and Other Fabric Products.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.V.1 Covered Stormwater Discharges.

The requirements in Subpart V apply to stormwater discharges associated with industrial activity from Textile Mills, Apparel, and Other Fabric Product manufacturing as identified by the SIC Codes specified under Sector V in Table D-1 of Appendix D of the permit.

8.V.2 Limitations on Coverage.

8.V.2.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.1.4) The following are not authorized by this permit: discharges of wastewater (e.g., wastewater resulting from wet processing or from any processes relating to the production process), reused or recycled water, and waters used in cooling towers. If you have these types of discharges from your facility, you must cover them under a separate NPDES permit. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.V.3 Additional Technology-Based Limitations.

8.V.3.1 Good Housekeeping Measures. (See also Part 2.1.2.2)

8.V.3.1.1 Material Storage Areas. Plainly label and store all containerized materials (e.g., fuels, petroleum products, solvents, and dyes) in a protected area, away from drains. Minimize contamination of the stormwater runoff from such storage areas. Also consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances. For storing empty chemical drums or containers, ensure that the drums and containers are clean (consider triple-rinsing) and that there is no contact of residuals with precipitation or runoff. Collect and dispose of wash water from these cleanings properly.

8.V.3.1.2 Material Handling Areas. Minimize contamination of stormwater runoff from material handling operations and areas through implementation of control measures such as the following, where determined to be feasible: using spill and overflow protection; covering fueling areas; and covering or enclosing areas where the transfer of material may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines and pipes that may carry chemicals, dyes or wastewater.

8.V.3.1.3 Fueling Areas. Minimize contamination of stormwater runoff from fueling areas through implementation of control measures such as the following, where determined to be feasible: covering the fueling area; using spill and overflow protection; minimizing run-on of stormwater to the fueling areas; using dry cleanup methods; and treating and/or recycling stormwater runoff collected from the fueling area.

8.V.3.1.4 Above-Ground Storage Tank Area. Minimize contamination of stormwater runoff from above-ground storage tank areas, including the associated piping and valves, through implementation of control measures such as the following, where determined to be feasible (list not exclusive): regular cleanup of these areas; including measures for tanks, piping and valves explicitly in your SPCC program; minimizing runoff of stormwater from adjacent areas; restricting access to the area; inserting filters in adjacent catch basins; providing absorbent booms in unbermed fueling areas; using dry cleanup methods; and permanently sealing drains within critical areas that may discharge to a storm drain.

8.V.3.2 Employee Training. (See also Part 2.1.2.8) As part of your employee training program, address, at a minimum, the following activities (as applicable): use of reused and recycled waters, solvents management, proper disposal of dyes, proper disposal of petroleum products and spent lubricants, spill prevention and control, fueling procedures, and general good housekeeping practices.

8.V.4 Additional SWPPP Requirements.

8.V.4.1 Potential Pollutant Sources. (See also Part 5.2.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them: industry-specific significant materials and industrial activities (e.g., backwinding, beaming, bleaching, backing bonding, carbonizing, carding, cut and sew operations, desizing, drawing, dyeing locking, fulling, knitting, mercerizing, opening, packing, plying, scouring, slashing, spinning, synthetic-felt processing, textile waste processing, tufting, turning, weaving, web forming, winging, yarn spinning, and yarn texturing).

8.V.4.2 Description of Good Housekeeping Measures for Material Storage Areas. Document in the SWPPP your containment area or enclosure for materials stored outdoors in connection with Part 8.V.3.1.1 above.

8.V.5 Additional Inspection Requirements.

Inspect, at least monthly, the following activities and areas (at a minimum): transfer and transmission lines, spill prevention, good housekeeping practices, management of process waste products, and all structural and nonstructural management practices.

Part 8 – Sector-Specific Requirements for Industrial Activity**Subpart W – Sector W – Furniture and Fixtures.**

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.W.1 Covered Stormwater Discharges.

The requirements in Subpart W apply to stormwater discharges associated with industrial activity from Furniture and Fixtures facilities as identified by the SIC Codes specified under Sector W in Table D-1 of Appendix D of the permit.

8.W.2 Additional SWPPP Requirements.

8.W.2.1 Drainage Area Site Map. (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: material storage (including tanks or other vessels used for liquid or waste storage) areas; outdoor material processing areas; areas where wastes are treated, stored, or disposed of; access roads; and rail spurs.

Part 8 – Sector-Specific Requirements for Industrial Activity**Subpart X – Sector X – Printing and Publishing.**

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.X.1 Covered Stormwater Discharges.

The requirements in Subpart X apply to stormwater discharges associated with industrial activity from Printing and Publishing facilities as identified by the SIC Codes specified under Sector X in Table D-1 of Appendix D of the permit.

8.X.2 Additional Technology-Based Effluent Limits.**8.X.2.1 Good Housekeeping Measures.** (See also Part 2.1.2.2)

- 8.X.2.1.1 Material Storage Areas.** Plainly label and store all containerized materials (e.g., skids, pallets, solvents, bulk inks, hazardous waste, empty drums, portable and mobile containers of plant debris, wood crates, steel racks, and fuel oil) in a protected area, away from drains. Minimize contamination of the stormwater runoff from such storage areas. Also consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances.
- 8.X.2.1.2 Material Handling Area.** Minimize contamination of stormwater runoff from material handling operations and areas (e.g., blanket wash, mixing solvents, loading and unloading materials) through implementation of control measures such as the following, where determined to be feasible (list not exclusive): using spill and overflow protection; covering fueling areas; and covering or enclosing areas where the transfer of materials may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines, and pipes that may carry chemicals or wastewater.
- 8.X.2.1.3 Fueling Areas.** Minimize contamination of stormwater runoff from fueling areas through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering the fueling area; using spill and overflow protection; minimizing runoff of stormwater to the fueling areas; using dry cleanup methods; and treating and/or recycling stormwater runoff collected from the fueling area.
- 8.X.2.1.4 Above Ground Storage Tank Area.** Minimize contamination of the stormwater runoff from above-ground storage tank areas, including the associated piping and valves, through implementation of control measures such as the following, where determined to be feasible (list not exclusive): regularly cleaning these areas; explicitly addressing tanks; piping and valves in the SPCC program; minimizing stormwater runoff from adjacent areas; restricting access to the area; inserting filters in adjacent catch basins; providing absorbent booms in unbermed fueling areas; using dry cleanup methods; and permanently sealing drains within critical areas that may discharge to a storm drain.

8.X.2.2 Employee Training. (See also Part 2.1.2.8) As part of your employee training program, address, at a minimum, the following activities (as applicable): spent solvent management, spill prevention and control, used oil management, fueling procedures, and general good housekeeping practices.

8.X.3 Additional SWPPP Requirements.

8.X.3.1 Description of Good Housekeeping Measures for Material Storage Areas. In connection with Part 8.X.2.1.1, describe in the SWPPP the containment area or enclosure for materials stored outdoors.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart Y – Sector Y – Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.Y.1 Covered Stormwater Discharges.

The requirements in Subpart Y apply to stormwater discharges associated with industrial activity from Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries facilities as identified by the SIC Codes specified under Sector Y in Table D-1 of Appendix D of the permit.

8.Y.2 Additional Technology-Based Effluent Limits.

8.Y.2.1 Controls for Rubber Manufacturers. (See also Part 2.1.2) Minimize the discharge of zinc in your stormwater discharges. Parts 8.Y.2.1.1 to 8.Y.2.1.5 give possible sources of zinc to be reviewed and list control measures to be implemented where determined to be feasible. Implement additional control measures such as the following, where determined to be feasible (list not exclusive): using chemicals purchased in pre-weighed, sealed polyethylene bags; storing in-use materials in sealable containers, ensuring an airspace between the container and the cover to minimize “puffing” losses when the container is opened; and using automatic dispensing and weighing equipment.

8.Y.2.1.1 Zinc Bags. Ensure proper handling and storage of zinc bags at your facility through implementation of control measures such as the following, where determined to be feasible (list not exclusive): employee training on the handling and storage of zinc bags; indoor storage of zinc bags; cleanup of zinc spills without washing the zinc into the storm drain; and the use of 2,500-pound sacks of zinc rather than 50- to 100-pound sacks.

8.Y.2.1.2 Dumpsters. Minimize discharges of zinc from dumpsters through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering the dumpster; moving the dumpster indoors; and providing a lining for the dumpster.

8.Y.2.1.3 Dust Collectors and Baghouses. Minimize contributions of zinc to stormwater from dust collectors and baghouses. Replace or repair, as appropriate, improperly operating dust collectors and baghouses.

8.Y.2.1.4 Grinding Operations. Minimize contamination of stormwater as a result of dust generation from rubber grinding operations. Where determined to be feasible, install a dust collection system.

8.Y.2.1.5 Zinc Stearate Coating Operations. Minimize the potential for stormwater contamination from drips and spills of zinc stearate slurry that may be released to the storm drain. Where determined to be feasible, use alternative compounds to zinc stearate.

8.Y.2.2 Controls for Plastic Products Manufacturers. Minimize the discharge of plastic resin pellets in your stormwater discharges through implementation of control measures such as the following, where determined to be feasible (list not exclusive): minimizing spills; cleaning up of spills promptly and thoroughly; sweeping thoroughly; pellet capturing; employee education; and disposal precautions.

8.Y.3 Additional SWPPP Requirements.

8.Y.3.1 Potential Pollutant Sources for Rubber Manufacturers. (See also Part 5.2.3) Document in your SWPPP the use of zinc at your facility and the possible pathways through which zinc may be discharged in stormwater runoff.

8.Y.4 Sector-Specific Benchmarks. (See also Part 6)

Table 8.Y-1 identifies benchmarks that apply to Sector Y. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.Y-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector Y1. Rubber Products Manufacturing (SIC 3011, 3021, 3052, 3053, 3061, 3069)	Total Zinc (freshwater) ² Total Zinc (saltwater) ¹	Hardness Dependent 0.09 mg/L

¹Saltwater benchmark values apply to stormwater discharges into saline waters where indicated.

² The freshwater benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. Hardness Dependent Benchmarks follow in the table below:

Freshwater Hardness Range	Zinc (mg/L)
0-24.99 mg/L	0.04
25-49.99 mg/L	0.05
50-74.99 mg/L	0.08
75-99.99 mg/L	0.11
100-124.99 mg/L	0.13
125-149.99 mg/L	0.16
150-174.99 mg/L	0.18
175-199.99 mg/L	0.20
200-224.99 mg/L	0.23
225-249.99 mg/L	0.25
250+ mg/L	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity**Subpart Z – Sector Z – Leather Tanning and Finishing.**

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.Z.1 Covered Stormwater Discharges.

The requirements in Subpart Z apply to stormwater discharges associated with industrial activity from Leather Tanning and Finishing facilities as identified by the SIC Code specified under Sector Z in Table D-1 of Appendix D of the permit.

8.Z.2 Additional Technology-Based Effluent Limits.**8.Z.2.3 Good Housekeeping Measures.** (See also Part 2.1.2.2)**8.Z.2.3.1 Storage Areas for Raw, Semiprocessed, or Finished Tannery By-products.**

Minimize contamination of stormwater runoff from pallets and bales of raw, semiprocessed, or finished tannery by-products (e.g., splits, trimmings, shavings). Store or protect indoors with polyethylene wrapping, tarpaulins, roofed storage, etc. where practicable. Place materials on an impermeable surface and enclose or put berms (or equivalent measures) around the area to prevent stormwater run-on and runoff where practicable.

8.Z.2.3.2 Material Storage Areas. Label storage containers of all materials (e.g., specific chemicals, hazardous materials, spent solvents, waste materials) and minimize contact of such materials with stormwater.**8.Z.2.3.3 Buffing and Shaving Areas.** Minimize contamination of stormwater runoff with leather dust from buffing and shaving areas through implementation of control measures such as the following, where determined to be feasible (list not exclusive): implementing dust collection enclosures; implementing preventive inspection and maintenance programs; or other appropriate preventive measures.**8.Z.2.3.4 Receiving, Unloading, and Storage Areas.** Minimize contamination of stormwater runoff from receiving, unloading, and storage areas. If these areas are exposed, implement control measures such as the following, where determined to be feasible (list not exclusive): covering all hides and chemical supplies; diverting drainage to the process sewer; or grade berming or curbing the area to prevent stormwater runoff.**8.Z.2.3.5 Outdoor Storage of Contaminated Equipment.** Minimize contact of stormwater with contaminated equipment through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering equipment, diverting drainage to the process sewer, and cleaning thoroughly prior to storage.**8.Z.2.3.6 Waste Management.** Minimize contamination of stormwater runoff from waste storage areas through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering dumpsters; moving waste management activities indoors; covering waste piles with temporary covering material such as tarpaulins or polyethylene; and

minimizing stormwater runoff by enclosing the area or building berms around the area.

8.Z.3 Additional SWPPP Requirements.

- 8.Z.3.1 Drainage Area Site Map.** (See also Part 5.2.2) Identify in your SWPPP where any of the following may be exposed to precipitation or surface runoff: processing and storage areas of the beamhouse, tanyard, and re-tan wet finishing and dry finishing operations.
- 8.Z.3.2 Potential Pollutant Sources.** (See also Part 5.2.3) Document in your SWPPP the following sources and activities that have potential pollutants associated with them (as appropriate): temporary or permanent storage of fresh and brine-cured hides; extraneous hide substances and hair; leather dust, scraps, trimmings, and shavings.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart AA – Sector AA – Fabricated Metal Products

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.AA.1 Covered Stormwater Discharges.

The requirements in Subpart AA apply to stormwater discharges associated with industrial activity from Fabricated Metal Products facilities as identified by the SIC Codes specified under Sector AA in Table D-1 of Appendix D of the permit.

8.AA.2 Additional Technology-Based Effluent Limits.

8.AA.2.1 Good Housekeeping Measures. (See also Part 2.1.2.2)

8.AA.2.1.1 Raw Steel Handling Storage. Minimize the generation of and/or recover and properly manage scrap metals, fines, and iron dust. Include measures for containing materials within storage handling areas.

8.AA.2.1.2 Paints and Painting Equipment. Minimize exposure of paint and painting equipment to stormwater.

8.AA.2.2 Spill Prevention and Response Procedures. (See also Part 2.1.2.4) Ensure that the necessary equipment to implement a cleanup is available to personnel. The following areas should be addressed:

8.AA.2.2.1 Metal Fabricating Areas. Maintain clean, dry, orderly conditions in these areas. Use dry clean-up techniques where practicable.

8.AA.2.2.2 Storage Areas for Raw Metal. Keep these areas free of conditions that could cause, or impede appropriate and timely response to, spills or leakage of materials through implementation of control measures such as the following, where determined to be feasible (list not exclusive): maintaining storage areas so that there is easy access in the event of a spill, and labeling stored materials to aid in identifying spill contents.

8.AA.2.2.3 Metal Working Fluid Storage Areas. Minimize the potential for stormwater contamination from storage areas for metal working fluids.

8.AA.2.2.4 Cleaners and Rinse Water. Control and clean up spills of solvents and other liquid cleaners, control sand buildup and disbursement from sand-blasting operations, and prevent exposure of recyclable wastes. Substitute environmentally benign cleaners when possible.

8.AA.2.2.5 Lubricating Oil and Hydraulic Fluid Operations. Minimize the potential for stormwater contamination from lubricating oil and hydraulic fluid operations. Use monitoring equipment or other devices to detect and control leaks and overflows where feasible. Install perimeter controls such as dikes, curbs, grass filter strips, or equivalent measures where feasible.

8.AA.2.2.6 Chemical Storage Areas. Minimize stormwater contamination and accidental spillage in chemical storage areas. Include a program to inspect containers and identify proper disposal methods.

8.AA.2.3 Spills and Leaks. (See also Part 5.2.3.3) In your spill prevention and response procedures, required by Part 2.1.2.4, pay attention to the following materials (at a minimum): chromium, toluene, pickle liquor, sulfuric acid, zinc and other water priority chemicals, and hazardous chemicals and wastes.

8.AA.3 Additional SWPPP Requirements.

8.AA.3.1 Drainage Area Site Map. (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: raw metal storage areas; finished metal storage areas; scrap disposal collection sites; equipment storage areas; retention and detention basins; temporary and permanent diversion dikes or berms; right-of-way or perimeter diversion devices; sediment traps and barriers; processing areas, including outside painting areas; wood preparation; recycling; and raw material storage.

8.AA.3.2 Potential Pollutant Sources. (See also Part 5.2.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them: loading and unloading operations for paints, chemicals, and raw materials; outdoor storage activities for raw materials, paints, empty containers, corn cobs, chemicals, and scrap metals; outdoor manufacturing or processing activities such as grinding, cutting, degreasing, buffing, and brazing; onsite waste disposal practices for spent solvents, sludge, pickling baths, shavings, ingot pieces, and refuse and waste piles.

8.AA.4 Additional Inspection Requirements.

8.AA.4.1 Inspections. (See also Part 3.1) At a minimum, include the following areas in all inspections: raw metal storage areas, finished product storage areas, material and chemical storage areas, spent solvents and chemical storage areas, recycling areas, loading and unloading areas, equipment storage areas, paint areas, drainage from roof and vehicle fueling and maintenance areas. Potential pollutants include chromium, zinc, lubricating oil, solvents, aluminum, oil and grease, methyl ethyl ketone, steel, and related materials.

8.AA.5 Sector-Specific Benchmarks. (See also Part 6)

Table 8.AA-1 identifies benchmarks that apply to the specific subsectors of Sector AA. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.AA-1		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector AA1. Fabricated Metal Products, except Coating (SIC 3411-3499; 3911-3915)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Total Zinc (freshwater) ²	Hardness Dependent
	Total Zinc (saltwater) ¹	0.09 mg/L
Subsector AA2. Fabricated Metal Coating and Engraving (SIC 3479)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Zinc (freshwater) ²	Hardness Dependent
	Total Zinc (saltwater) ¹	0.09 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L

¹ Saltwater benchmark values apply to stormwater discharges into saline waters where indicated.

² The freshwater benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. Hardness Dependent Benchmarks follow in the table below:

Freshwater Hardness Range	Zinc (mg/L)
0-24.99 mg/L	0.04
25-49.99 mg/L	0.05
50-74.99 mg/L	0.08
75-99.99 mg/L	0.11
100-124.99 mg/L	0.13
125-149.99 mg/L	0.16
150-174.99 mg/L	0.18
175-199.99 mg/L	0.20
200-224.99 mg/L	0.23
225-249.99 mg/L	0.25
250+ mg/L	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart AB – Sector AB – Transportation Equipment, Industrial or Commercial Machinery Facilities.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.AB.1 Covered Stormwater Discharges.

The requirements in Subpart AB apply to stormwater discharges associated with industrial activity from Transportation Equipment, Industrial or Commercial Machinery facilities as identified by the SIC Codes specified under Sector AB in Table D-1 of Appendix D of the permit.

8.AB.2 Additional SWPPP Requirements.

8.AB.2.1 Drainage Area Site Map. (See also Part 5.2.2) Identify in your SWPPP where any of the following may be exposed to precipitation or surface runoff: vents and stacks from metal processing and similar operations.

Part 8 – Sector-Specific Requirements for Industrial Activity**Subpart AC– Sector AC – Electronic and Electrical Equipment and Components, Photographic and Optical Goods.**

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.AC.1 Covered Stormwater Discharges.

The requirements in Subpart AC apply to stormwater discharges associated with industrial activity from facilities that manufacture Electronic and Electrical Equipment and Components, Photographic and Optical goods as identified by the SIC Codes specified in Table D-1 of Appendix D of the permit.

8.AC.2 Additional Requirements.

No additional sector-specific requirements apply.

Part 8 – Sector-Specific Requirements for Industrial Activity**Subpart AD – Sector AD – Stormwater Discharges Designated by the Director as Requiring Permits.**

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.AD.1 Covered Stormwater Discharges.

Sector AD is used to provide permit coverage for facilities designated by the Director as needing a stormwater permit, and any discharges of stormwater associated with industrial activity that do not meet the description of an industrial activity covered by Sectors A-AC.

8.AD.1.1 Eligibility for Permit Coverage. Because this sector is primarily intended for use by discharges designated by the Director as needing a stormwater permit (which is an atypical circumstance), and your facility may or may not normally be discharging stormwater associated with industrial activity, you must obtain the Director's written permission to use this permit prior to submitting an NOI. If you are authorized to use this permit, you will still be required to ensure that your discharges meet the basic eligibility provisions of this permit at Part 1.1.

8.AD.2 Sector-Specific Benchmarks and Effluent Limits. (See also Part 6)

The Director will establish any additional monitoring and reporting requirements for your facility prior to authorizing you to be covered by this permit. Additional monitoring requirements would be based on the nature of activities at your facility and your stormwater discharges.

9. Permit Conditions Applicable to Specific States, Indian Country Lands, or Territories**9.1 EPA Region 1: Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont.****9.1.1 CTR05I000: Indian Country within the State of Connecticut**

No additional requirements.

9.1.2 MAR050000: Commonwealth of Massachusetts, except Indian country

Permittees in the Commonwealth of Massachusetts must meet the following conditions:

9.1.2.1 Additional conditions required by the Commonwealth of Massachusetts. Discharges covered by the general permit must comply with the provisions of 314 CMR 3.00; 314 CMR 4.00; 314 CMR 9.00; and 314 CMR 10.00 and any other related policies adopted under the authority of the Massachusetts Clean Waters Act, MGL c.21, ss. 26-53 and Wetlands Protection Act, MGL s. 40.

New facilities or redevelopment of existing facilities subject to this permit must comply with applicable stormwater performance standards prescribed by state regulation or policy. A permit under 314 CMR 3.04 is not required for existing facilities which meet state stormwater performance standards. An application for a permit under 314 CMR 3.00 is required only when required under 314 CMR 3.04(2)(b) {designation of a discharge on a case-by-case basis} or is otherwise identified in 314 CMR 3.00 or any Massachusetts Department of Environmental Protection policy as a discharge requiring a permit application. Department regulations and policies may be obtained through the State House Bookstore or online at www.mass.gov/dep.

9.1.2.2 SWPPP Availability. The Department may request a copy of the Stormwater Pollution Prevention Plan (SWPPP) and the permittee is required to submit the SWPPP to the Department within 14 days of such a request.**9.1.2.3 Authorization to Inspect.** The Department may conduct an inspection of any facility covered by this permit to ensure compliance with state law requirements, including state water quality standards. The Department may enforce its certification conditions.**9.1.2.4 Submission of Monitoring Data.** The results of any monitoring [four samples required in the first year of the permit] required by this permit must be sent to the appropriate Regional Office of the Department [attention: Bureau of Waste Prevention] where the monitoring identifies violations of any effluent limits or benchmarks for any parameter for which monitoring is required under this permit. In addition, any follow-up monitoring and a description of the corrective actions required and undertaken to meet the effluent limits or benchmarks must be sent to the appropriate Department Regional Office.**9.1.2.5 Sector-Specific Requirements.** The Massachusetts Coastal Zone Management Program submitted the following conditions to be added to the permit in order to meet the Programs' Consistency Review and which are included in the requirements of this Water Quality Certification:

- In Sector Q [Water Transportation] add copper to the required monitoring parameters with a benchmark monitoring concentration as included in the MSGP 2015 Fact Sheet Part X.B.1, and Appendix J.
- In Sector R [Ship and Boat Building and Repair Yards] add aluminum, iron, lead and copper to the list of required monitoring parameters with a benchmark monitoring concentration as included in the MSGP 2015 Fact Sheet Part X.B.1 and Appendix J.
- Modify the monitoring requirements [Part 6.2.1.2] for Sectors Q and R such that all four of the quarterly monitoring samples must meet the benchmarks rather than the average of the four before no further monitoring is required.

9.1.3 MAR05I000: Indian country within the Commonwealth of Massachusetts

No additional requirements.

9.1.4 NHR050000: State of New Hampshire

Permittees in New Hampshire must also meet the following conditions:

9.1.4.1 *Consider Opportunities for on-site infiltration of stormwater.* In Part 2.1.1 Control Measure Selection and Design Considerations, you are required to consider opportunities for infiltrating runoff onsite. This is encouraged, but it should only be done if consistent with the statutes and rules of the Department of Environmental Services written to protect groundwater, including Env-Wq 1507.04(e). Infiltration best management practices are not recommended at industrial sites except in areas where industrial activities do not occur, such as at office buildings and their associated parking facilities, or in drainage areas at the facility where a certification of no exposure will always be possible [see 40 CFR 122.26(g)].

9.1.4.2 *Maintenance of Infiltration Best Management Practices.* In Part 2.1.2.3 you are required to maintain control measures. In Parts 5.2.2, 5.2.5.1, and 5.5 you are required to document the location of control measures, perform inspections and maintenance, and keep records. Accordingly, the SWPPP must contain the following:

- A description of and the location of each on-site infiltration BMP installed;
- The maintenance procedures that will be followed to ensure proper operation, including the removal of sediment from pretreatment devices;
- The inspection procedures that will be followed at least annually. These should include the procedures for ensuring that the stormwater being infiltrated is not exposed to industrial pollutants and the procedures for ensuring proper drainage to prevent mosquito breeding;
- The employee name (or title of the position) who is a member of the stormwater pollution prevention team (see Part 5.2.1) who will be responsible for the maintenance required in this section, the inspection required in this section, and any necessary corrective action required in Part 4; and
- Records for all maintenance performed, inspections conducted, and corrective actions taken.

9.1.4.3 *Discontinue, Permit or Register On-site Infiltration BMP if Necessary.* If at any time a certification of no exposure can no longer be made for any of the stormwater to be infiltrated, then the infiltration BMP must cease for that portion of the runoff or

the discharge must be permitted or registered as appropriate. The following may be required:

- Infiltration BMP that meets the definition of a Class V well or that infiltrates stormwater via a subsurface structure (i.e. concrete chambers, dry well, leach field, etc.) will need an underground injection control (UIC) registration from NHDES; and
- Permitting as a groundwater discharge as required in Env-Wq 402, if the stormwater will or may contain regulated contaminants.

The SWPPP must be modified immediately if new infiltration BMPs are proposed or if existing infiltration BMPs will cease.

9.1.4.4 Required NHDES notification.

- Notify the NHDES Groundwater Discharge Permit Coordinator immediately if you believe that any infiltration BMP may need to be permitted or registered (See Part 9.1.4.3) during the permit term.
- Notify the NHDES Wastewater Engineering Bureau immediately of any plans to discharge any new non-stormwater discharges during the permit term. This does not include the allowable non-stormwater discharges listed in Part 1.1.3.

9.1.4.5 Information That May Be Requested by NHDES. To ensure compliance with RSA 485-C, RSA 485-A, RSA 485-A:13, I(a), Env-Wq 400 and Env-Wq 401 the following information may be requested by NHDES. This information must be kept on site unless you receive a written request from NHDES that it be sent to the address shown in Part 9.1.4.6.

- The site map required in Part 5.2.2, showing the type and location of all on-site infiltration BMP utilized at the facility or the reason(s) why none were installed.
- A list of all non-stormwater discharges that occur at the facility, including their source locations and the control measures being used (See Sections 1.1.3 and 5.2.3.4).
- A copy of the Annual Reports required in Part 7.5

9.1.4.6 Where to Submit Information. Information submitted to NHDES must be sent to the following address:

NH Department of Environmental Services
Wastewater Engineering Bureau, Permits & Compliance Section
P.O. Box 95
Concord, NH 03302-0095

9.1.4.7 Modification of Clean Water Act Section 401 Water Quality Certification. When NHDES determines that additional water quality certification requirements are necessary to protect water quality, it may require individual dischargers to meet additional conditions to obtain or continue coverage under the MSGP. Any such conditions shall be supplied to the permittee in writing. Any required pollutant loading analyses and any designs for structural best management practices necessary to protect water quality must be prepared by a civil or sanitary engineer registered in New Hampshire.

9.1.5 RIR05I000: Indian country within the State of Rhode Island

No additional requirements.

9.1.6 VTR05F000: Areas in the State of Vermont subject to industrial activity by a Federal Operator

No additional requirements.

9.2 EPA Region 2: New Jersey, New York, Puerto Rico, Virgin Islands.**9.2.1 PRR050000: Commonwealth of Puerto Rico**

No additional requirements.

9.3 EPA Region 3: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia.**9.3.1 DCR050000: District of Columbia**

Permittees in the District of Columbia must also meet the following conditions:

9.3.1.1 Compliance with District of Columbia Laws and Regulations. Discharges covered by the MSGP must comply with the District of Columbia Water Pollution Control Act of 1984, as amended, D.C. Official Code § 8-103.01 *et seq.*; and its implementing regulations in Title 21, Chapters 11 and 19 of the District of Columbia Municipal Regulations. Nothing in this permit will be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to District of Columbia laws and regulations.

9.3.1.2 Submission of SWPPP. The Stormwater Pollution Prevention Plan (SWPPP) shall be submitted to the District Department of the Environment (DDOE) at the same time the Notice of Intent (NOI) is submitted to EPA.

9.3.1.3 Submission of No Exposure Certification and NOT. Copies of the No Exposure Certification and Notice of Termination (NOT) shall be submitted to DDOE at the same time they are submitted to EPA.

9.3.1.4 Authorization to Inspect. The permittee shall allow DDOE to inspect any facility, equipment, practices, or operations regulated or required under this permit and to access records maintained under the conditions of this permit.

9.3.1.5 Submission of Reports. Signed copies of all reports required under this permit including the reporting requirements of Appendix B.12 shall be submitted to DDOE at the same time they are submitted to EPA.

9.3.1.6 Where to Submit Information. All required or requested documents shall be sent to the:

Attention: Associate Director
Water Quality Division, Natural Resources Administration
District Department of the Environment
1200 First Street, NE, 5th Floor
Washington, D.C. 20002

9.3.2 DER05F000: Areas in the State of Delaware subject to industrial activity by a Federal Operator

No additional requirements.

9.4 EPA Region 4: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

Coverage not available under this permit.

9.5 EPA Region 5: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin.

9.5.1 MIR05I000: Indian country within the State of Michigan

No additional requirements.

9.5.2 MNR05I000: Indian country within the State of Minnesota

9.5.2.1 Fond du Lac Reservation

The following conditions apply only to discharges on the Fond du Lac Reservation.

9.5.2.1.1 Submission of SWPPP. A copy of the Stormwater Pollution Plan (SWPPP) must be submitted to the Office of Water Protection at least thirty (30) days in advance of sending the Notice of Intent to EPA. MSGP applicants are encouraged to work with the Fond du Lac Office of Water Protection in the identification of all proposed receiving waters.

9.5.2.1.2 Submission of NOI and NOT. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be sent to the Fond du Lac Office of Water Protection at the same time they are submitted to EPA.

9.5.2.1.3 Benchmark Monitoring for Turbidity. The Benchmark Monitoring Concentration (BMC) for Turbidity shall NOT exceed 10% of natural background as determined by Office of Water Protection staff as measured in NTU.

9.5.2.1.4 Effluent Limitations. The Effluent Limitations for ALL sectors shall NOT exceed more than two times (2x) Fond du Lac's ambient concentrations (based upon 15 years of monitoring data) for the following:

a) Ammonia	Ambient = <0.3 mg/l
b) Arsenic	Ambient = <3.0 µg/l
c) Chromium	Ambient = <0.8 µg/l
d) Total Phosphorus	Ambient = <0.09 mg/l
e) Total Suspended Solids	Ambient = <16.0 mg/l
f) Zinc	Ambient = <24.0 mg/l

9.5.2.1.5 Outstanding Reservation Resource Waters (ORRW). This Certification does not pertain to any new discharge to Outstanding Reservation Resource Waters (ORRW) as described in § 105 b.3. of the Fond du Lac Water Quality Standards (Ordinance #12/98). Although additional waters may be designated in the future, currently Perch Lake, Rice Portage Lake, Miller Lake, Deadfish Lake, and Jaskari Lake are designated as ORRWs. New dischargers wishing to discharge to an ORRW must obtain an individual permit for storm water discharges.

9.5.2.1.6 Water Quality Criteria. All industrial activities shall be carried out in such a manner as will prevent violations of water quality criteria as stated in the Water Quality Standards of the Fond du Lac Reservation, Ordinance 12/98, as amended. This includes, but is not limited to, the prevention of any discharge that causes a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of water of the Fond du Lac Reservation for any of the uses designated in the Water Quality Standards of the Fond du Lac Reservation. These uses include wildlife, aquatic life, warm and cold water fisheries, subsistence farming (netting), primary contact recreation, cultural, wild rice areas, aesthetic waters, agriculture, navigation, and commercial.

9.5.2.1.7 Impacts to cultural sites. This certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for such listing.

9.5.2.1.8 Where to Submit Information. All required or requested documents shall be sent to the:

Fond du Lac Reservation
Office of Water Protection
1720 Big Lake Road
Cloquet, Minnesota 55720

9.5.2.2 Grand Portage Band of the Minnesota Chippewa Tribe

The following conditions apply to industrial storm water discharges into Waters of the Grand Portage Reservation:

9.5.2.2.1 Definitions. The definitions set forth in the Grand Portage Water Resources Ordinance, as amended, ("Water Resources Ordinance") govern these certification conditions.

9.5.2.2.2 Water Quality Standards. All industrial storm water discharges authorized by this permit must comply with the Grand Portage Water Quality Standards, Applicable Federal Standards, and the Water Resources Ordinance.

9.5.2.2.3 Additional Monitoring. Grand Portage reserves the right to require monitoring of storm water discharges as determined on a case-by-case basis. If the Grand Portage Environmental Resources Board ("Board") determines that a monitoring plan is necessary, the monitoring plan must be prepared and incorporated into the Storm Water Pollution Prevention Plan ("SWPPP") before the SWPPP is submitted to the U.S. EPA. Accordingly, the Board must be contacted, at the address listed below, at the onset of writing the SWPPP.

9.5.2.2.4 Submission of SWPPP, NOI, and NOT. In addition, a copy of the SWPPP, Notice of Intent ("NOI"), and Notice of Termination (NOT) (collectively the "application") must be submitted to the Board at least 30 days before submitting the NOI to the U.S. EPA. Applications should be sent to the address below.

9.5.2.2.5 Additional information. Upon receipt of the application, the Board shall order the Grand Portage Environmental Department (Department) to conduct a technical review of the application materials. If necessary, Department staff will send a

request for additional information to the applicant within 30 days of receipt of the application.

- 9.5.2.2.6 Preliminary coverage determination.** After considering the application and such other information and data as the Department staff deems relevant, the Department Director will evaluate whether there is a reasonable probability that the proposed activity will violate the Grand Portage Water Quality Standards or any Applicable Federal Standards and recommend one of the following preliminary determinations:
- Unconditionally grant coverage under the MSGP;
 - Grant coverage under the MSGP subject to certain conditions; or
 - Deny coverage under the MSGP.
- 9.5.2.2.7 Final coverage determination.** Within 30 days of the Department Director's recommendation, the Board will provide public notice of the application for coverage under the MSGP and the Department Director's recommendations. Upon request, the Department will schedule a hearing as provided in 40 CFR Part 25. If, after considering the evidence provided at the hearing and the entire record, the Board determines by a preponderance of the evidence that the proposed activity will violate the Grand Portage Water Quality Standards or any Applicable Federal Standards, the Board shall deny eligibility for coverage under the MSGP, unless there is a reasonable certainty that compliance can be achieved by the applicant's adherence to reasonable conditions. If the Board finds insufficient evidence to show that the proposed activity will violate the Grand Portage Water Quality Standards or any Applicable Federal Standards, it shall approve coverage under the MSGP.
- 9.5.2.2.8 Appeals.** Appeals related to water quality certification decisions or permits will be heard by the Grand Portage Tribal Court.
- 9.5.2.2.9 Prohibition of Discharge.** The applicant is prohibited from discharging into the Waters of the Reservation pursuant to the MSGP unless the Board has granted coverage under the MSGP, or until the applicant has adhered to conditions required by the Board's conditional grant of coverage.
- 9.5.2.2.10 Compliance.** The Board retains full authority provided by the Water Resources Ordinance to ensure compliance with and enforce the provisions of the Water Resource Ordinance, the Grand Portage Water Quality Standards, Applicable Federal Standards, and these certification conditions.
- 9.5.2.2.11 Where to Submit Information.** All required or requested information mentioned above shall be sent to:
- Grand Portage Environmental Resources Board
P.O. Box 428
Grand Portage, MN 55605
- 9.5.3 WIR05I000: Indian country within the State of Wisconsin, except those on Bad River Band of Lake Superior Tribe of Chippewa Indians lands and on Sokaogon Chippewa Community lands**
No additional requirements.

Note: Facilities in the Bad River Band of Lake Superior Tribe of Chippewa Indians land Sokaogon Chippewa Community lands and are not eligible for stormwater discharge coverage under this permit. Contact the EPA Region 5 office for an individual permit application.

9.6 EPA Region 6: Arkansas, Louisiana, Oklahoma, Texas, and New Mexico (except see Region 9 for Navajo lands, and see Region 8 for Ute Mountain Reservation lands).

9.6.1 LAR05I000: Indian country within the State of Louisiana

No additional requirements.

9.6.2 NMR050000: The State of New Mexico, except Indian country

Permittees in New Mexico must also meet the following conditions:

9.6.2.1 Benchmark Monitoring Concentrations. The benchmark values for the indicated pollutants in the table below must be modified to reflect New Mexico water quality standards for the facilities in New Mexico, based on benchmark values from the *Standards for Interstate and Intrastate Surface Waters* (as approved on June. 5, 2013), 20.6.4.900 NMAC).

Pollutant	MSGP Benchmark	Lowest New Mexico Water Quality Standard	Hardness dependent value (if appropriate) ¹
Ammonia*	2.14 mg/L	No Standard	
Biochemical Oxygen Demand (BOD 5 day)	30 mg/L	No Standard	
Chemical Oxygen Demand (COD)	120 mg/L	No Standard	
Total Suspended Solids	100 mg/L	Segment specific	
Turbidity	50 NTU	Segment specific	
Nitrate + Nitrite Nitrogen	0.68 mg/L	132 mg/L	
Total Phosphorus	2.0 mg/L	Segment specific	
pH	6.0 – 9.0 SU	Segment specific	
Aluminum (T) (pH 6.5 – 9)*	0.75 mg/L	--	3.4 mg/L (acute) 1.37 mg/L (chronic)
Antimony (T)	0.64 mg/L	0.006 mg/L	
Arsenic (T) (Freshwater)*	0.15 mg/L	0.01 mg/L	
Beryllium (T)	0.13 mg/L	0.004 mg/L	
Cadmium (T) (Freshwater)*	0.0021 mg/L	--	0.00165 mg/L (acute) 0.00045 mg/L (chronic)
Copper (T) (Freshwater)*	0.014 mg/L	--	0.013 mg/L (acute) 0.009 mg/L (chronic)
Cyanide (Freshwater)*	0.022 mg/L	0.0052 (WH)	
Iron (T)	1.0mg/L	No standard	
Lead (Freshwater)*	0.082 mg/L		0.065 mg/L (acute) 0.003 mg/L (chronic)
Magnesium (T)	0.064 mg/L	No standard	
Mercury (Freshwater)*	0.0014 mg/L	0.00077 mg/L	
Nickel (T) (Freshwater)*	0.47 mg/L		0.47 mg/L (acute) 0.052 mg/L (chronic)
Selenium (T) (Freshwater)* ²	0.005 mg/L	0.005 mg/L (WH)	

Pollutant	MSGP Benchmark	Lowest New Mexico Water Quality Standard	Hardness dependent value (if appropriate) ¹
Silver (Freshwater)*	0.0038 mg/L		0.0032 mg/L (acute)
Zinc (T) (Freshwater)*	0.12 mg/L		0.16 mg/L (acute) 0.121 mg/L (chronic)

* EPA's Criteria are based on receiving water hardness of 100 mg/L. The facility will need to test their receiving water these hardness values and use Table 1 in Appendix J of this permit to determine their applicable limit.

¹ New Mexico Environment Department's criteria are listed at a hardness value of 100 mg/L as CaCO₃ for comparison to EPA's benchmark standard.

² SO₄ dependent

EPA defines saline/salt waters as having salinity concentrations greater than or equal to 10 parts per thousand 95 percent or more of the time (as discussed on Page 55 of the permit's proposed fact sheet). Saltwater values may apply to certain areas of New Mexico, such as the Pecos Basin below Santa Rosa and the Rio Grande below Elephant Butte. These values may also apply to waters that are part of the Colorado River Basin.

New Mexico water quality hardness-based values in the table below replace values listed in Appendix J and are the applicable benchmark values for New Mexico in this permit.

All Units mg/L	*	(mg/L, dissolved)						
		Aluminum	Cadmium	Copper	Lead	Nickel	Silver	Zinc
25	Acute	0.512	0.00051	0.004	0.014	0.140	0.0003	0.045
	Chronic	0.205	0.00017	0.003	0.001	0.016		0.034
30	Acute	0.658	0.00059	0.004	0.017	0.170	0.0004	0.054
	Chronic	0.263	0.00019	0.003	0.001	0.019		0.041
40	Acute	0.975	0.00076	0.006	0.024	0.220	0.0007	0.070
	Chronic	0.391	0.00023	0.004	0.001	0.024		0.053
50	Acute	1.324	0.00091	0.007	0.03	0.260	0.0010	0.085
	Chronic	0.530	0.00028	0.005	0.001	0.029		0.065
60	Acute	1.699	0.00107	0.008	0.037	0.300	0.0013	0.101
	Chronic	0.681	0.00031	0.006	0.001	0.034		0.076
70	Acute	2.099	0.00122	0.010	0.044	0.350	0.0017	0.116
	Chronic	0.841	0.00035	0.007	0.002	0.038		0.088
80	Acute	2.520	0.00137	0.011	0.051	0.390	0.0022	0.131
	Chronic	1.010	0.00039	0.007	0.002	0.043		0.099
90	Acute	2.961	0.00151	0.012	0.058	0.430	0.0027	0.145
	Chronic	1.186	0.00042	0.008	0.002	0.048		0.110
100	Acute	3.421	0.00165	0.013	0.065	0.470	0.0032	0.160
	Chronic	1.370	0.00045	0.009	0.003	0.052		0.121
200	Acute	8.838	0.00298	0.026	0.14	0.840	0.011	0.301
	Chronic	3.541	0.00075	0.016	0.005	0.09		0.228
220	Acute	10.071						
	Chronic	4.035						
300	Acute	10.071	0.00421	0.038	0.210	1.190	0.021	0.435
	Chronic	4.035	0.00100	0.023	0.008	0.130		0.329
400+	Acute	10.071	0.00538	0.050	0.280	1.510	0.035	0.564
	Chronic	4.035	122	0.029	0.011	0.170		428

*Acute vs. Chronic applicability: Acute numeric standards shall be attained at the "point of discharge" (end-of-pipe) for any discharge to surface water with a *designated aquatic life use*. TSS values will be important for any criteria differences between total and dissolved measurements.

9.6.2.2 Notice of Termination. Requirements in Part 8 of the this permit, in sectors G (Metal Mining), H (Coal Mines and Coal Mining-Related Facilities), I (Oil and Gas Extraction), and J (Non-Metallic Mineral Mining and Dressing), at the Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities" section were made more stringent as to inspection frequencies and timing of inspections and corrective actions required as a result of a rain event. These certification requirements will apply to these sectors mentioned in this condition, as follows:

Permittees can only use the option to "plant the area so that within 3 years the 70% cover requirement is met" as stated in Part 8.G.4.2.11, Part 8.H.4.2.11, and Part 8.J.4.2.11 of this Permit, in New Mexico as a method for final vegetative stabilization for purposes of filing a Notice of Termination (NOT) under the following conditions:

If this option is selected, you must notify New Mexico Environment Department (NMED) at the address listed below at the time the NOT is submitted to EPA. The information to be submitted includes:

- A copy of the NOT;
- Contact information, including individual name or title, address, and phone number for the party responsible for implementing the final stabilization measures; and
- The date that the permanent vegetative stabilization practice was implemented and the projected timeframe that the 70% native vegetative cover requirements are expected to be met. (Note that if more than three years is required to establish 70 percent of the natural vegetative cover, this technique cannot be used or cited for fulfillment of the final stabilization requirement- you remain responsible for establishment of final stabilization.)

NMED also requires that operators periodically (minimum once/year) inspect and properly maintain the area until the criteria for final stabilization, as specified in Part 2.2 of the Construction General Permit (CGP), have been met. Operators must prepare an inspection report documenting the findings of these inspections and signed in accordance with Appendix B.11. This inspection record must be retained along with the SWPPP for three years after the NOT is submitted for the site and additionally submitted to NMED at the address listed below. The inspections must at a minimum include the following:

- Observations of all areas of the site disturbed by construction activity;
- Best Management Practices (BMPs)/post-construction storm water controls must be observed to ensure they are effective;
- An assessment of the status of vegetative re-establishment; and
- Corrective actions required to ensure vegetative success within three years, and control of pollutants in storm water runoff from the site, including implementation dates.

- 9.6.2.3 Where to Submit Information.** All required or requested information mentioned above shall be sent to:
- Program Manager
Point Source Regulation Section
NMED Surface Water Quality Bureau
PO Box 5469
Santa Fe, NM 87502
- 9.6.3 NMR05I000: Indian country within the State of New Mexico, except Ute Mountain Reservation lands that are covered under Colorado permit COR05I000 and Navajo Reservation lands that are covered under Arizona permit AZR05I000**
- 9.6.3.1 Pueblo of Sandia**
The following conditions apply only to discharges on the Pueblo of Sandia:
- 9.6.3.1.1 Submission of NOI.** Copies of all Notices of Intent (NOI) submitted to the EPA must also be sent concurrently to the Pueblo of Sandia Environment Department. Discharges are not authorized by this permit unless an accurate and complete NOI has been submitted to the Pueblo of Sandia.
- 9.6.3.1.2 SWPPP Availability.** The Stormwater Pollution Prevention Plan (SWPPP) must be available to the Pueblo of Sandia Environment Department either electronically or hard copy upon request for review. Failure to provide a SWPPP to the Pueblo of Sandia Environment Department may result in denial of the water quality certification.
- 9.6.3.1.3 SWPPP Amendments.** Any Stormwater Pollution Prevention Plan (SWPPP) modification, update or amendment shall be submitted to the Pueblo of Sandia Environment Department either electronically or hard copy within seven (7) calendar days of its finalization. Failure to provide a SWPPP to the Pueblo of Sandia Environment Department may result in denial of the water quality certification.
- 9.6.3.1.4 Submission of Monitoring Data.** All monitoring and analytical data (e.g., Discharge Monitoring Reports (DMRs), follow-up monitoring reports, Exceedance Reports for Numeric Effluent Limits, etc.) submitted to the EPA must also be sent concurrently to the Pueblo of Sandia Environment Department.
- 9.6.3.1.5 Submission of Annual Reports.** Copies of all Annual Reports submitted to the EPA must also be sent concurrently to the Pueblo of Sandia Environment Department. Discharges are not authorized by this permit unless an accurate and complete Annual Report has been submitted to the Pueblo of Sandia.
- 9.6.3.1.6 Submission of Quarterly Visual Assessments.** Copies of all "Quarterly Visual Assessments" (Part 3.2) must be submitted either electronically or hard copy to the Pueblo of Sandia Environment Department within seven (7) calendar days.
- 9.6.3.1.7 Submission of Corrective Action Documentation.** Copies of all "Corrective Action Documentation" (Part 4.4) must be submitted electronically or hard copy to the Pueblo of Sandia Environment Department within seven (7) calendar days.
- 9.6.3.1.8 Additional Reporting.** Any notice of release of oils or hazardous substances shall be submitted to the Pueblo of Sandia Environment Department within twenty-four (24)

hours of becoming aware of the situation or circumstance, followed by the reporting requirements of 40 CFR 110, 40 CFR 300, and 40 CFR 302 relating to spills or other releases of oil or hazardous substances. The permittee must also telephone the Pueblo of Sandia Environment Department at (505) 867-4533 of any non-emergency spills or unauthorized discharges that may affect drinking water supplies, ceremonial and recreational surface waters, elicit fish kills, harm wildlife or endangered and threatened species, or endanger human health or the environment within eight (8) hours of becoming aware of the situation or circumstance, followed by the written report when it is sent to the EPA.

9.6.3.1.9 Authorization to Inspect. If requested by the Pueblo of Sandia Environment Department, the permittee must allow the Pueblo of Sandia to perform its own routine or compliance inspection to ensure the permittee is in compliance and any discharge is not contributing to a violation of the permit and the Pueblo of Sandia's Water Quality Standards.

9.6.3.1.10 Water Quality Standards. If requested by the Pueblo of Sandia Environment Department, the permittee shall provide additional information necessary for a "case by case" eligibility determination to assure compliance with the Pueblo of Sandia's Water Quality Standards. *Note: Upon receipt of a determination by the Pueblo of Sandia that discharges from a permittee under this general permit have reasonable potential to be causing or contributing to a violation of the Pueblo of Sandia's Water Quality Standards, EPA Region 6 would be notified. EPA Region 6 would then notify the permittee to either improve their Stormwater Pollution Prevention Plan (SWPPP) to achieve compliance with the Pueblo of Sandia's Water Quality Standards or have the permittee apply for and obtain an individual NPDES permit for these discharges per CFR 122.28(B)(3).

9.6.3.1.11 Alternative Permit. Any industry discharging to waters of the United States that has been designated by the EPA or the Pueblo of Sandia as impaired or degraded water shall not be covered under this general permit but will be required to obtain an individual permit.

9.6.3.1.12 Submission of NOT. Before submitting a Notice of Termination (NOT), permittees must clearly demonstrate to the Pueblo of Sandia Environment Department through a site visit or documentation that requirements for site stabilization have been met and any degradation has been mitigated. A short letter stating the stabilization requirements have been met will be sent to the permittee. Upon receipt the permittee may apply for an NOT to the EPA. Copies of the NOT submitted to the EPA must also be sent concurrently to the Pueblo of Sandia Environment Department.

9.6.3.1.13 Where to Submit Information. All required or requested information mentioned above shall be sent to:

- Regular U.S. Delivery Mail:
Pueblo of Sandia Environment Department
Attention: Scott Bulgrin, Water Quality Manager
481 Sandia Loop
Bernalillo, New Mexico 87004
- Or Electronically to: sbulgrin@sandiapueblo.nsn.us

9.6.3.2 Pueblo of Santa Clara.

The following condition applies only to discharges on the Santa Clara Indian Pueblo:

9.6.3.2.1 Submission of NOI and NOT. The Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Santa Clara Pueblo Governor's Office at the same time it is provided to EPA.

9.6.3.2.2 SWPPP Availability. A copy of the Stormwater Pollution Prevention Plan must be made available to the Pueblo of Santa Clara staff upon request.

9.6.3.2.3 Where to Submit Information. All required or requested documents shall be sent to the:

Santa Clara Pueblo
Governor's Office
P.O. Box 580
Española, NM 87532

9.6.4 OKR05I000: Indian country within the State of Oklahoma

9.6.4.1 Certification Requirements. In accordance with Oklahoma's Water Quality Standards (OAC 785:45-5-25) certification is denied for any new or proposed discharges located within the watershed of any part of the Oklahoma Scenic Rivers system, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork Creek, Little Lee Creek, Big Lee Creek or to any water designated as an Outstanding Resource Water (ORW). Existing discharges of stormwater in these watersheds may be permitted under this permit only from point sources existing as of June 25, 1992, whether or not such stormwater discharges were permitted as point sources prior to June 25, 1992. For any such existing discharge, increased load of any pollutant above levels of June 25, 1992 is prohibited.

Note: Operators of facilities within the watershed of any part of the Oklahoma Scenic Rivers system must contact the EPA Region 6 office for an individual permit application.

9.6.5 OKR05F000: Facilities in the State of Oklahoma not under the jurisdiction of the Oklahoma Department of Environmental Quality or the Oklahoma Department of Agriculture, Food and Forestry, except those on Indian Country. EPA jurisdiction facilities include SIC Codes 1311, 1381, 1382, 1389, and 5171

9.6.5.1 Certification Requirements. In accordance with Oklahoma's Water Quality Standards (OAC 785:45-5-25), Certification is denied for any new or proposed discharges located within the watershed or any part of the Oklahoma Scenic Rivers system, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork River, Little Lee Creek, Big Lee Creek or to any water designated as an Outstanding Resource Water (ORW). Existing discharges of stormwater in these watersheds may be permitted under this permit only from point sources existing as of June 25, 1992, whether or not such stormwater discharges were permitted as point sources prior to June 25, 1992. For any such existing discharge, increased load of any pollutant above levels of June 25, 1992 is prohibited.

Note: Operators of facilities within the watershed of any part of the Oklahoma Scenic Rivers system must contact the EPA Region 6 office for an individual permit application.

- 9.6.6 TXR05F000: Facilities in the State of Texas not under the jurisdiction of the Texas Commission on Environmental Quality, except those on Indian Country. EPA-jurisdiction facilities include SIC Codes 1311, 1321, 1381, 1382, and 1389 (other than oil field service company “home base” facilities)**
No additional requirements.
- 9.6.7 TXR05I000: Indian country within the State of Texas**
No additional requirements.
- 9.7 EPA Region 7: Iowa, Kansas, Missouri, Nebraska (except see Region 8 for Pine Ridge Reservation Lands).**
- 9.7.1 IAR05I000: Indian country within the State of Iowa**
No additional requirements.
- 9.7.2 KSR05I000: Indian country within the State of Kansas**
No additional requirements.
- 9.7.3 NER05I000: Indian country within the State of Nebraska, except Pine Ridge Reservation lands (see Region 8)**
No additional requirements.
- 9.8 EPA Region 8: Colorado, Montana, North Dakota, South Dakota, Wyoming, Utah (except see Region 9 for Goshute Reservation and Navajo Reservation Lands), the Ute Mountain Reservation in NM, and the Pine Ridge Reservation in NE.**
- 9.8.1 COR05F000: Areas in the State of Colorado, except those located on Indian country, subject to industrial activity by a Federal Operator**
No additional requirements.
- 9.8.2 COR05I000: Indian country within the State of Colorado, as well as the portion of the Ute Mountain Reservation located in New Mexico**
No additional requirements
- 9.8.3 MTR05I000: Indian country within the State of Montana**
No additional requirements.
- 9.8.4 NDR05I000: Indian country within the State of North Dakota, as well as that portion of the Standing Rock Reservation located in South Dakota (except for the portion of the lands within the former boundaries of the Lake Traverse Reservation which is covered under South Dakota permit SDR05I000 listed below)**
No additional requirements.
- 9.8.5 SDR05I000: Indian country within the State of South Dakota, as well as the portion of the Pine Ridge Reservation located in Nebraska and the portion of the lands within the former boundaries of the Lake Traverse Reservation located in North Dakota**

(except for the Standing Rock Reservation which is covered under North Dakota permit NDR05I000 listed above)

No additional requirements.

9.8.6 UTR05I000: Indian country within the State of Utah, except Goshute and Navajo Reservation lands (see Region 9)

No additional requirements.

9.8.7 WYR05I000: Indian country within the State of Wyoming

No additional requirements.

9.9 EPA Region 9: California, Hawaii, Nevada, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Confederated Tribes of the Goshute Reservation in Utah and Nevada, Indian Country within the State of Arizona including the Navajo Reservation in Utah and New Mexico and Arizona, the Duck Valley Reservation in Idaho, and the Fort McDermitt Reservation in Oregon.

9.9.1 ASR050000: American Samoa

No additional requirements.

9.9.2 AZR05I000: Indian country within the State of Arizona, including Navajo Reservation lands in New Mexico and Utah

9.9.2.1 Hualapai Tribe

The following condition applies only to discharges on the Hualapai Tribe:

9.9.2.1.1 Submission of NOI and SWPPP. All Notices of Intent (NOI) for proposed stormwater discharges under this permit and all Stormwater Pollution Plans (SWPPPs) for stormwater discharges on Hualapai Tribal lands shall be submitted to the Water Resource Program through the Tribal Chairwoman for review and approval.

9.9.2.1.2 Where to Submit Information. All required or requested documents shall be sent to:

Water Resource Program through the Tribal Chairwoman
P.O. Box 179
Peach Springs, AZ 86434

9.9.2.2 Navajo Nation

The following conditions apply only to discharges on the Navajo Nation:

9.9.2.2.1 Submission of NOI and SWPPP. Courtesy copies of Notices of Intent (NOI) and Stormwater Water Pollution Plans (SWPPPs) shall be made available to Navajo EPA for facilities located on Navajo lands.

9.9.2.2.2 Submission of Monitoring Data. Copies of all monitoring reports must be provided to Navajo EPA for facilities located on Navajo lands.

9.9.2.2.3 Authorization to Inspect. Facilities located on Navajo lands and covered under this permit will be subject to compliance inspections by Navajo EPA staff with active Federal Inspector Credentials under authority of the Clean Water Act.

9.9.2.3 White Mountain Apache Tribe

The following condition applies only to discharges on the White Mountain Apache Tribe:

- 9.9.2.3.1 Submission of SWPPP.** The Storm Water Pollution Prevention Plan (SWPPP) must be available to the White Mountain Apache Water Resources Programs either electronically or hard copy upon request for review before a Notice of Intent (NOI) for comments from the White Mountain Apache Water Resources Programs. Failure to provide a SWPPP to the White Mountain Apache Water Resources Programs may result in denial of the water quality certification.
- 9.9.2.3.2 Submission of NOI.** Copies of all Notices of Intent (NOI)) submitted to the EPA must also be sent concurrently to the White Mountain Apache Water Resources Programs. Discharges are not authorized by this permit unless an accurate and complete NOI has been submitted to the White Mountain Apache Tribe.
- 9.9.2.3.3 SWPPP Modification.** Any Storm Water Pollution Prevention Plan (SWPPP) modification, update or amendment shall be submitted to the White Mountain Apache Water Resources Programs either electronically or hard copy within seven (7) calendar days of its finalization. Failure to provide a SWPPP to the White Mountain Apache Water Resources Programs may result in denial of the water quality certification.
- 9.9.2.3.4 Submission of Monitoring Data.** All monitoring and analytical data (e.g. Discharge Monitoring Reports (DMRs), follow-up monitoring reports, Exceedance Reports for Numerical Effluent Limits, etc.) submitted to EPA must also be sent concurrently to the White Mountain Apache Water Resources Programs.
- 9.9.2.3.5 Submission of Annual Reports.** Copies of all Annual Reports submitted to the EPA must also be sent concurrently to the White Mountain Apache Water Resources Programs. Discharges are not authorized by this permit unless an accurate and complete Annual Report has been submitted to the White Mountain Apache Tribe.
- 9.9.2.3.6 Submission of Quarterly Visual Assessments.** Copies of all "Quarterly Visual Assessments" (Part 3.2) must be submitted either electronically or hard copy to the White Mountain Apache Water Resources Programs within seven (7) calendar days.
- 9.9.2.3.7 Submission of Corrective Action Documentation.** Copies of all "Corrective Action Documentation" (Part 4.4) must be submitted either electronically or hard copy to the White Mountain Apache Water Resources Programs within seven (7) calendar days.
- 9.9.2.3.8 Additional Reporting.** Any notice of release of oils or hazardous substances shall be submitted to the White Mountain Apache Water Resources Programs within twenty-four (24) hours of becoming aware of the situation or circumstance, followed by the reporting requirements of 40 CFR 110, 40 CFR 300, and 40 CFR 302 relating to spills or other releases of oils or hazardous substances. The permittee must also telephone the White Mountain Apache Water Resources Programs at (928) 338-4267 of any non-emergency spills or unauthorized discharge that may affect drinking water, supplies, ceremonial and recreational surface waters, elicit fish kills, harm wildlife or endangered and threaten species, or endanger human health or

the environment within eight (8) hours of becoming aware of the situation or circumstance, followed by a written report when it is sent to the EPA.

9.9.2.3.9 Authorization to Inspect. If requested by the White Mountain Apache Water Resources Programs, the permittee must allow the White Mountain Apache Tribe to perform its own routine or compliance inspection to ensure the permittee is in compliance and any discharge is not contributing to a violation of the permit and the White Mountain Apache Tribe's Water Quality Standards.

9.9.2.3.10 Water Quality Standards. If requested by the White Mountain Apache Water Resources Programs, the permittee shall provide additional information necessary for a "case by case" eligibility determination to assure compliance with the White Mountain Apache Tribe's Water Quality Standards. *Note: Upon receipt of a determination by the White Mountain Apache Tribe that discharges from a permittee under this general permit have reasonable potential to be causing or contributing to a violation of the White Mountain Apache Tribe's Water Quality Standards, EPA Region 9 would be notified. EPA Region 9 would then notify the permittee to either improve their Stormwater Pollution Prevention Plan (SWPPP) to achieve compliance with the White Mountain Apache Tribe's Water Quality Standards or have the permittee apply for and obtain an individual NPDES permit for those discharges per CFR 122.28 (B)(3).

9.9.2.3.11 Alternative Permit. Any industry discharging into waters of the United States that has been designated by the EPA or the White Mountain Apache Tribe as impaired or degraded water shall not be covered under this general permit but will be required to obtain an individual permit.

9.9.2.3.12 Submission of NOT. Before submitting a Notice of Termination (NOT), permittees must clearly demonstrate to the White Mountain Apache Water Resources Programs through a site visit or documentation that requirements for site stabilization have been met and any degradation has been mitigated. A short letter stating the stabilization requirements have been met will be sent to the permittee. Upon receipt the permittee may apply for an NOT to the EPA. Copies of the NOT submitted to the EPA must also be sent concurrently to the White Mountain Apache Water Resources Programs.

9.9.2.3.13 Where to Submit Information. All required or requested information mentioned above shall be sent to:

- Regular U.S. Delivery Mail:
White Mountain Apache Tribe Water Resources Programs
Attention: Tara Chief, Water Quality Officer
P.O. Box 816
Fort Apache, AZ 85926
- Or Electronically to: tarachief@wmat.us

9.9.3 CAR05I000: Indian country within the State of California

9.9.3.1 Hoopa Valley Tribe

The following conditions apply only to discharges on the Hoopa Valley Tribe:

- 9.9.3.1.1 Submission of NOI.** All Notices of Intent (NOI) submitted for stormwater discharges under the general permits in Hoopa Valley Indian Reservation (HVIR) shall be submitted to the Tribal Environmental Protection Agency (TEPA).
- 9.9.3.1.2 Submission of SWPPP.** All Stormwater Pollution Plans (SWPPPs) for stormwater discharge in HVIR shall be submitted to TEPA for review and approval.
- 9.9.3.2 Twenty-Nine Palms Band of Mission Indians**
The following conditions apply only to discharges on the Twenty-Nine Palms Band of Mission Indians:
- 9.9.3.2.1 Submission of Monitoring Data.** The Twenty-Nine Palms Tribal Water Quality Standards require that routine monitoring be performed quarterly at each sampling site. Additional special monitoring requirements include: a) Sampling following a significant storm event; and b) Sampling in the event of an accidental spill. Monitoring results for discharges into Twenty-Nine Palms Tribal waters must be reported to Twenty-Nine Palms Tribal EPA.
- 9.9.3.2.2 Certification.** Certification does not relieve the applicant of the responsibility to comply with applicable local, state, or federal regulations or statutes, including regulations affecting any discharge into waters of the U.S. Copies of this certification shall be kept on the job site and readily available for reference by tribal members and tribal representatives. If the project is operated in a manner not consistent with the MSGPs, the permittee will be in violation of this certification.
- 9.9.3.2.3 Pollution Prevention.** All practicable measures and precautions must be taken to prevent pollution affecting public health, fish, shellfish, wildlife, and recreation due to turbidity, pH, temperature, nutrients, suspended solids, floating debris, visible oil and grease, or other pollutants entering tribal waters, including wetlands.
- 9.9.3.2.4 Spills or Leaks.** All equipment operated within any tribal waters must be cleaned away from the tribal waters and maintained to prevent fuel and oil leaks. These methods include, but are not limited to: offsite/ upland fuel and oil storage and refueling areas, on-site spill containment equipment, a spill contingency plan, and spill prevention/contaminant training for on-site personnel. Should a spill of petroleum products or chemicals occur, immediately call the National Response Center at (800) 424-8802 and the Tribal Environmental Protection Agency at (760) 398-6767.
- 9.9.3.2.5 Ground Disturbance.** Ground disturbance shall not exceed the minimum necessary.
- 9.9.3.2.6 Minimizing Adverse Impacts.** All projects using the MSGP must avoid discharges to the maximum extent practicable, and utilize the best available and practicable means of minimizing the adverse impact of discharges that cannot be avoided.
- 9.9.4 GUR050000: Island of Guam**
No additional requirements.
- 9.9.5 JAR050000: Johnston Atoll**
No additional requirements.

9.9.6 MWR050000: Midway Island and Wake Island

No additional requirements.

9.9.7 MPR050000: Commonwealth of the Northern Mariana Islands

No additional requirements.

9.9.8 NVR051000: Indian country within the State of Nevada, including the Duck Valley Reservation in Idaho, the Fort McDermitt Reservation in Oregon and the Confederated Tribes of the Goshute Reservation in Utah

No additional requirements.

9.10 Region 10: Alaska, Idaho (except see Region 9 for Duck Valley Reservation lands), Oregon (except see Region 9 for Fort McDermitt Reservation), Washington.**9.10.1 AKR05F000: Areas in the Denali National Park and Preserve subject to industrial activity by a Federal Operator**

No additional requirements.

9.10.2 AKR051000: Indian country lands within the State of Alaska

No additional requirements.

9.10.3 IDR050000: The State of Idaho, except Indian country lands

Permittees in the State of Idaho must meet the following conditions. For the complete text of Idaho's certification including the full anti-degradation analysis, please visit the IDEQ website at <http://www.deq.idaho.gov/media/60177118/multi-sector-general-permit-401-certification.pdf>.

9.10.3.1 New or Expanding Discharges. New dischargers or existing dischargers wishing to expand their discharge to high-quality waters are only eligible for coverage under the MSGP if the discharger establishes, to the satisfaction of EPA and DEQ, that the new or expanded discharge will not result in an increase in the concentration of pollutants relevant to the use for which the water is considered high quality, or that the increase constitutes insignificant degradation as defined in the WQS (IDAPA 58.01.02.052.08.a).

A new discharger or an existing discharger wishing to expand must include an analysis regarding whether the new or expanded discharge will cause an increase in the pollutants relevant to the use for which the water is considered high quality, and if there is an increase, whether that increase constitutes insignificant degradation in the NOI, or in the planned changes report. These NOIs and planned changes reports must be submitted to both EPA and DEQ.

If DEQ determines the new discharge or planned changes of an existing discharger will result in significant degradation, the permittee will need to obtain DEQ's approval of an alternatives analysis (IDAPA 58.01.02.052.08.c), a socioeconomic justification (IDAPA 58.01.02.052.08.d) and information regarding other source controls (IDAPA 59.01.02.052.08.b).

9.10.3.2 Follow-up Monitoring for Benchmark Concentrations. If all four quarterly samples do not exceed the benchmark, the permittee is not required to conduct any additional quarterly monitoring for that parameter. If any of the four quarterly

samples exceed the benchmark, then the permittee must follow the additional requirements in Section 6.2.1.2 of the MSGP, with the following modifications:

- If the permittee elects to make any necessary modifications and continue quarterly monitoring, such monitoring must occur until the results from *all four consecutive quarterly samples are below the benchmark*.

9.10.3.3 Monitoring of Discharges to Impaired Waters. To determine the support status of the affected water body, persons filing a Notice of Intent (NOI) for coverage under this general permit must use the most current EPA Integrated Report, available on Idaho DEQ's website: <http://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report/>. DEQ's webpage also has a link to the state's map-based Integrated Report which presents information from the Integrated Report in a searchable, map-based format: <http://www.deq.idaho.gov/assistance-resources/maps-data>. For water bodies included on the states 303(d) list (Category 5 of the Integrated Report), identified as "cause unknown", the permittee must monitor for the pollutants listed in the cause comments section of the report (e.g., nutrients, metals, pesticides).

9.10.3.4 Stormwater Pollution Prevention Plan (SWPPP) Availability. If requested by Idaho Department of Environmental Quality (DEQ), the permittee must submit a copy of the SWPPP to DEQ within fourteen (14) days of the request.

9.10.3.5 Submission of NOIs, Monitoring Data, and Additional Reporting. Copies of the following information must be sent to the appropriate DEQ regional office at the same time it is submitted to EPA:

- NOIs and NOTs;
- Monitoring data collected pursuant to Part 6 of the MSGP, well as any additional monitoring data required by this Part;
- Exceedance Reports as required by Part 6.3;
- Planned Changes Reports

Both monitoring data and exceedance reports must be sent to the appropriate DEQ regional office with thirty (30) days of receipt of analytical results. DEQ Regional Office contact information is listed in Table 9.10.3.5.1.

Table 9.10.3.5.1: Idaho Regional Office contact information

Regional Office	Address	Phone	Email
Boise	1445 N. Orchard Rd, Boise 83706	208-373-0550	kati.carberry@deq.idaho.gov lance.holloway@deq.idaho.gov
Coeur d'Alene	2110 Ironwood Parkway, Coeur d'Alene 83814	208-769-1422	june.berquist@deq.idaho.gov
Idaho Falls	900 N. Skyline, Ste B, Idaho Falls 83402	208-528-2650	troy.saffle@deq.idaho.gov
Lewiston	1118 "F" St., Lewiston 83501	208-799-4370	cynthia.barrett@deq.idaho.gov
Pocatello	444 Hospital Way, Pocatello 83201	208-236-6160	lynn.vanevery@deq.idaho.gov greg.mladenka@deq.idaho.gov
Twin Falls	650 Addison Ave., W., Ste 110, Twin Falls 83301	208-736-2190	balthasar.buhidar@deq.idaho.gov
State Office	1410 N. Hilton Rd., Boise 83706	208-373-0574	nicole.deinarowicz@deq.idaho.gov

9.10.3.6 Benchmark Monitoring for Arsenic and Selenium. The benchmark values for arsenic and selenium are equal to 0.15 mg/L and 0.005 mg/L, respectively. These values are equivalent to Idaho's chronic water quality criteria. Given that storms are discrete events of relatively short duration, DEQ believes it is more appropriate to use the acute water quality criteria as benchmark values. Therefore, the benchmark value

for arsenic and selenium can be set equal to 0.34 mg/L and 0.02 mg/L, respectively, and still comply with Idaho WQS.

9.10.3.7 Additional Conditions Applicable to Sector L (Landfills, Land Application Sites and Open Dumps). Stormwater entering a landfill must be managed as leachate, including run off from areas that have received daily cover which may have contacted waste material, and thus is not eligible for coverage under the MSGP (See 40 CFR 258.26(a)(2); Municipal Solid Waste Landfill Criteria Technical Manual, EPA 530-R-93-017, 1998). Stormwater from a closed landfill or from areas of the landfill that have received final cover is not leachate, and may be covered under the MSGP.

9.10.3.8 Additional Reporting of Discharges Containing Hazardous Materials or Petroleum Products. Any unauthorized discharges containing hazardous materials or petroleum products must be reported to the Idaho State Communications Center by calling 1-800-632-8000 or 208-846-7610.

Spills must also be reported to the appropriate DEQ Regional Office (Table 9.10.3.5.1). Spills of petroleum products that exceed 25 gallons or that cause a visible sheen on nearby surface waters should be reported to DEQ within 24 hours. Petroleum product spills of less than 25 gallons or spills that do not cause a sheen on nearby surface waters must only be reported to DEQ if clean-up cannot be accomplished within 24 hours (IDAPA 58.01.02.850, 58.01.02.851, 58.01.02.852).

9.10.3.9 Numeric Effluent Limitations and Benchmark Monitoring for pH. The MSGP includes a pH range of 6.0 – 9.0 standard units, which does not comply with Idaho WQS (IDAPA 58.01.02.250.01.a). Therefore, numeric effluent limitations and benchmark monitoring concentrations for pH shall be 6.5 – 9.0 standard units.

9.10.3.10 Numeric Effluent Limitations for Total Arsenic and Total Zinc. The MSGP includes a total arsenic effluent limitation (Sector K) of 1.1 mg/L, which exceeds Idaho's acute and chronic criteria of 0.34 mg/L and 0.15 mg/L, respectively. Given that storms are discrete events of relatively short duration, DEQ believes it is more appropriate to use the acute water quality criteria as benchmark values; therefore DEQ requires the total arsenic effluent limit to be set equal to Idaho's acute criterion of 0.34 mg/L.

The MSGP includes a monthly average maximum numeric effluent limit for zinc of 0.296 mg/L (Sector K), which will only comply with water quality standards when hardness is greater than 290 mg/L. Similarly, the maximum daily limit and the monthly average maximum limit for zinc is 0.2 mg/L and 0.11 mg/L, respectively (Sector L); these limits do not generally comply with WQS when hardness values for the receiving water are less than 130 mg/L and 85 mg/L, respectively. Therefore, DEQ requires that the total zinc numeric effluent limit be equal to the acute water quality criterion of 0.12 mg/L.

9.10.4 IDR05I000: Indian country lands within the State of Idaho, except Duck Valley Reservation lands, which are covered under Nevada permit NVR05I000

9.10.4.1 Shoshone-Bannock Tribes

The following conditions apply only to discharges to waters of the Shoshone-Bannock Tribes:

9.10.4.1.1 Submission of NOI, Monitoring Data, and Reports. Copies of the Notices of Intent (NOI), Monitoring data collected pursuant to section 6.2 of this permit, and Exceedance Reports must be sent to the Shoshone-Bannock Tribes Water Resources Department (SBT-WRD). The monitoring data and exceedance reports must be sent to the SBT-WRD within thirty (30) days of receipt of analytical results.

9.10.4.1.2 Submission of SWPPP. If requested by the SBT-WRD, the permittee must submit a copy of the SWPPP to SBT-WRD within fourteen (14) days of the request.

9.10.4.1.3 Where to Submit Information. All required or requested documents shall be sent to:

Shoshone-Bannock Tribes Water Resources Department
P.O. Box 306 Pima Drive
Fort Hall, ID 83203
Phone: (208) 239-4582
Fax: (208) 239-4592

9.10.5 ORR05I000: Indian country lands within the State of Oregon, except Fort McDermitt Reservation lands, which are covered under Nevada permit NVR05I000

9.10.5.1 Confederated Tribes of the Umatilla Indian Reservation

Projects located within the exterior boundaries of the Umatilla Indian Reservation must meet the following conditions:

9.10.5.1.1 Water Quality Standards. The operator shall be responsible for achieving compliance with Confederated Tribes of the Umatilla Indian Reservation's (CTUIR) Water Quality Standards.

9.10.5.1.2 Submission of NOI. The operator shall submit a copy of the Notice of Intent (NOI to be covered by this permit to the CTUIR Water Resources Program at the address below, at the same time it is submitted to EPA.

9.10.5.1.3 Submission of SWPPP. The operator shall be responsible for submitting all Stormwater Pollution Prevention Plans (SWPPPs) required under this general permit to the CTUIR Water Resources Program for review and determination that the SWPPP is sufficient to meet Tribal Water Quality Standards, prior to the beginning of any discharge activities taking place.

9.10.5.1.4 Additional Reporting. The operator shall be responsible for reporting an exceedance to Tribal Water Quality Standards to the CTUIR Water Resources Program at the same time it is reported to EPA.

9.10.5.1.5 Additional Requirements for Historic Properties Preservation. The applicant shall submit copies of each NOI to the CTUIR Tribal Historic Preservation Office (THPO). The NOI shall define the undertaking's area of potential effect (APE). This information will be used to determine whether or not the undertaking has the potential to affect historic properties. To be in compliance with the NHPA and be eligible for coverage under this permit, the operator must meet the following criteria:

- The THPO will be provided 30 days to comment on the APE as defined in the permit application.

- If the project is an undertaking, a cultural resource investigation must occur. All fieldwork must be conducted by qualified personnel (as outlined by the [Secretary of Interior's Standards and Guidelines](#)) and documented using [Oregon Reporting Standards](#). The resulting report must be submitted to the THPO and the THPO must concur with the findings and recommendations before any ground disturbing work can occur. The THPO requires 30 days to review all reports.
- The operator must obtain THPO concurrence in writing. If historic properties are present, this written concurrence will outline measures to be taken to prevent or mitigate effects to historic properties.

9.10.5.1.6 Where to Submit Information. The NOI, SWPPP, and reports must be sent to:

Confederated Tribes of the Umatilla Indian Reservation
Water Resources Program
46411 Timine Way
Pendleton, OR 97801
(541) 966-2420

All required Historic Properties Preservation information must be sent to:

Confederated Tribes of the Umatilla Indian Reservation
Cultural Resources Protection Program
Tribal Historic Preservation Office
46411 Timine Way
Pendleton, OR 97801
(541) 429-7234

9.10.5.2 Confederated Tribes of the Warm Springs Indian Reservation

The following conditions apply for projects within the exterior boundaries of the Warm Springs Indian Reservation:

- 9.10.5.2.1 Water Quality Standards.** The operator shall be responsible for achieving compliance with the Confederated Tribes of the Warm Springs Indian Reservation's Water Quality Standards. (Tribal Ordinance 80).
- 9.10.5.2.2 Submission of NOI.** The operator shall submit a copy of the Notice of Intent (NOI) to be covered by this permit to the Tribes' Environmental Office at the address below, at the same time it is submitted to EPA.
- 9.10.5.2.3 Submission of SWPPP.** The operator shall be responsible for filing all Stormwater Pollution Prevention Plans (SWPPP) required under this permit to the Tribes' Environmental Office for review and determination that the SWPPP is sufficient to meet Tribal Water Quality Standards, prior to the beginning of any discharge activities taking place.
- 9.10.5.2.4 Additional Reporting.** The operator shall be responsible for reporting an exceedance to Tribal Water Quality Standards to the Tribes' Environmental Office at the same time it is reported to EPA.
- 9.10.5.2.5 Tribal Cultural Resources.** The applicant shall submit copies of each NOI to the Tribal Historic Preservation Office (THPO). The NOI shall define the undertaking's area of potential effect (APE). This information will be used to determine whether or not the

undertaking has the potential to affect historic properties. To be in compliance with the NHPA and be eligible for coverage under this permit, the operator must meet the following criteria:

- The THPO will be provided 30 days to comment on the APE as defined in the permit application.
- If the project is an undertaking, a cultural resource investigation must occur. All fieldwork must be conducted by qualified personnel (as outlined by the Secretary of Interior's Standards and Guidelines). The resulting report must be submitted to the THPO and the THPO must concur with the findings and recommendations before any ground disturbing work can occur. The THPO requires 30 days to review all reports.
- The operator must obtain THPO concurrence in writing. If historic properties are present, this written concurrence will outline measures to be taken to prevent or resolve effects to historic properties.

9.10.5.2.6 Where to Submit Information. All required or requested documents shall be sent to:

Confederated Tribes of Warm Springs
Branch of Natural Resources
Tribal Environmental Office
P.O. Box C
Warm Springs
Oregon, 97761
541-553-2002

9.10.6 WAR05I000: Indian country lands within the State of Washington

9.10.6.1 Confederated Tribes of the Colville Reservation

No Additional Requirements.

9.10.6.2 Lummi Nation

The following conditions apply only to discharges within the Lummi Nation:

9.10.6.2.1 Certification. This certification does not exempt and is provisional upon compliance with other applicable statutes and codes administered by federal and Lummi tribal agencies. Pursuant to Lummi Code of Laws (LCL) 17.05.020(a), the operator must also obtain a land use permit from the Lummi Planning Department as provided in Title 15 of the Lummi Code of Laws and regulations adopted thereunder.

9.10.6.2.2 Submission of SWPPP. Pursuant to LCL 17.05.020, each operator shall develop and submit a Storm Water Pollution Prevention Plan to the Lummi Water Resources Division for review and approval by the Water Resources Manager prior to beginning any discharge activities.

9.10.6.2.3 Water Quality Standards. Pursuant to LCL Title 17, each operator shall be responsible for achieving compliance with the Water Quality Standards for Surface Waters of the Lummi Indian Reservation (Lummi Administrative Regulations [LAR] 17 LAR 07.010 through 17 LAR 07.210).

9.10.6.2.4 Submission of NOI, Monitoring Data, Reports and NOT. Each operator shall submit a copy of the Notice of Intent (NOI), analytical monitoring results, any Exceedance Reports, Annual Reports, and Notice of Termination (NOT) to the Lummi Water

Resources Division at the same time it is submitted to the Environmental Protection Agency (EPA).

9.10.6.2.5 Where to Submit Information. All required or requested documents shall be sent to:

Lummi Natural Resources Department
ATTN: Water Resources Manager
2665 Kwina Road
Bellingham, WA 98226

Please see the Lummi Nation website (www.lummi-nsn.gov) to review a copy of Title 17 of the Lummi Code of Laws and the references upon which the conditions identified above are based.

9.10.6.3 Puyallup Tribe of Indians

The following conditions apply only to discharges to waters of the Puyallup Tribe of Indians:

9.10.6.3.1 Submission of NOI, NOT and No Exposure. Copies of the Notice of Intent (NOI), Notice of Termination (NOT), and No Exposure Certification shall be submitted to the Tribe's Natural Resources Department.

9.10.6.3.2 Submission of SWPPP. A copy of the Stormwater Pollution Plan (SWPPP) shall be submitted to the Tribe's Natural Resources Department at least thirty (30) days in advance of submitting the NOI to EPA.

9.10.6.3.3 Compliance with Tribe's Water Quality Standards. Each permittee shall be responsible for achieving compliance with the Tribe's Water Quality Standards, including anti-degradation provisions.

9.10.6.3.4 Submission and Approval of Sampling Plan. A sampling plan shall be submitted to the Tribe's Natural Resources Department and approved by the Tribe prior to initiation of monitoring required under Part 6 of this permit.

9.10.6.3.5 Submission of Monitoring Data and Reports. The results of any monitoring required by this permit and reports must be sent to the Tribe's Natural Resources Department, including a description of the corrective actions required and undertaken to meet effluent limits or benchmarks (as applicable).

9.10.6.3.6 Authorization to Inspect. The Natural Resources Department may conduct an inspection of any facility covered by this permit to ensure compliance with tribal water quality standards. The Department may enforce its certification conditions.

9.10.6.3.7 Tribal Endangered Species Act Consultation. Consultation with the Tribe that addresses the effects of your facility's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities on federally-listed threatened or endangered species and designated critical habitat. Information required as part of the consultation shall include:

- Basis of the determination that your stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities will not adversely affect federally-listed as endangered or threatened ("listed") under the Endangered Species Act (ESA) and will not result in the adverse

modification or destruction of designated critical habitat including appropriate measures to be undertaken to avoid or eliminate the likelihood of adverse effects (under Criterion C in Section 1.1.4.5); and

- Notice of Intent form complete with extent of action area, list of federally-listed threatened or endangered species or designated critical habitat likely to occur in action area, list of potential pollutants (if you are a new discharger) or list of pollutants for which you have ever exceeded an applicable benchmark of effluent limitation guideline, or for which your discharge has ever been found to cause or contribute to an exceedance of an applicable water quality standard (if you are an existing discharger).

9.10.6.3.8 Discharges to CERCLA Sites. This permit does not authorize direct stormwater discharges to certain sites undergoing remedial cleanup actions pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) unless first approved by the appropriate EPA Regional office. In the case of the Commencement Bay, Near Shore/Tide Flats (WAD980726368), the Puyallup Tribe also requests notification by the facility and consultation with EPA prior to discharge. Contaminants at this site include but are not limited to: dioxins, furans, arsenic, copper, lead, zinc, 4-methly-phenol, Hex-CB, HPAHs, PCBs, PCE, cadmium, mercury, and LPAHs.

9.10.6.3.9 Discharge-related Activities that have Potential to Cause an Adverse Effect on Historic Properties. Installation of stormwater controls that involve subsurface disturbances may potentially have an adverse impact on historic properties. Procedures detailed in Appendix F of the permit shall be completed. Brandon Reynon, the Puyallup Tribe's Cultural Regulatory Specialist, shall be contacted prior to initiating discharge-related activities that may have an impact on historic properties. His contact information is (253) 573-7986 and Brandon.reynon@puyalluptribe.com

9.10.6.3.10 Where to Submit Information. All required or requested documents shall be sent to the:

Puyallup Tribe of Indians
Department of Natural Resources c/o Bill Sullivan and Char Naylor
3009 E. Portland Avenue
Tacoma, Washington 98404

9.10.6.4 Spokane Tribe of Indians

Permit coverage not available until Clean Water Act (CWA) 401 certification is received.

9.10.6.5 Swinomish Indian Tribal Community

The following conditions apply only to discharges to waters of the Swinomish Indian Tribal Community:

9.10.6.5.1 Certification. This certification does not exempt and is provisional upon compliance with other applicable statutes and codes administered by federal and Swinomish Indian Tribal Community (SITC) agencies. Operator must obtain any applicable SITC permits.

- 9.10.6.5.2 Submission of SWPPP.** Each operator shall develop a Storm Water Pollution Prevention Plan (SWPPP) and submit it to the Swinomish Department of Environmental Protection (SDEP) for review and approval by the Director prior to beginning any discharge activities under the permit.
- 9.10.6.5.3 Water Quality Standards.** Each operator shall be responsible for achieving compliance with applicable Water Quality Standards for Surface Waters of the Swinomish Indian Reservation.
- 9.10.6.5.4 Submission of NOI, Monitoring Data, Reports and NOT.** Each operator shall submit a copy of the Notice of Intent (NOI), analytical monitoring results and Exceedance Reports if any, Annual Reports, and Notice of Termination (NOT) to the Swinomish DEP at the same time it is submitted to EPA.
- 9.10.6.5.5 Alternative Permit.** The permit does not allow discharge of any pollutant on EPA's Persistent Bioaccumulative and Toxic pollutant list. Operator must eliminate such discharge or apply for an Individual permit.
- 9.10.6.5.6 Historic Properties Preservation.** If any archeological/cultural resources or human remains are uncovered during the course of operations, all work will cease and operator must contact the Swinomish Tribal Historic Preservation Officer at 466-7352 or (cell) 840-4127.
- 9.10.6.5.7 Where to Submit Information.** All submittals and correspondence required by this certification including but not limited to Storm Water Pollution Prevention Plans (SWPPP), monitoring results, reports of exceedances, and other notices are to be directed to the Environmental Director, Swinomish Department of Environmental Protection, 11430 Moorage Way, LaConner, WA 98257, phone (360) 466-7201, fax (360) 466-1615, and shall reference 401 Certification # 2014-01 and NPDES MSGP WAR-51000.
- 9.10.6.6 Tulalip Tribes**
The following conditions apply only to discharges on waters of the Tulalip Tribes:
- 9.10.6.6.1 Submission of NOI, NOT, and No Exposure.** Copies of the Notice of Intent (NOI), Notice of Termination (NOT), and No Exposure Certification shall be submitted to the Tribe's Natural Resources Department.
- 9.10.6.6.2 Submission of SWPPP.** A copy of the Stormwater Pollution Prevention Plan (SWPPP) shall be submitted to the Tribe's Natural Resources Department at least thirty (30) days in advance of submitting the NOI to EPA.
- 9.10.6.6.3 Compliance with Tribe's Water Quality Standards.** Each permittee shall be responsible for achieving compliance with the Tribe's Water Quality Standards.
- 9.10.6.6.4 Submission and approval of Sampling Plans.** A sampling plan shall be submitted to the Tribe's Natural Resources Department and approved by the Tribe prior to initiation of monitoring required under Part 6 of this permit.
- 9.10.6.6.5 Submission of Monitoring Data and Reports.** The results of any monitoring required by this permit and reports must be sent to the Tribe's Natural Resources Department,

including a description of the corrective actions required and undertaken to meet effluent limits or benchmarks (as applicable).

9.10.6.6.6 Authorization to Inspect. The Natural Resources Department may conduct an inspection of any facility covered by this permit to ensure compliance with tribal water quality standards. The Department may enforce its certification conditions.

9.10.6.6.7 Incorporation by reference. This certification does not exempt the applicant from compliance with other statutes and codes administered by the tribes, county, state and federal agencies.

9.10.6.6.8 Invalidation. This certification will cease to be valid if the project is constructed and/or operated in a manner not consistent with the project description contained in the permit. This certification will also cease to be valid and the applicant must reapply with an updated application if information contained in the permit is voided by subsequent submittals.

9.10.6.6.9 Modification. Nothing in this certification waives the Tulalip Tribes of Washington's authority to issue modifications to this certification if additional impacts due to operational changes are identified, or if additional conditions are necessary to protect water quality or further protect the Tribal Communities interest.

9.10.6.6.10 Permits on-site. A copy of the permit shall be kept on the job site and readily available for reference by the construction supervisor, construction managers and foreman, and Tribal inspectors.

9.10.6.6.11 Project Management. The applicant shall ensure that project managers, construction managers and foreman, and other responsible parties have read and understand conditions of the permit, this certification, and other relevant documents, to avoid violations or noncompliance with this certification.

9.10.6.6.12 Emergencies/Contingency Measures. In the event the operator is unable to comply with the permit terms and conditions due to any cause, the contractor shall immediately take action to stop the violation and correct the problem, and immediately report spill events to EPA's 24-hour Spill Response Team at (206) 553-1263 and the Tulalip Tribes Police Department (425) 508-1565. Compliance with this condition does not relieve the applicant from responsibility to maintain continuous compliance with the terms and conditions of this certification or the resulting liability from failure to comply.

9.10.6.6.13 Tribal Endangered Species Act Consultation. Consultation with the Tribes that addresses the effects of a facility's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities on federally-listed threatened or endangered species and designated critical habitat. Information required as part of the consultation shall include:

- Basis of the determination that your stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities will not adversely affect federally-listed as endangered or threatened ("listed") under the Endangered Species Act (ESA) and will not result in the adverse modification or destruction of designated critical habitat including appropriate measures to be undertaken to avoid or eliminate the likelihood of adverse effects (under Criterion C in Section 1.1.4.5); and

- Notice of Intent form complete with extent of action area, list of federally-listed threatened or endangered species or designated critical habitat likely to occur in action area, list of potential pollutants (if you are a new discharger) or list of pollutants for which you have ever exceeded an applicable benchmark or effluent limitations guideline, or for which your discharge has ever been found to cause or contribute to an exceedance of an applicable water quality standard (if you are an existing discharger).

9.10.6.6.14 Discharges to CERCLA Sites. This permit does not authorize direct stormwater discharges to certain sites undergoing remedial cleanup actions pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) unless first approved by the appropriate EPA Regional office. In the case of the Tulalip Landfill site (WAD980639256), the Tulalip Tribes also requests notification by the facility and consultation with EPA prior to discharge. Contaminants at this site may include but are not limited to: dioxins, furans, arsenic, copper, lead, zinc, 4-methyl-phenol, Hex-CB, HPAHs, PCBs, PCE, cadmium, mercury, and LPAHs.

9.10.6.6.15 Discharge-related Activities that have Potential to Cause an Adverse Effect on Historic Properties. Installation of stormwater controls that involve subsurface disturbances may potentially have an adverse impact on historic properties. Procedures detailed in Appendix F of the permit shall be completed. Richard Young, of the Tulalip Tribe's Cultural Resources Department shall be contacted prior to initiating discharge-related activities that may have an impact on historic properties. His contact information is (360) 716-2652 and ryoung@tulaliptribesnsn.gov.

9.10.6.6.16 Where to Submit Information: All required or requested documents shall be sent to the:

Tulalip Tribes Natural Resources Environmental Division
c/o Kurt Nelson and Valerie Streeter
6704 Marine Drive, Tulalip, Washington 98271

9.10.7 WAR05F000: Areas in the State of Washington, except those located on Indian Country lands, subject to industrial activity by a Federal Operator

Permittees in the State of Washington must meet the following conditions:

9.10.7.1 Discharges shall not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), ground water quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the National Toxics Rule (40 CFR Part 131.36). Discharges that are not in compliance with these standards are not authorized.

9.10.7.2 Prior to the discharge of stormwater and non-stormwater to waters of the state, the Permittee shall apply all known, available, and reasonable methods of prevention, control, and treatment (AKART). This includes the preparation and implementation of an adequate Stormwater Pollution Prevention Plan (SWPPP), with all appropriate best management practices (BMPs) installed and maintained in accordance with the SWPPP and the terms and conditions of this permit.

9.10.7.3 Additional Sampling Requirements and Effluent Limits for Discharges to Certain Impaired Waters and Puget Sound Sediment Cleanup Sites.

1. Permittees discharging to a 303(d)-listed waterbody (Category 5), either directly or indirectly through a stormwater drainage system, shall comply with the applicable sampling requirements and numeric effluent limits in Table 9.10.7.3.1.

For purposes of this condition, “applicable sampling requirements and effluent limits” means the sampling and effluent limits in Table 1 that correspond to the specific parameter(s) the receiving water is 303(d)-listed for at the time of permit coverage, or Total Suspended Solids (TSS) if the waterbody is 303(d)-listed (Category 5) for sediment quality at the time of MSGP coverage.

If a discharge point is subject to an impaired waterbody effluent limit for a parameter that also has a benchmark, the effluent limit supersedes the benchmark. All references to Category 5 pertain to the 2012 EPA-approved Water Quality Assessment.

The 2012 EPA-approved Water Quality Assessment may be viewed online at: http://www.ecy.wa.gov/programs/wq/links/wq_assessments.html.

Table 9.10.7.3.1: Sampling and Effluent Limits Applicable to Discharges to 303(d)-listed Waters

Parameter	Units	Maximum Daily ^a		Analytical Method ^b	Laboratory Quantitation Level ^c	Sampling Frequency ^d
		Freshwater	Marine			
Turbidity	NTUs	25	25	EPA 180.1 Meter	0.5	1/quarter
pH	SU	j	Between 7.0 and 8.5	Meter	±0.1	1/quarter
Fecal Coliform Bacteria	# colonies/ 100 mL	i	i	SM 9222D	20 CFU/ 100 mL	1/quarter
TSS ^f	mg/L	30	30	SM2540-D	5	1/quarter
Phosphorus, Total	mg/L	g	g	EPA 365.1	0.01	1/quarter
Total Ammonia (as N)	mg/L	g	g	SM 4500 NH ³ -GH	0.3	1/quarter
Copper, Total	µg/L	g	g	EPA 200.8	2.0	1/quarter
Lead, Total	µg/L	g	g	EPA 200.8	0.5	1/quarter
Mercury, Total	µg/L	2.1	1.8	EPA1631E	0.0005	1/quarter
Zinc, Total	µg/L	g	g	EPA 200.8	2.5	1/quarter
Pentachlorophenol	µg/L	9 ^h	g	EPA 625	1.0	1/quarter

- Maximum daily effluent limit means the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. The daily discharge is the average measurement of the pollutant over the day; this does not apply to pH.
- Or other equivalent method with the same reporting level.
- The Permittee shall ensure laboratory results comply with the quantitation level (QL) specified in the table. However, if an alternate method from 40 CFR Part 136 is sufficient to produce measurable results in the sample, the Permittee may use that method for analysis. If the Permittee uses an alternative method it must report the test method and QL on the DMR. If the Permittee is unable to obtain the required QL due to matrix effects, the Permittee must report the matrix-specific method detection level (MDL) and QL on the DMR.
- 1/quarter means at least one sample taken each quarter, e.g., Q1 = Jan 1 – March 31, Q2 = April 1 – June 30.
- Permittees shall use either a calibrated pH meter consistent with EPA 9040 or an approved state method.
- Permittees who discharge to a waterbody 303(d)-listed (Category 5) for sediment quality shall sample the discharge for TSS.
- Site-specific effluent limitation will be assigned at the time of permit coverage.
- Based on a pH of 7.0.

- i. A numeric effluent limit does not apply, but Permittees must sample according to Table 9.10.7.3.1. In addition, the following mandatory BMPs shall be incorporated into the SWPPP and implemented; the Permittee must:
- 1) Use all known, available and reasonable methods to prevent rodents, birds, and other animals from feeding/nesting/roosting at the facility. Nothing in this section shall be construed as allowing violations of any applicable federal, state or local statutes, ordinances, or regulations including the Migratory Bird Treaty Act.
 - 2) Perform at least one annual dry weather inspection of the stormwater system to identify and eliminate sanitary sewer cross-connections.
 - 3) Install structural source control BMPs to address on-site activities and sources that could cause bacterial contamination (e.g., dumpsters, compost piles, food waste, and animal products).
 - 4) Implement operational source control BMPs to prevent bacterial contamination from any known sources of fecal coliform bacteria (e.g., animal waste).
 - 5) Conduct additional bacteria-related sampling and/or BMPs, if ordered by Ecology on a case-by-case basis.
- j. The effluent limit for a Permittee who discharges to a freshwater body 303(d)-listed for pH is: Between 6.0 and 8.5, if the 303(d)-listing is for high pH only; Between 6.5 and 9.0, if the 303(d)-listing is for low pH only; and Between 6.5 and 8.5 if the 303(d)-listing is for both low and high pH. All pH effluent limits are applied end-of-pipe.

2. Permittees discharging to a Puget Sound Sediment Cleanup Site¹, either directly or indirectly through a stormwater drainage system, shall comply with this section:

- a. Permittees shall sample the discharge for Total Suspended Solids (TSS) in accordance with Table 9.10.7.3.2.
- b. If the waterbody is listed within Category 5 (sediment medium) where the outfall discharges to the waterbody, the discharge is subject to the TSS numeric effluent limit in Table 9.10.7.3.1.
- c. If the waterbody is not listed within Category 5 (sediment medium) where the outfall discharges to the waterbody (e.g., Category 4B, etc.), the discharge is subject to the TSS benchmark in Table 9.10.7.3.2. If the discharge is subject to more than one TSS benchmark value (i.e., two different benchmarks), the lower benchmark supersedes the higher one. If a discharge exceeds the TSS benchmark, the Permittee shall implement corrective actions in accordance with the MSGP.
- d. Permittees shall remove accumulated solids from storm drain lines (including inlets, catch basins, sumps, conveyance lines, and oil/water separators) owned or controlled by the Permittee at least once during the term of the MSGP.

Permittees shall conduct line cleaning operations (e.g., jetting, vacuuming, removal, loading, storage, and/or transport) using BMPs to prevent discharges of storm drain solids to surface waters of the state.

Removed storm drain solids and liquids shall be disposed of in accordance with applicable laws and regulations and documented in the SWPPP.

¹ Puget Sound Sediment Cleanup Site means: Category 4B (Sediment) portions of Budd Inlet (Inner), Commencement Bay (Inner), Commencement Bay (Outer), Dalco Passage and East Passage, Duwamish Waterway (including East and West Waterway), Eagle Harbor, Elliot Bay, Hood Canal (North), Liberty Bay, Rosario Strait, Sinclair Inlet, and Thea Foss Waterway; Category 5 (Sediment) portions of the Duwamish Waterway (including East and West Waterway), and Port Gardner and Inner Everett Harbor; and the Port Angeles Harbor sediment cleanup area, as mapped on Ecology's ISGP website. All references to Category 4B and 5 pertain to the 2012 EPA-approved Water Quality Assessment, available online at: http://www.ecy.wa.gov/programs/wq/links/wq_assessments.html

- e. Prior to removing storm drain solids according to Condition 2.D, Permittees shall sample and analyze storm drain solids in accordance with Table 9.10.7.3.3. Storm drain solids must be collected/sampled from a representative catch basin, sump, pipe, or other feature within the storm drain system that corresponds to the discharge point where Total Suspended Solids (TSS) samples are collected per these conditions. Samples may be either a single grab sample or a composite sample. Samples must be representative of the storm drain solids generated and accumulated in the facility's drainage system. To the extent possible, sample locations must exclude portions of the drainage system affected by water from off-site sources (e.g., run-on from off-site properties, tidal influence, and backflow).
- f. All storm drain solids sampling data shall be reported to EPA no later than the DMR due date for the reporting period in which the solids were sampled. A copy of the lab report shall be submitted to EPA.

Table 9.10.7.3.2: Benchmarks and Sampling Requirements Applicable to Discharges to Puget Sound Sediment Cleanup Sites that are not Category 5 for Sediment Quality

Parameter	Units	Benchmark Value ^a	Analytical Method	Laboratory Quantitation Level ^b	Minimum Sampling Frequency ^c
TSS	mg/L	30	SM2540-D	5	1/quarter

- a. Permittees sampling more than once per quarter shall average the sample results and compare the average value to the benchmark to determine if the discharge has exceeded the benchmark value. However, if Permittees collect more than one sample during a 24-hour period, they must first calculate the daily average of the individual grab sample results collected during that 24-hour period; then use the daily average to calculate a quarterly average.
- b. The Permittee shall ensure laboratory results comply with the quantitation level (QL) specified in the table. However, if an alternate method from 40 CFR Part 136 is sufficient to produce measurable results in the sample, the Permittee may use that method for analysis. If the Permittee uses an alternative method it must report the test method and QL on the DMR. If the Permittee is unable to obtain the required QL due to matrix effects, the Permittee must report the matrix-specific method detection level (MDL) and QL on the DMR.
- c. 1/quarter means at least one sample taken each quarter, year-round.

Table 9.10.7.3.3: Sampling and Analytical Procedures for Storm Drain Solids

Analyte	Method in Sediment	Quantitation Level ^a
Conventional Parameters		
Percent total solids	SM 2540G, or ASTM Method D 2216	NA
Total organic carbon	Puget Sound Estuary Protocols (PSEP 1997), or EPA 9060	0.1%
Grain size	Ecology Method Sieve and Pipette (ASTM 1997), ASTM D422, or PSEP 1986/2003	NA
Metals		
Antimony, Total	EPA Method 200.8 (ICP/MS), EPA Method 6010 or EPA Method 6020	0.2 mg/kg dw ^b
Arsenic, Total	EPA Method 200.8 (ICP/MS), EPA Method 6010 or EPA Method 6020	0.1 mg/kg dw
Beryllium, Total	EPA Method 200.8 (ICP/MS), EPA Method 6010 or EPA Method 6020	0.2 mg/kg dw
Cadmium, Total	EPA Method 200.8 (ICP/MS), EPA Method 6010 or EPA Method 6020	0.2 mg/kg dw
Chromium, Total	EPA Method 200.8 (ICP/MS), EPA Method 6010 or EPA Method 6020	0.5 mg/kg dw

Analyte	Method in Sediment	Quantitation Level ^a
Copper, Total	EPA Method 200.8 (ICP/MS) , EPA Method 6010 or EPA Method 6020	0.2 mg/kg dw
Lead, Total	EPA Method 200.8 (ICP/MS) , EPA Method 6010 or EPA Method 6020	0.2 mg/kg dw
Mercury, Total	EPA Method 1631E, or EPA Method 7471B	0.005 mg/kg dw
Nickel, Total	EPA Method 200.8 (ICP/MS) , EPA Method 6010 or EPA Method 6020	0.1 mg/kg dw
Selenium, Total	EPA Method 200.8 (ICP/MS) , EPA Method 6010 or EPA Method 6020	0.5 mg/kg dw
Silver, Total	EPA Method 200.8 (ICP/MS) , EPA Method 6010 or EPA Method 6020	0.1 mg/kg dw
Thallium, Total	EPA Method 200.8 (ICP/MS) , EPA Method 6010 or EPA Method 6020	0.2 mg/kg dw
Zinc, Total	EPA Method 200.8 (ICP/MS) , EPA Method 6010 or EPA Method 6020	5.0 mg/kg dw
Organics		
PAH compounds ^c	EPA Method 8270 D	70 µg/kg dw
PCBs (aroclor)s, Total ^d	EPA Method 8082	10 µg/kg dw
Petroleum Hydrocarbons		
NWTPH-Dx	NWTPH-Dx	25.0-100.0 mg/kg dw

- a. The Permittee shall ensure laboratory results comply with the quantitation level (QL) specified in the table. However, if an alternate method is sufficient to produce measurable results in the sample, the Permittee may use that method for analysis. If the Permittee uses an alternative method, it must report the test method and QL on the sediment monitoring report. All results shall be reported. For values below the QL, or where a QL is not specified, report results at the method detection level (MDL) from the lab and the qualifier of "U" for undetected at that concentration. If the Permittee is unable to obtain the required QL due to matrix effects, the Permittee must report the matrix-specific MDL and QL on the DMR.
- b. dw = dry weight.
- c. PAH compounds include: 1-methylnaphthalene, 2-methylnaphthalene, 2-chloronaphthalene, acenaphthylene, acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b, k)fluoranthene, benzo(ghi)perylene, dibenzo(a,h)anthracene, dibenzofuran, carbazole, chrysene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene.
- d. Total = sum of PCB aroclors 1016+1221+1232+1242+1248+1254+1260.

9.10.7.4 Requirements for Discharges to Waters with Applicable TMDLs

1. The Permittee shall comply with applicable TMDL determinations. Applicable TMDLs or TMDL determinations are TMDLs which have been completed by the issuance date of this permit, or which have been completed prior to the date that the Permittee's NOI is received by EPA, whichever is later. EPA will list the Permittee's requirements to comply with this condition on the letter of permit coverage.
2. TMDL requirements associated with TMDLs completed after the issuance date of this permit only become effective if they are imposed through an administrative order issued by EPA.
3. Where Ecology has established a TMDL wasteload allocation and sampling requirements for the Permittee's discharge, the Permittee shall comply with all requirements of the TMDL.
 - a. If a discharge point is subject to a TMDL-related effluent limit for a parameter that also has a benchmark, the effluent limit supersedes the benchmark.

4. Where Ecology has established a TMDL general wasteload allocation for industrial stormwater discharges for a parameter present in the Permittee's discharge, but has not identified specific requirements, EPA will assume the Permittee's compliance with the terms and conditions of the permit complies with the approved TMDL.
5. Where Ecology has not established a TMDL wasteload allocation for industrial stormwater discharges for a parameter present in the Permittee's discharge, but has not excluded these discharges, EPA will assume the Permittee's compliance with the terms and conditions of this permit complies with the approved TMDL.
6. Where a TMDL for a parameter present in the Permittee's discharge specifically precludes or prohibits discharges of stormwater associated with industrial activity, the Permittee is not eligible for coverage under the MSGP.

Appendix A - Definitions, Abbreviations, and Acronyms (for the purposes of this permit).**A.1. DEFINITIONS**

Action Area – all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. See 50 CFR 402. For the purposes of this permit and for application of Endangered Species Act requirements, the following areas are included in the definition of action area:

- The areas where stormwater discharges originate and flow from the industrial facility to the point of discharge into receiving waters. (Example: Where stormwater flows into a ditch, swale, or gully that leads to receiving waters and where listed species (such as listed amphibians) are found in the ditch, swale, or gully.)
- The areas where stormwater from industrial activities discharge into receiving waters and the areas in the immediate vicinity of the point of discharge. (Example: Where stormwater from industrial activities discharges into a stream segment that is known to harbor listed aquatic species.)
- The areas where stormwater controls will be constructed and operated, including any areas where stormwater flows to and from the stormwater controls. (Example: Where a stormwater retention pond would be built.)
- The areas upstream and/or downstream from the stormwater discharge into a stream segment that may be affected by these discharges. (Example: Where sediment discharged to a receiving stream settles downstream and impacts a breeding area of a listed aquatic species.)

Antidegradation Policy or Antidegradation Requirements – the water quality standards regulation that requires States and Tribes to establish a three-tiered antidegradation program:

1. Tier 1 maintains and protects existing uses and water quality conditions necessary to support such uses. An existing use can be established by demonstrating that fishing, swimming, or other uses have actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur. Where an existing use is established, it must be protected even if it is not listed in the water quality standards as a designated use. Tier 1 requirements are applicable to all surface waters.
2. Tier 2 maintains and protects "high quality" waters -- water bodies where existing conditions are better than necessary to support CWA § 101(a)(2) "fishable/swimmable" uses. Water quality can be lowered in such waters. However, state and tribal Tier 2 programs identify procedures that must be followed and questions that must be answered before a reduction in water quality can be allowed. In no case may water quality be lowered to a level which would interfere with existing or designated uses.
3. Tier 3 maintains and protects water quality in outstanding national resource waters (ONRWs). Except for certain temporary changes, water quality cannot be lowered in such waters. ONRWs generally include the highest quality waters of the United States. However, the ONRW classification also offers special protection for waters of exceptional ecological significance, i.e., those which are important, unique, or sensitive ecologically. Decisions regarding which water bodies qualify to be ONRWs are made by States and authorized Indian Tribes.

Arid Areas – areas where annual rainfall averages from 0 to 10 inches.

Bypass – the intentional diversion of waste streams from any portion of a treatment facility. See 40 CFR 122.41(m)(1)(i).

CERCLA Site (i.e., Superfund Site) - for the purposes of this permit, a site as defined in Section 101(9) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9601(9), that is undergoing a remedial investigation and feasibility study, or for which a Record of Decision for remedial action has been issued in accordance with the National Contingency Plan, 40 CFR Part 300.

Co-located Industrial Activities – any industrial activities, excluding your primary industrial activity(ies), located on-site that are defined by the stormwater regulations at 122.26(b)(14)(i)-(ix) and (xi). An activity at a facility is not considered co-located if the activity, when considered separately, does not meet the description of a category of industrial activity covered by the stormwater regulations or identified by the SIC code list in Appendix D.

Confidential Business Information (CBI) – see 40 CFR Part 2 for relevant definitions of CBI: <http://www.gpo.gov/fdsys/pkg/CFR-2013-title40-vol1/pdf/CFR-2013-title40-vol1-part2-subpartB.pdf>.

Control Measures – refers to any stormwater control or other method (including narrative effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the United States.

Corrective Action – for the purposes of the permit, any action taken, or required to be taken, to (1) repair, modify, or replace any stormwater control used at the site; (2) clean up and dispose of spills, releases, or other deposits found on the site; and (3) remedy a permit violation.

Critical Habitat – as defined in the Endangered Species Act at 16 U.S.C. 1531 for a threatened or endangered species, (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

Director – a Regional Administrator of the Environmental Protection Agency or an authorized representative. See 40 CFR 122.2.

Discharge – when used without qualification, means the "discharge of a pollutant." See 40 CFR 122.2.

Discharge of a Pollutant – any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. See 40 CFR 122.2.

Discharge Point – for the purposes of this permit, the location where collected and concentrated stormwater flows are discharged from the facility such that the first receiving waterbody into which the discharge flows, either directly or through a separate storm sewer system, is a water of the U.S.

Discharge-Related Activity – activities that cause, contribute to, or result in stormwater and allowable non-stormwater point source discharges, and measures such as the siting, construction and operation of stormwater controls to control, reduce, or prevent pollution in the discharges.

Discharge to an Impaired Water – for the purposes of this permit, a discharge to an impaired water occurs if the first water of the U.S. to which you discharge is identified by a state, tribe, or EPA as not meeting an applicable water quality standard, and requires development of a total maximum daily load (TMDL) (pursuant to Section 303(d) of the Clean Water Act), or is addressed by an EPA-approved or established TMDL, or is not in either of the above categories but the waterbody is covered by pollution control requirements that meet the requirements of 40 CFR 130.7(b)(1). For discharges that enter a separate storm sewer system prior to discharge, the water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system.

Drought-Stricken Area – for the purposes of this permit, an area in which the National Oceanic and Atmospheric Administration's U.S. Seasonal Drought Outlook indicates for the period that any of the following conditions are likely: (1) "Drought to persist or intensify", (2) "Drought ongoing, some improvement", (3) "Drought likely to improve, impacts ease", or (4) "Drought development likely". See http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.gif.

Effective Operating Condition – for the purposes of this permit, a stormwater control is kept in effective operating condition if it has been implemented and maintained in such a manner that it is working as designed to minimize pollutant discharges.

Effluent Limitations – for the purposes of this permit, any of the Part 2 or Part 3 requirements.

Effluent Limitations Guideline (ELG) – defined in 40 CFR § 122.2 as a regulation published by the Administrator under section 304(b) of CWA to adopt or revise effluent limitations.

Eligible – for the purposes of this permit, refers to stormwater and allowable non-stormwater discharges that are authorized for coverage under this general permit.

Endangered Species – defined in the Endangered Species Act at 16 U.S.C. 1531 as any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man.

Existing Discharger – an operator applying for coverage under this permit for discharges authorized previously under an NPDES general or individual permit.

Facility or Activity – any NPDES "point source" (including land or appurtenances thereto) that is subject to regulation under the NPDES program. See 40 CFR 122.2.

Feasible – for the purposes of this permit, feasible means technologically possible and economically practicable and achievable in light of best industry practices. EPA notes that it does not intend for any permit requirement to conflict with state water rights law.

Federal Operator – an entity that meets the definition of “Operator” in this permit and is either any department, agency or instrumentality of the executive, legislative, and judicial branches of the Federal government of the United States, or another entity, such as a private contractor, operating for any such department, agency, or instrumentality.

Hazardous Materials or Hazardous Substances or Toxic Materials – for the purposes of this permit, any liquid, solid, or contained gas that contain properties that are dangerous or potentially harmful to human health or the environment. See also 40 CFR §261.2.

Historic Property – as defined in the National Historic Preservation Act regulations means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

Impaired Water (or “Water Quality Impaired Water” or “Water Quality Limited Segment”) – for the purposes of this permit, waters identified by a state, tribe, or EPA as not meeting an applicable water quality standard, and require development of a total maximum daily load (TMDL) (pursuant to Section 303(d) of the CWA), or are addressed by an EPA-approved or established TMDL, or are covered by pollution controls requirements that meet the requirements of 40 FR 130.7(b)(1). For discharges that enter a separate storm sewer system prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system.

Indian Country or Indian Country Lands – defined at 40 CFR 122.2 as:

- a). All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation;
- b). All dependent Indian communities within the borders of the United States, whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State; and
- c). All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. This definition includes all land held in trust for an Indian tribe. (18 U.S.C. 1151)

Infeasible – for the purposes of this permit, infeasible means not technologically possible or not economically practicable and achievable in light of best industry practices. EPA notes that it does not intend for any permit requirement to conflict with state water rights law.

Industrial Activity – the 10 categories of industrial activities included in the definition of “stormwater discharges associated with industrial activity” as defined in 40 CFR 122.26(b)(14)(i)-(ix) and (xi).

Industrial Stormwater – stormwater runoff from industrial activity.

Measurable Storm Event – a precipitation event that results in a measurable amount of precipitation (i.e., a storm event that results in an actual discharge) and that follows the preceding storm event by at least 72 hours (3-days). The 72-hour storm interval does not apply if you document that less than a 72-hour interval is representative for local storm events.

Minimize – for the purposes of this permit, minimize means to reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer (MS4) – defined at 40 CFR § 122.26(b)(8) as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

1. Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
2. Designed or used for collecting or conveying stormwater;
3. Which is not a combined sewer; and
4. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2. See 40 CFR 122.26(b)(4) and (b)(7).

National Pollutant Discharge Elimination System (NPDES) – defined at 40 CFR § 122.2 as the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA. The term includes an 'approved program.'

New Discharger – a facility from which there is or may be a discharge, that did not commence the discharge of pollutants at a particular site prior to August 13, 1979, which is not a new source, and which has never received a finally effective NPDES permit for discharges at that site. See 40 CFR 122.2.

New Source – any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced:

- after promulgation of standards of performance under section 306 of the CWA which are applicable to such source, or
- after proposal of standards of performance in accordance with section 306 of the CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal. See 40 CFR 122.2.

New Source Performance Standards (NSPS) – technology-based standards for facilities that qualify as new sources under 40 CFR 122.2 and 40 CFR 122.29.

No Exposure – all industrial materials or activities protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. See 40 CFR 122.26(g).

Non-Stormwater Discharges – discharges that do not originate from storm events. They can include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, pavement wash water, external building washdown, irrigation water, or uncontaminated ground water or spring water.

Notice of Intent (NOI) – the form (electronic or paper) required for authorization of coverage under the Multi-Sector General Permit.

Notice of Termination (NOT) – the form (electronic or paper) required for terminating coverage under the Multi-Sector General Permit.

Operator – any entity with a stormwater discharge associated with industrial activity that meets either of the following two criteria:

1. The entity has operational control over industrial activities, including the ability to make modifications to those activities; or
2. The entity has day-to-day operational control of activities at a facility necessary to ensure compliance with the permit (e.g., the entity is authorized to direct workers at a facility to carry out activities required by the permit).

Outfall – see “Discharge Point.”

Permitting Authority – for the purposes of this permit, EPA, a Regional Administrator of EPA, or an authorized representative.

Person – an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof. See 40 CFR 122.2.

Point Source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff. See 40 CFR 122.2.

Pollutant – defined at 40 CFR §122.2. A partial listing from this definition includes: dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal and agricultural waste discharged into water. See 40 CFR 122.2.

Pollutant of Concern – a pollutant which causes or contributes to a violation of a water quality standard, including a pollutant which is identified as causing an impairment in a state's 303(d) list.

Primary Industrial Activity – includes any activities performed on-site which are (1) identified by the facility's primary SIC code and included in the descriptions of 122.26(b)(14)(ii), (iii), (vi), or (viii); or (2) included in the narrative descriptions of 122.26(b)(14)(i), (iv), (v), (vii), or (ix). [For co-located activities covered by multiple SIC codes, it is recommended that the primary industrial determination be based on the value of receipts or revenues or, if such information is not available for a particular facility, the number of employees or production rate for each process may be compared. The operation that generates the most revenue or employs the most personnel is the operation in which the facility is primarily engaged. In situations where the vast majority of on-site activity falls within one SIC code, that activity may be the primary industrial activity.] Narrative descriptions in 40 CFR 122.26(b)(14) identified above include: (i) activities subject to stormwater effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards; (iv) hazardous waste treatment storage, or disposal facilities including those that are operating under interim status or a permit under subtitle C of the Resource Conservation and Recovery Act (RCRA); (v) landfills, land application sites and open

dumps that receive or have received industrial wastes; (vii) steam electric power generating facilities; and (ix) sewage treatment works with a design flow of 1.0 mgd or more.

Qualified Personnel – qualified personnel are those who are knowledgeable in the principles and practices of industrial stormwater controls and pollution prevention, and who possess the education and ability to assess conditions at the industrial facility that could impact stormwater quality, and the education and ability to assess the effectiveness of stormwater controls selected and installed to meet the requirements of the permit.

Reportable Quantity Release – a release of a hazardous substance at or above the established legal threshold that requires emergency notification. Refer to 40 CFR Parts 110, 117, and 302 for complete definitions and reportable quantities for which notification is required.

Restricted Information – for the purposes of this permit, information that is privileged or that is otherwise protected from disclosure pursuant to applicable statutes, Executive Orders, or regulations. Such information includes, but is not limited to: classified national security information, protected critical infrastructure information, sensitive security information, and proprietary business information.

Runoff Coefficient – the fraction of total rainfall that will appear at the conveyance as runoff. See 40 CFR 122.26(b)(11).

Run-On – sources of stormwater that drain from land located upslope or upstream from the regulated facility in question.

Saline Water or Saltwater – for the purposes of this permit, a waterbody with salinity that is equal to or exceeds 10 parts per thousand 95 percent or more of the time, unless otherwise defined as a coastal or marine water by the applicable state or tribal surface water quality standards.

Semi-Arid Areas – areas where annual rainfall averages from 10 to 20 inches.

Significant Materials – includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges. See 40 CFR 122.26(b)(12).

Special Aquatic Sites – sites identified in 40 CFR 230 Subpart E. These are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region.

Spill – for the purpose of this permit, the release of a hazardous or toxic substance from its container or containment.

Stormwater – stormwater runoff, snow melt runoff, and surface runoff and drainage. See 40 CFR 122.26(b)(13).

Stormwater Controls – see “Control Measures.”

Stormwater Discharges Associated with Construction Activity – as used in this permit, a discharge of pollutants in stormwater runoff from areas where land-disturbing activities (e.g., clearing, grading, or excavating) occur, or where construction materials or equipment storage or maintenance (e.g., fill piles, borrow areas, concrete truck washout, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located. See 40 CFR 122.26(b)(14)(x) and 40 CFR 122.26(b)(15).

Stormwater Discharges Associated with Industrial Activity – the discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under Part 122. For the categories of industries identified in this section, the term includes, but is not limited to, stormwater discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to stormwater. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with stormwater drained from the above described areas. Industrial facilities include those that are federally, state, or municipally owned or operated that meet the description of the facilities listed in 40 CFR 122.26(b)(14). The term also includes those facilities designated under the provisions of 40 CFR 122.26(a)(1)(v). See 40 CFR 122.26(b)(14).

Stormwater Team – the group of individuals responsible for oversight of the development and modifications of the SWPPP, and oversight of compliance with the permit requirements. The individuals on the "Stormwater Team" must be identified in the SWPPP.

Storm Event – a precipitation event that results in a measurable amount of precipitation.

Threatened Species – defined in the Endangered Species Act at 16 U.S.C. 1531 as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Tier 2 Waters – For antidegradation purposes, pursuant to 40 CFR 131.12(a)(2), Tier 2 waters are characterized as having water quality that exceeds the levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water.

Tier 2.5 Waters – For antidegradation purposes, Tier 2.5 waters are those waters designated by States or Tribes as requiring a level of protection equal to and above that given to Tier 2 waters, but less than that given Tier 3 waters. States have special requirements for these waters.

Tier 3 Waters – For antidegradation purposes, pursuant to 40 CFR 131.12(a)(3), Tier 3 waters are identified by states as having high quality waters constituting an Outstanding National Resource Water (ONRW), such as waters of National Parks and State Parks, wildlife refuges, and waters of exceptional recreational or ecological significance.

Total Maximum Daily Loads (TMDLs) – The sum of the individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background. If receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. (See section 303(d) of the Clean Water Act and 40 CFR 130.2 and 130.7).

Toxic Waste – see “Hazardous Materials.”

Uncontaminated Discharge – a discharge that does not cause or contribute to an exceedance of applicable water quality standards.

Upset – Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond your reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See 40 CFR 122.41 (n)(1).

Water Quality Impaired – See “Impaired Water.”

Water Quality Standards – defined in 40 CFR § 131.3, and are provisions of State or Federal law which consist of a designated use or uses for the waters of the United States, water quality criteria for such waters based upon such uses, and an antidegradation policy to protect high-quality waters. Water quality standards protect the public health or welfare, enhance the quality of water and serve the purposes of the Act.

Waters of the United States – See definition at 40 CFR § 122.2.

A.2. ABBREVIATIONS AND ACRONYMS

BAT – Best Available Technology Economically Achievable

BOD5 – Biochemical Oxygen Demand (5-day test)

BMP – Best Management Practice

BPJ – Best Professional Judgment

BPT – Best Practicable Control Technology Currently Available

CERCLA – Comprehensive Environmental Response, Compensation and Liability Act

CGP – Construction General Permit

CFR – Code of Federal Regulations

COD – Chemical Oxygen Demand

CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 *et seq*)

CWT – Centralized Waste Treatment

DMR – Discharge Monitoring Report

ELG – Effluent Limitations Guideline

EPA – U. S. Environmental Protection Agency

ESA – Endangered Species Act

FWS – U. S. Fish and Wildlife Service

LA – Load Allocations

MGD – Million Gallons per Day

MOS – Margin of Safety

MS4 – Municipal Separate Storm Sewer System

MSGP – Multi-Sector General Permit

NAICS – North American Industry Classification System

NEPA – National Environmental Policy Act

NET – NPDES eReporting Tool

NHPA – National Historic Preservation Act

NMFS – U. S. National Marine Fisheries Service

NOI – Notice of Intent

NOE – No Exposure

NOT – Notice of Termination

NPDES – National Pollutant Discharge Elimination System

NRC – National Response Center

NRHP – National Register of Historic Places

NSPS – New Source Performance Standard

NTU – Nephelometric Turbidity Unit

OMB – U. S. Office of Management and Budget

ORW – Outstanding Resource Water

OSM – U. S. Office of Surface Mining

POTW – Publicly Owned Treatment Works

RCRA – Resource Conservation and Recovery Act

RQ – Reportable Quantity

SARA – Superfund Amendments and Reauthorization Act

SDS – Safety Data Sheet

SHPO – State Historic Preservation Officer

SIC – Standard Industrial Classification

SMCRA – Surface Mining Control and Reclamation Act

SPCC – Spill Prevention, Control, and Countermeasures

SWPPP – Stormwater Pollution Prevention Plan

THPO – Tribal Historic Preservation Officer

TMDL – Total Maximum Daily Load

TSDF – Treatment, Storage, or Disposal Facility

TSS – Total Suspended Solids

USGS – United States Geological Survey

WLA – Wasteload Allocation

WQS – Water Quality Standard

Appendix B - Standard Permit Conditions.

Standard permit conditions in Appendix B are consistent with the general permit provisions required under 40 CFR 122.41.

B.1 Duty To Comply.

You must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

- A. You must comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards, even if the permit has not yet been modified to incorporate the requirement.
- B. Penalties for Violations of Permit Conditions: The Director will adjust the civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (61 FR 252, December 31, 1996, pp. 69359-69366, as corrected in 62 FR 54, March 20, 1997, pp.13514-13517) as mandated by the Debt Collection Improvement Act of 1996 for inflation on a periodic basis. This rule allows EPA's penalties to keep pace with inflation. The Agency is required to review its penalties at least once every 4 years thereafter and to adjust them as necessary for inflation according to a specified formula. The civil and administrative penalties following were adjusted for inflation starting in 1996.

1. Criminal Penalties.

- 1.1 *Negligent Violations.* The CWA provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to criminal penalties of not less than \$2,500 nor more than \$25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation or by imprisonment of not more than two years, or both.
- 1.2 *Knowing Violations.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both.
- 1.3 *Knowing Endangerment.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he or she is placing another person in imminent danger of death or serious bodily injury shall upon conviction be subject to a fine of not more than \$250,000 or by imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person

shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.

- 1.4. *False Statement.* The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.
2. *Civil Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$37,500 per day for each violation).
3. *Administrative Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows
 - 3.1. *Class I Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$16,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$37,500).
 - 3.2. *Class II Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$11,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$177,500).

B.2 Duty to Reapply.

If you wish to continue an activity regulated by this permit after the expiration date of this permit, you must apply for and obtain authorization as required by the new permit once EPA issues it.

B.3 Need to Halt or Reduce Activity Not a Defense.

It shall not be a defense for you in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

B.4 Duty to Mitigate.

You must take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

B.5 Proper Operation and Maintenance.

You must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by you to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by you only when the operation is necessary to achieve compliance with the conditions of this permit.

B.6 Permit Actions.

This permit may be modified, revoked and reissued, or terminated for cause. Your filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

B.7 Property Rights.

This permit does not convey any property rights of any sort, or any exclusive privileges.

B.8 Duty to Provide Information.

You must furnish to EPA or an authorized representative (including an authorized contractor acting as a representative of EPA), within a reasonable time, any information which EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. You must also furnish to EPA or an authorized representative upon request, copies of records required to be kept by this permit.

B.9 Inspection and Entry.

You must allow EPA or an authorized representative (including an authorized contractor acting as a representative of EPA), upon presentation of credentials and other documents as may be required by law, to:

- A. Enter upon your premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

- D. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

B.10 Monitoring and Records.

- A. Samples and measurements taken for the purpose of monitoring must be representative of the volume and nature of the monitored activity.
- B. You must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date the permit expires or the date the permittee's authorization is terminated. This period may be extended by request of EPA at any time.
- C. Records of monitoring information must include:
1. The date, exact place, and time of sampling or measurements;
 2. The individual(s) who performed the sampling or measurements;
 3. The date(s) analyses were performed
 4. The individual(s) who performed the analyses;
 5. The analytical techniques or methods used; and
 6. The results of such analyses.
- D. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit.
- E. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

B.11 Signatory Requirements.

- A. NOIs, NOTs, and NOEs must be signed as follows:
1. For a corporation: By a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment

- recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
2. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or
 3. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).
- B. Your SWPPP, including changes to your SWPPP to document any corrective actions taken as required by Part 3.1, and any other compliance documentation required under this permit, including the Annual Report, DMRs, inspection reports, and corrective action reports, must be signed by a person described in Appendix B, Subsection 11.A above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
1. The authorization is made in writing by a person described in Appendix B, Subsection 11.A;
 2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 3. The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.
- C. All other changes to your SWPPP, and other compliance documentation required under Part 5.4, must be signed and dated by the person preparing the change or documentation.
- D. Changes to Authorization. If an authorization under Part 1.3.1.3 is no longer accurate because the industrial facility has been purchased by a different entity, a new NOI satisfying the requirements of Part 1.3 must be submitted to EPA. See Table 1-2 in Part 1.3.1.1 of the permit. However, if the only change that is occurring is a change in contact information or a change in the facility's address, the operator need only make a modification to the existing NOI submitted for authorization.
- E. Any person signing documents in accordance with Appendix B, Subsections 11.A or 11.B above must include the following certification:
- "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the

information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- F. For persons signing documents electronically, in addition to meeting other applicable requirements in Appendix I, Subsection B.11, such signatures must be legally dependable with no less evidentiary value than their paper equivalent.
- G. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

B.12 Reporting Requirements.

- A. Planned changes. You must give notice to EPA as soon as possible, but no fewer than 30 days, of any planned physical alterations or additions to the permitted facility. Notice is required only when:
 - 1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - 2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).
- B. Anticipated noncompliance. You must give advance notice to EPA of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- C. Transfers. This permit is not transferable to any person except after notice to EPA. Where a facility wants to change the name of the permittee, the original permittee (the first owner or operators) must submit a Notice of Termination pursuant to Part 1.4. The new owner or operator must submit a Notice of Intent in accordance with Part 1.3.1 and Table 1-2. See also requirements in Appendix B, Subsections 11.B and 11.D.
- D. Monitoring reports. Monitoring results must be reported at the intervals specified elsewhere in this permit.
 - 1. Pursuant to Part 7.1, all monitoring data collected pursuant to Part 6 must be submitted to EPA using EPA's online DMR system (<http://www.epa.gov/netdmr/>).
 - 2. If you monitor any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or as specified in the permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the DMR.

3. Calculations for all limitations which require averaging of measurements must use an arithmetic mean. For averaging purposes, use a value of zero for any individual sample parameter, which is determined to be less than the method detection limit. For sample values that fall between the method detection level and the quantitation limit (i.e., a confirmed detection but below the level that can be reliably quantified), use a value halfway between zero and the quantitation limit.
- E. Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.
- F. Twenty-four hour reporting.
1. You must report any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time you become aware of the circumstances. A written submission must also be provided within five days of the time you become aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
 2. The following shall be included as information which must be reported within 24 hours under this paragraph.
 - a. Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR 122.41(m)(3)(ii))
 - b. Any upset which exceeds any effluent limitation in the permit
 - c. Violation of a maximum daily discharge limit for any numeric effluent limitation. (See 40 CFR 122.44(g).)
 3. EPA may waive the written report on a case-by-case basis for reports under Appendix B, Subsection 12.F.2 if the oral report has been received within 24 hours.
- G. Other noncompliance. You must report all instances of noncompliance not reported under Appendix B, Subsections 12.D, 12.E, and 12.F, at the time monitoring reports are submitted. The reports must contain the information listed in Appendix B, Subsection 12.F.
- H. Other information. Where you become aware that you failed to submit any relevant facts in your NOI, or submitted incorrect information in your NOI or in any report to the Permitting Authority, you must promptly submit such facts or information.

B.13 Bypass.

- A. Definitions.
1. Bypass means the intentional diversion of waste streams from any portion of a treatment facility See 40 CFR 122.41(m)(1)(i).

2. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. See 40 CFR 122.41(m)(1)(ii).
- B. Bypass not exceeding limitations. You may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Appendix B, Subsections 13.C and 13.D. See 40 CFR 122.41(m)(2).
- C. Notice.
1. Anticipated bypass. If you know in advance of the need for a bypass, you must submit prior notice, if possible at least ten days before the date of the bypass. See 40 CFR 122.41(m)(3)(i).
 2. Unanticipated bypass. You must submit notice of an unanticipated bypass as required in Appendix B, Subsection 12.F (24-hour notice). See 40 CFR 122.41(m)(3)(ii).
- D. Prohibition of bypass. See 40 CFR 122.41(m)(4).
1. Bypass is prohibited, and EPA may take enforcement action against you for bypass, unless:
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - c. You submitted notices as required under Appendix B, Subsection 13.C.
 2. EPA may approve an anticipated bypass, after considering its adverse effects, if EPA determines that it will meet the three conditions listed above in Appendix B, Subsection 13.D.1.

B.14 Upset.

- A. Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond your reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See 40 CFR 122.41(n)(1).
- B. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements

of Appendix B, Subsection 14.C are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. See 40 CFR 122.41(n)(2).

- C. Conditions necessary for a demonstration of upset. See 40 CFR 122.41(n)(3). A permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
1. An upset occurred and that you can identify the cause(s) of the upset;
 2. The permitted facility was at the time being properly operated; and
 3. You submitted notice of the upset as required in Appendix B, Subsection 12.F.2.b (24 hour notice).
 4. You complied with any remedial measures required under Appendix B, Subsection 4.
- D. Burden of proof. In any enforcement proceeding, you, as the one seeking to establish the occurrence of an upset, have the burden of proof. See 40 CFR 122.41(n)(4).

B.15 Retention of Records.

Copies of the SWPPP and all documentation required by this permit, including records of all data used to complete the NOI to be covered by this permit, must be retained for at least three years from the date that permit coverage expires or is terminated. This period may be extended by request of EPA at any time.

B.16 Reopener Clause.

- A. Procedures for modification or revocation. Permit modification or revocation will be conducted according to 40 CFR §122.62, §122.63, §122.64 and §124.5.
- B. Water quality protection. If there is evidence indicating that the stormwater discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, you may be required to obtain an individual permit in accordance with Part 1.3.3 of this permit, or the permit may be modified to include different limitations and/or requirements.
- C. Timing of permit modification. EPA may elect to modify the permit prior to its expiration (rather than waiting for the new permit cycle) to comply with any new statutory or regulatory requirements, such as for effluent limitation guidelines that may be promulgated in the course of the current permit cycle.

Appendix C - Permit Areas Eligible for Coverage.

EPA can only provide permit coverage in these areas and for classes of discharges that are outside the scope of a state's NPDES program authorization.

C.1 EPA Region 1: Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 1:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
CTR05I000	Indian Country within the State of Connecticut
MAR050000	Commonwealth of Massachusetts, except Indian country
MAR05I000	Indian country within the Commonwealth of Massachusetts
NHR050000	State of New Hampshire
RIR05I000	Indian country within the State of Rhode Island
VTR05F000	Areas in the State of Vermont subject to industrial activity by a Federal Operator

For stormwater discharges in EPA Region 1 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.2 EPA Region 2: New Jersey, New York, Puerto Rico, Virgin Islands.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 2:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
PRR050000	Commonwealth of Puerto Rico

For stormwater discharges in EPA Region 2 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.3 EPA Region 3: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 3:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
DCR050000	District of Columbia
DER05F000	Areas in the State of Delaware subject to industrial activity by a Federal Operator

For stormwater discharges in EPA Region 3 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.4 EPA Region 4: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee (Coverage not available under this permit).

For stormwater discharges in EPA Region 4, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.5 EPA Region 5: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 5:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
MIR05I000	Indian country within the State of Michigan
MNR05I000	Indian country within the State of Minnesota
WIR05I000	Indian country within the State of Wisconsin (except for facilities on Sokaogon Chippewa Community lands and Bad River Band of Lake Superior Tribe of Chippewa Indians lands, see EPA Region 5 for an individual permit application).

For stormwater discharges in EPA Region 5 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.6 EPA Region 6: Arkansas, Louisiana, Oklahoma, Texas, and New Mexico (except see Region 9 for Navajo lands, and see Region 8 for Ute Mountain Reservation lands).

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 6:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
LAR05I000	Indian country within the State of Louisiana
NMR050000	The State of New Mexico, except Indian country
NMR05I000	Indian country within the State of New Mexico, except Ute Mountain Reservation lands that are covered under Colorado permit COR05I000 and Navajo Reservation lands that are covered under Arizona permit AZR05I000
OKR05I000	Indian country within the State of Oklahoma
OKR05F000	Facilities in the State of Oklahoma not under the jurisdiction of the Oklahoma Department of Environmental Quality or the Oklahoma Department of Agriculture, Food and Forestry, except those on Indian Country. EPA jurisdiction facilities include SIC Codes 1311, 1381, 1382, 1389, and 5171.

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
TXR05F000	Facilities in the State of Texas not under the jurisdiction of the Texas Commission on Environmental Quality, except those on Indian Country. EPA-jurisdiction facilities include SIC Codes 1311, 1321, 1381, 1382, 1389, and 5171 (other than oil field service company "home base" facilities).
TXR05I000	Indian country within the State of Texas

For stormwater discharges in EPA Region 6 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.7 EPA Region 7: Iowa, Kansas, Missouri, Nebraska (except see Region 8 for Pine Ridge Reservation Lands).

This permit offer NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 7:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
IAR05I000	Indian country within the State of Iowa
KSR05I000	Indian country within the State of Kansas
NER05I000	Indian country within the State of Nebraska, except Pine Ridge Reservation lands (see Region 8)

For stormwater discharges in EPA Region 7 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.8 EPA Region 8: Colorado, Montana, North Dakota, South Dakota, Wyoming, Utah (except see Region 9 for Goshute Reservation and Navajo Reservation Lands), the Ute Mountain Reservation in NM, and the Pine Ridge Reservation in NE.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 8:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
COR05F000	Areas in the State of Colorado, except those located on Indian country, subject to industrial activity by a Federal Operator
COR05I000	Indian country within the State of Colorado, as well as the portion of the Ute Mountain Reservation located in New Mexico
MTR05I000	Indian country within the State of Montana
NDR05I000	Indian country within the State of North Dakota, as well as that portion of the Standing Rock Reservation located in South Dakota (except for the portion of the lands within the former boundaries of the Lake Traverse Reservation, which is covered under South Dakota permit SDR05I000 listed below)

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
SDR05I000	Indian country within the State of South Dakota, as well as the portion of the Pine Ridge Reservation located in Nebraska and the portion of the lands within the former boundaries of the Lake Traverse Reservation located in North Dakota (except for the Standing Rock Reservation, which is covered under North Dakota permit NDR05I000 listed above)
UTR05I000	Indian country within the State of Utah, except Goshute and Navajo Reservation lands (see Region 9)
WYR05I000	Indian country within the State of Wyoming

For stormwater discharges in EPA Region 8 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.9 EPA Region 9: California, Hawaii, Nevada, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Confederated Tribes of the Goshute Reservation in Utah and Nevada, Indian Country within the State of Arizona including the Navajo Reservation in Utah and New Mexico and Arizona, the Duck Valley Reservation in Idaho, and the Fort McDermitt Reservation in Oregon.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 9:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
ASR050000	American Samoa
AZR05I000	Indian country within the State of Arizona, including Navajo Reservation lands in New Mexico and Utah
CAR05I000	Indian country within the State of California
GUR050000	Island of Guam
JAR050000	Johnston Atoll
MWR050000	Midway Island and Wake Island
MPR050000	Commonwealth of the Northern Mariana Islands
NVR05I000	Indian country within the State of Nevada, including the Duck Valley Reservation in Idaho, the Fort McDermitt Reservation in Oregon and the Confederated Tribes of the Goshute Reservation in Utah

For stormwater discharges in EPA Region 9 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.10 Region 10: Alaska, Idaho (except see Region 9 for Duck Valley Reservation lands), Oregon (except see Region 9 for Fort McDermitt Reservation), Washington.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 10:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
AKR05F000	Denali National Park and Preserve
AKR05I000	Indian country lands as defined in 18 U.S.C. 1151 within the State of Alaska
IDR050000	The State of Idaho, except Indian country lands
IDR05I000	Indian country lands within the State of Idaho, except Duck Valley Reservation lands, which are covered under Nevada permit NVR05I000
ORR05I000	Indian country lands within the State of Oregon, except Fort McDermitt Reservation lands, which are covered under Nevada permit NVR05I000
WAR05I000	Indian country lands within the State of Washington
WAR05F000	Areas in the State of Washington, except those located on Indian country lands, subject to industrial activity by a Federal Operator

For stormwater discharges in EPA Region 10 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

Appendix D - Facilities and Activities Covered

Your permit eligibility is limited to discharges from facilities in the “sectors” of industrial activity summarized in Table D-1. These sector descriptions are based on Standard Industrial Classification (SIC) Codes and Industrial Activity Codes. References to “sectors” in this permit (e.g., sector-specific monitoring requirements) refer to these groupings.

Table D-1. Sectors of Industrial Activity Covered by This Permit		
Subsector (May be subject to more than one sector/subsector)	SIC Code or Activity Code¹	Activity Represented
SECTOR A: TIMBER PRODUCTS		
A1	2421	General Sawmills and Planing Mills
A2	2491	Wood Preserving
A3	2411	Log Storage and Handling
A4	2426	Hardwood Dimension and Flooring Mills
	2429	Special Product Sawmills, Not Elsewhere Classified
	2431-2439 (except 2434)	Millwork, Veneer, Plywood, and Structural Wood (see Sector W)
	2448	Wood Pallets and Skids
	2449	Wood Containers, Not Elsewhere Classified
	2451, 2452	Wood Buildings and Mobile Homes
	2493	Reconstituted Wood Products
	2499	Wood Products, Not Elsewhere Classified
	2441	Nailed and Lock Corner Wood Boxes and Shook
SECTOR B: PAPER AND ALLIED PRODUCTS		
B1	2631	Paperboard Mills
B2	2611	Pulp Mills
	2621	Paper Mills
	2652-2657	Paperboard Containers and Boxes
	2671-2679	Converted Paper and Paperboard Products, Except Containers and Boxes
SECTOR C: CHEMICALS AND ALLIED PRODUCTS		
C1	2873-2879	Agricultural Chemicals
C2	2812-2819	Industrial Inorganic Chemicals
C3	2841-2844	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations
C4	2821-2824	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass

Table D-1. Sectors of Industrial Activity Covered by This Permit

Subsector (May be subject to more than one sector/subsector)	SIC Code or Activity Code¹	Activity Represented
C5	2833-2836	Medicinal Chemicals and Botanical Products; Pharmaceutical Preparations; in vitro and in vivo Diagnostic Substances; and Biological Products, Except Diagnostic Substances
	2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products
	2861-2869	Industrial Organic Chemicals
	2891-2899	Miscellaneous Chemical Products
	3952 (limited to list of inks and paints)	Inks and Paints, Including China Painting Enamels, India Ink, Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints and Artist's Watercolors
	2911	Petroleum Refining
SECTOR D: ASPHALT PAVING AND ROOFING MATERIALS AND LUBRICANTS		
D1	2951, 2952	Asphalt Paving and Roofing Materials
D2	2992, 2999	Miscellaneous Products of Petroleum and Coal
SECTOR E: GLASS, CLAY, CEMENT, CONCRETE, AND GYPSUM PRODUCTS		
E1	3251-3259	Structural Clay Products
	3261-3269	Pottery and Related Products
E2	3271-3275	Concrete, Gypsum, and Plaster Products
E3	3211	Flat Glass
	3221, 3229	Glass and Glassware, Pressed or Blown
	3231	Glass Products Made of Purchased Glass
	3241	Hydraulic Cement
	3281	Cut Stone and Stone Products
	3291-3299	Abrasive, Asbestos, and Miscellaneous Nonmetallic Mineral Products
SECTOR F: PRIMARY METALS		
F1	3312-3317	Steel Works, Blast Furnaces, and Rolling and Finishing Mills
F2	3321-3325	Iron and Steel Foundries
F3	3351-3357	Rolling, Drawing, and Extruding of Nonferrous Metals
F4	3363-3369	Nonferrous Foundries (Castings)
F5	3331-3339	Primary Smelting and Refining of Nonferrous Metals
	3341	Secondary Smelting and Refining of Nonferrous Metals
	3398, 3399	Miscellaneous Primary Metal Products

Table D-1. Sectors of Industrial Activity Covered by This Permit

Subsector (May be subject to more than one sector/subsector)	SIC Code or Activity Code¹	Activity Represented
SECTOR G: METAL MINING (ORE MINING AND DRESSING)		
G1	1021	Copper Ore and Mining Dressing Facilities
G2	1011	Iron Ores
	1021	Copper Ores
	1031	Lead and Zinc Ores
	1041, 1044	Gold and Silver Ores
	1061	Ferroalloy Ores, Except Vanadium
	1081	Metal Mining Services
	1094, 1099	Miscellaneous Metal Ores
SECTOR H: COAL MINES AND COAL MINING-RELATED FACILITIES		
H1	1221-1241	Coal Mines and Coal Mining-Related Facilities
SECTOR I: OIL AND GAS EXTRACTION		
I1	1311	Crude Petroleum and Natural Gas
	1321	Natural Gas Liquids
	1381-1389	Oil and Gas Field Services
SECTOR J: MINERAL MINING AND DRESSING		
J1	1442	Construction Sand and Gravel
	1446	Industrial Sand
J2	1411	Dimension Stone
	1422-1429	Crushed and Broken Stone, Including Rip Rap
	1481	Nonmetallic Minerals Services, Except Fuels
	1499	Miscellaneous Nonmetallic Minerals, Except Fuels
J3	1455, 1459	Clay, Ceramic, and Refractory Materials
	1474-1479	Chemical and Fertilizer Mineral Mining
SECTOR K: HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES		
K1	HZ	Hazardous Waste Treatment, Storage, or Disposal Facilities, including those that are operating under interim status or a permit under subtitle C of RCRA
SECTOR L: LANDFILLS, LAND APPLICATION SITES, AND OPEN DUMPS		
L1	LF	All Landfill, Land Application Sites and Open Dumps
L2	LF	All Landfill, Land Application Sites and Open Dumps, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.60
SECTOR M: AUTOMOBILE SALVAGE YARDS		
M1	5015	Automobile Salvage Yards

Table D-1. Sectors of Industrial Activity Covered by This Permit

Subsector (May be subject to more than one sector/subsector)	SIC Code or Activity Code ¹	Activity Represented
SECTOR N: SCRAP RECYCLING FACILITIES		
N1	5093	Scrap Recycling and Waste Recycling Facilities except Source-Separated Recycling
N2	5093	Source-separated Recycling Facility
SECTOR O: STEAM ELECTRIC GENERATING FACILITIES		
O1	SE	Steam Electric Generating Facilities, including coal handling sites
SECTOR P: LAND TRANSPORTATION AND WAREHOUSING		
P1	4011, 4013	Railroad Transportation
	4111-4173	Local and Highway Passenger Transportation
	4212-4231	Motor Freight Transportation and Warehousing
	4311	United States Postal Service
	5171	Petroleum Bulk Stations and Terminals
SECTOR Q: WATER TRANSPORTATION		
Q1	4412-4499	Water Transportation Facilities
SECTOR R: SHIP AND BOAT BUILDING AND REPAIRING YARDS		
R1	3731, 3732	Ship and Boat Building or Repairing Yards
SECTOR S: AIR TRANSPORTATION FACILITIES		
S1	4512-4581	Air Transportation Facilities
SECTOR T: TREATMENT WORKS		
T1	TW	Treatment Works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR Part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the CWA
SECTOR U: FOOD AND KINDRED PRODUCTS		
U1	2041-2048	Grain Mill Products
U2	2074-2079	Fats and Oils Products
U3	2011-2015	Meat Products
	2021-2026	Dairy Products

Table D-1. Sectors of Industrial Activity Covered by This Permit

Subsector (May be subject to more than one sector/subsector)	SIC Code or Activity Code¹	Activity Represented
	2032-2038	Canned, Frozen, and Preserved Fruits, Vegetables, and Food Specialties
	2051-2053	Bakery Products
	2061-2068	Sugar and Confectionery Products
	2082-2087	Beverages
	2091-2099	Miscellaneous Food Preparations and Kindred Products
	2111-2141	Tobacco Products
SECTOR V: TEXTILE MILLS, APPAREL, AND OTHER FABRIC PRODUCT MANUFACTURING; LEATHER AND LEATHER PRODUCTS		
V1	2211-2299	Textile Mill Products
	2311-2399	Apparel and Other Finished Products Made from Fabrics and Similar Materials
	3131-3199	Leather and Leather Products (note: see Sector Z1 for Leather Tanning and Finishing)
SECTOR W: FURNITURE AND FIXTURES		
W1	2434	Wood Kitchen Cabinets
	2511-2599	Furniture and Fixtures
SECTOR X: PRINTING AND PUBLISHING		
X1	2711-2796	Printing, Publishing, and Allied Industries
SECTOR Y: RUBBER, MISCELLANEOUS PLASTIC PRODUCTS, AND MISCELLANEOUS MANUFACTURING INDUSTRIES		
Y1	3011	Tires and Inner Tubes
	3021	Rubber and Plastics Footwear
	3052, 3053	Gaskets, Packing and Sealing Devices, and Rubber and Plastic Hoses and Belting
	3061, 3069	Fabricated Rubber Products, Not Elsewhere Classified
Y2	3081-3089	Miscellaneous Plastics Products
	3931	Musical Instruments
	3942-3949	Dolls, Toys, Games, and Sporting and Athletic Goods
	3951-3955 (except 3952 – see Sector C)	Pens, Pencils, and Other Artists' Materials
	3961, 3965	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal
	3991-3999	Miscellaneous Manufacturing Industries
SECTOR Z: LEATHER TANNING AND FINISHING		
Z1	3111	Leather Tanning and Finishing

Table D-1. Sectors of Industrial Activity Covered by This Permit		
Subsector (May be subject to more than one sector/subsector)	SIC Code or Activity Code¹	Activity Represented
SECTOR AA: FABRICATED METAL PRODUCTS		
AA1	3411-3499 (except 3479)	Fabricated Metal Products, Except Machinery and Transportation Equipment, and Coating, Engraving, and Allied Services.
	3911-3915	Jewelry, Silverware, and Plated Ware
AA2	3479	Fabricated Metal Coating and Engraving
SECTOR AB: TRANSPORTATION EQUIPMENT, INDUSTRIAL OR COMMERCIAL MACHINERY		
AB1	3511-3599 (except 3571-3579)	Industrial and Commercial Machinery, Except Computer and Office Equipment (see Sector AC)
	3711-3799 (except 3731, 3732)	Transportation Equipment Except Ship and Boat Building and Repairing (see Sector R)
SECTOR AC: ELECTRONIC, ELECTRICAL, PHOTOGRAPHIC, AND OPTICAL GOODS		
AC1	3571-3579	Computer and Office Equipment
	3812-3873	Measuring, Analyzing, and Controlling Instruments; Photographic and Optical Goods, Watches, and Clocks
	3612-3699	Electronic and Electrical Equipment and Components, Except Computer Equipment
SECTOR AD: NON-CLASSIFIED FACILITIES		
AD1	Other stormwater discharges designated by the Director as needing a permit (see 40 CFR 122.26(a)(9)(i)(C) & (D)) or any facility discharging stormwater associated with industrial activity not described by any of Sectors A-AC. NOTE: Facilities may not elect to be covered under Sector AD. Only the Director may assign a facility to Sector AD.	

¹ A complete list of SIC Codes (and conversions from the newer North American Industry Classification System" (NAICS)) can be obtained from the Internet at www.census.gov/epcd/www/naics.html or in paper form from various locations in the document titled *Handbook of Standard Industrial Classifications*, Office of Management and Budget, 1987.

Appendix E - Procedures Relating to Endangered Species Protection

E.1 Assessing the Effects of Your Discharges and Discharge-Related Activities

You must follow the procedures in this appendix to determine which of the eligibility criteria in Part 1.1.4.5 (i.e., criterion A - E), if any, you qualify under, by assessing the potential effects of applicable stormwater discharges, discharge-related activities, and allowable non-stormwater discharges on listed threatened and endangered species and their designated critical habitat. In accordance with Part 5.2.6.1 of this permit, you must keep any documentation that supports your eligibility determination, including the completed [Criterion Selection Worksheet](#) in Part E.4 of this appendix, with your Stormwater Pollution Prevention Plan (SWPPP). You must complete your eligibility determination prior to submitting your Notice of Intent (NOI) for coverage under the MSGP, and must provide all information as required on your NOI form that supports the Part 1.1.4.5 eligibility criterion you qualify under. **Note that if you have determined that you may be eligible under criterion C, you must submit a completed [Criterion C Eligibility Form](#) to EPA a minimum of 30 days prior to submitting your NOI for permit coverage.**

When evaluating the potential effects of your activities, you must consider effects to listed species or critical habitats within the "action area" of your industrial activity. Action area is defined in Appendix A of the MSGP as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. This includes areas beyond the footprint of the facility that are likely to be affected by stormwater discharges, discharge-related activities, and allowable non-stormwater discharges. For example, discharges of pollutants into downstream areas can increase the "action area" beyond the footprint of the facility.

E.2 Eligibility Criterion

As required by Part 1.1.4.5, you must meet one or more of the following five criteria (A - E) to be eligible for coverage under the permit:

- Criterion A.** No federally listed threatened or endangered species or their designated critical habitat(s) are likely to occur in the "action area" as defined in Appendix A. To certify your eligibility under this criterion, you must use the *Criterion Selection Worksheet* in Part E.4 of Appendix E. You must also provide a description of the basis for the criterion you selected on your NOI form and provide documentation supporting your eligibility determination in your SWPPP.
- Criterion B.** Your industrial activity's discharges and discharge-related activities were already addressed in another operator's valid certification of eligibility for your action area under this permit and there is no reason to believe that federally listed species or designated critical habitat not considered in the prior certification may be present or located in the "action area" (e.g., due to a new species listing or critical habitat designation). To certify your eligibility under this criterion, you must use the *Criterion Selection Worksheet* in Part E.4 of Appendix E. There must be no lapse of NPDES permit coverage in the other operator's certification. You must also comply with any additional measures that formed the basis of the other operator's valid certification of eligibility to ensure that your discharges and discharge-related activities are protective of listed species and/or critical habitat. You must include in your NOI the NPDES ID (i.e., permit tracking number) assigned to the other operator's authorization under this permit, and a description of the basis for the criterion selected on your NOI form, including the eligibility criterion selected by the

other operator's certification. You must also provide any documentation in your SWPPP that supports the other operator's eligibility determination, including any additional measures that formed the basis of the other operator's eligibility determination.

Criterion C. Federally listed threatened or endangered species or their designated critical habitat(s) are likely to occur in or near your facility's "action area," and your industrial activity's discharges and discharge-related activities are not likely to adversely affect listed threatened or endangered species or critical habitat. To certify your eligibility under this criterion, you must use the *Criterion Selection Worksheet* in Part E.4 of Appendix E, including completion of the *Criterion C Eligibility Form*, which you must submit to EPA at least 30 days prior to filing your NOI for permit coverage. After evaluation of your *Criterion C Eligibility Form*, EPA may require additional measures that you must implement to avoid or eliminate likely adverse effects on listed species and critical habitat from discharges and discharge-related activities. You may submit your NOI for permit coverage 30 days after submitting to EPA your completed *Criterion C Eligibility Form*. You must also provide a description of the basis for the criterion you selected on your NOI form and provide documentation supporting your eligibility determination in your SWPPP.

Criterion D. Consultation between a Federal Agency and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the Endangered Species Act (ESA) has been concluded. Consultations can be either formal or informal, and would have occurred only as a result of a separate federal action (e.g., during application for an individual wastewater discharge permit or the issuance of a wetlands dredge and fill permit), and consultation must have addressed the effects of the industrial activity's discharges and discharge-related activities on all federally listed threatened or endangered species and federally designated critical habitat. The result of this consultation must be one of the following:

- i. A biological opinion that concludes that the action in question (taking into account the effects of your facility's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat;
- ii. A biological opinion that concludes that the action is likely to jeopardize listed species or to result in the destruction or adverse modification of critical habitat, and any recommended reasonable and prudent alternatives or reasonable and prudent measures are being implemented; or
- iii. Written concurrence from the applicable Service(s) with a finding that your facility's discharges and discharge-related activities are not likely to adversely affect listed species or critical habitat.

To certify your eligibility under this criterion, you must use the *Criterion Selection Worksheet* in Part E.4 of Appendix E. You must verify that the consultation does not warrant reinitiation under 50 CFR §402.16. If reinitiation of consultation is required, in order to be eligible under this criterion you must ensure consultation is reinitiated and the result of the consultation must be consistent with (i), (ii), or (iii) above.

If eligible, you must also provide supporting documentation for your determination in your NOI and SWPPP, including the Biological Opinion (or PCTS tracking number) or concurrence letter.

Criterion E. Your industrial activities are the subject of a permit under section 10 of the ESA, and this authorization addresses the effects of your facility's discharges and discharge-related activities on federally listed species and designated critical habitat. To certify your eligibility under this criterion, you must use the *Criterion Selection Worksheet* in Part E.4 of Appendix E. You must also provide supporting documentation for your determination in your NOI and SWPPP, including a copy of the permit from the Services.

E.3 Eligibility Compliance

You must comply with any measures that formed the basis of your eligibility determination in Part 1.1.4.5 for the duration of your coverage under the MSGP in order to maintain your eligibility for coverage under the permit. These measures become permit requirements per Part 2.3. Documentation of these measures must be kept as part of your SWPPP (see Part 5.2.6.1).

E.4 Criterion Selection Worksheet

Instructions:

You must follow the step-by-step instructions in this worksheet in order to determine your eligibility under the Part 1.1.4.5 criteria. Alternatively, if you prefer to use a Biological Evaluation (or its equivalent) in making a determination of your eligibility, you should ensure all of the information requested below for the criterion you are selecting is fully addressed in such a document. You must attach this completed document or Biological Evaluation (or equivalent) to your SWPPP to support your Part 1.1.4.5 eligibility determination.

You may need the following information in order to determine your eligibility:

- 1) Your facility's draft Stormwater Pollution Prevention Plan (SWPPP), including information on receiving waters.
- 2) Any additional site-specific information related to your facility's discharges and discharge-related activities.
- 3) The list(s) of endangered and threatened species and any designated critical habitat in your action area, as acquired from the Fish and Wildlife Service and/or the National Marine Fisheries Services. Directions on how to acquire species lists is described in a subsequent section below.

Note that much of the information needed to complete this worksheet is also needed in order to prepare your NOI for permit coverage, and is also information that you must develop as part of your SWPPP. You may copy and paste any information that is already required and completed in your SWPPP into this worksheet. (You may also decide to make minor changes or additions to your SWPPP while filling out the worksheet for clarification purposes or to address any concerns that are identified below.)

STEP 1: DETERMINE IF THE ELIGIBILITY REQUIREMENTS OF CRITERION B, D, OR E CAN BE MET.

- A. You should first determine whether you are eligible under [criterion B](#) (because another operator has accounted for your action area in their valid certification of eligibility under the 2015 MSGP), [criterion D](#) (because of a previously completed ESA section 7 consultation), or [criterion E](#) (because of a previously issued ESA section 10 permit).

- B. If your facility is likely to be eligible under criterion B, D or E, you may skip ahead to the applicable criterion's requirements to determine if you are eligible. If after completing the relevant section you find that your facility does not in fact meet criteria B, D, or E (e.g., due to difference in action area described, lack of analysis of appropriate effects, new listings or designation of critical habitat), proceed to [Step 2](#) below.
- C. If your facility is not likely to be eligible under criterion B, D or E, you may proceed directly to [Step 2](#).

Criterion B Eligibility Requirements

If your industrial activities were already addressed in another operator's valid certification of eligibility under the current 2015 MSGP, you may be eligible for coverage under criterion B. In order to be eligible for coverage under criterion B, you must confirm that all the following are true:

- ☐ You have confirmed that the other operator's certification of eligibility accounted for your action area and that the eligibility determination was valid.
- ☐ There has been no lapse of NPDES permit coverage in the other operator's certification.
- ☐ You will comply with all measures that formed the basis of the other operator's valid certification of eligibility. List any measures here (or enter "N/A" if none exist):

- **If all of the above are true, you may select criterion B on your NOI.** You must include in your NOI the NPDES ID assigned to the other operator's authorization under this permit, and a description of the basis for the criterion selected on your NOI form, including the eligibility criterion selected by the other operator's certification. You must include this completed worksheet in your SWPPP.
- **If any of the above are not true, you may not select criterion B and must proceed to [Step 2](#).** For example, if there are any listed species in your action area that were not addressed in the other operator's certification, you are not eligible under criterion B.

Criterion D Eligibility Requirements

If consultation under section 7 of the ESA has been concluded, you may be eligible for coverage under criterion D. In order to be eligible for coverage under criterion D, you must confirm that all the following are true:

- ☐ A consultation between a federal agency and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the ESA has been concluded. Consultations can be either formal or informal, and would have occurred only as a result of a separate federal action (e.g., during application for an individual wastewater discharge permit or the issuance of a wetlands dredge and fill permit), and the consultation must have addressed the effects of your industrial activity's discharges and discharge-related activities on all federally listed threatened or endangered species and all designated critical habitat in your action area. The result of this consultation must be either:

- i. A biological opinion that concludes that the action in question (taking into account the effects of your facility's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat. The biological opinion must have included the effects of your facility's discharges^a and discharge-related activities on all the listed species and designated critical habitat in your action area;
- ii. A biological opinion that concludes that the action is likely to jeopardize listed species or to result in the destruction or adverse modification of critical habitat, and any recommended reasonable and prudent alternatives or reasonable and prudent measures are being implemented; or
- iii. Written concurrence (e.g., letter of concurrence) from the applicable Service(s) with a finding that concludes that your facility's discharges and discharge-related activities are not likely to adversely affect listed species or designated critical habitat. The concurrence letter must have included the effects of your facility's discharges and discharge-related activities on all the listed species and designated critical habitat on your species list(s) acquired from the Service(s) as part of this worksheet.

☐ The consultation does not warrant reinitiation under 50 CFR §402.16; or, if reinitiation of consultation is required (e.g., due to a new species listing or critical habitat designation; new information), you have reinitiated the consultation and the result of the consultation is consistent with the statements above. Attach a copy of any reinitiation documentation from the Services or other consulting federal agency.

- **If all of the above are true, you may select criterion D on your NOI.** You must also provide a description of the basis for the criterion selected on your NOI form and you must include this completed worksheet in your SWPPP. In both your SWPPP and NOI you must also provide the Biological Opinion (or PCTS tracking number) or concurrence letter and any other documentation supporting your eligibility determination.
- **If any of the above are not true, you may not select criterion D and must proceed to [Step 2](#).** For example, if the biological opinion or written concurrence did not include the effects of the discharge or discharge-related activities as described above (e.g., the previous consultation covered some but not all of the species or critical habitat in your action area as shown on your species list), or if the consultation is no longer valid (e.g., due to new species listings), you are not eligible under criterion D.

Criterion E Eligibility Requirements

If your industrial activities are the subject of a permit under section 10 of the ESA, and this authorization addresses the effects of your facility's discharges and discharge-related activities on federally listed species and designated critical habitat in your action area, you may be eligible for coverage under criterion E. In order to be eligible for coverage under criterion E, you must confirm that the following is true:

☐ A permit has been issued under section 10 of the ESA. The permit authorization specifically addresses the effects of your facility's discharges and discharge-related activities (if applicable) on all federally-listed species and designated critical habitat in your action area.

^a Effects of discharge includes, but is not limited to, the analysis of the hydrological, chemical, and biological effects of the discharge on listed species, their prey, and their habitat, as well as critical habitat, where designated. For example, the effects analysis would have evaluated whether the various pollutants in the discharge (e.g., TSS, metals) would adversely affect listed species through exposure to the pollutants, or to their prey or habitat. Effects that look only at short-term effects unrelated to the stormwater discharge effects to listed species are not sufficient for these purposes.

- **If the above is true, you may select criterion E on your NOI.** You must also provide a description of the basis for the criterion selected on your NOI form and must include this completed worksheet in your SWPPP. In both your SWPPP and your NOI you must provide a copy of the section 10 permit issued by the Services.
- **If the above is not true, you may not select criterion E and must proceed to [Step 2](#).** For example, if a permit has been issued under section 10 of the ESA, but the permit authorization did not address the effects of your facility's discharges and/or discharge-related activities on all federally-listed species and designated critical habitat in your action area, you are not eligible under criterion E, but you should attach a copy of the permit to the SWPPP for reference.

STEP 2: DETERMINE THE EXTENT OF YOUR ACTION AREA

You must determine whether species listed as either threatened or endangered, or their critical habitat(s) (see definitions of these terms in Appendix A), are located in your facility's action area (i.e., all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action, including areas beyond the footprint of the facility that are likely to be affected by stormwater discharges, discharge-related activities, and allowable non-stormwater discharges). Consider the following in determining the action area for your facility:

- Discharges of pollutants into downstream areas can expand the action area well beyond the footprint of your facility and the discharge point(s). Take into account the controls you will be implementing to minimize pollutants and the receiving waterbody characteristics (e.g., perennial, intermittent, ephemeral) in determining the extent of physical, chemical, and/or biotic effects of the discharges. All receiving waterbodies that could receive pollutants from your facility must be included in your action area.
- Discharge-related activities must also be accounted for in determining your action area. Discharge-related activities are any activities that cause, contribute to, or result in stormwater and allowable non-stormwater point source discharges, and measures such as the siting, construction, and operation of stormwater controls to control, reduce, or prevent pollutants from being discharged. For example, any new or modified stormwater controls that will have noise or other similar effects, and any disturbances associated with construction of controls, are part of your action area.

If you have any questions about determining the extent of your action area, you may contact EPA or the Services for assistance.

You must include a map **and a written description of** the action area of your facility in [Attachment 1](#) of this appendix. You may choose to include the map that is generated from the FWS' on-line mapping tool IPaC (the *Information, Planning, and Consultation System*) located at <http://ecos.fws.gov/ipac/> (see [Step 3](#) for information about using this tool).

You must proceed to [Step 3](#) below.

STEP 3: DETERMINE IF LISTED THREATENED OR ENDANGERED SPECIES AND/OR CRITICAL HABITAT ARE PRESENT IN YOUR ACTION AREA.

You must determine whether species listed as either threatened or endangered under the Endangered Species Act (ESA), and/or their designated critical habitat(s)^b, are located in your facility's action area. Federally listed species and designated critical habitat are under the purview of the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS) (together, "Services"), and in many cases, species and critical habitat lists will need to be acquired from both Services.

^b See definitions of these terms in Appendix A of the MSGP.

- For NMFS species and critical habitat information, use the following webpages, which provide up-to-date information on listed species (<http://www.nmfs.noaa.gov/pr/species/esa/>) and critical habitat (<http://www.nmfs.noaa.gov/pr/species/criticalhabitat.htm>). To determine the field office that corresponds to your facility, go to <http://www.nmfs.noaa.gov/> (under the left tab for "Regions"). For NMFS species in the Greater Atlantic Region, go to <http://www.greateratlantic.fisheries.noaa.gov/protected/section7/guidance/maps/index.html>.
- For FWS species information, use the on-line mapping tool IPaC (the *Information, Planning, and Consultation System*) located at <http://ecos.fws.gov/ipac/>, and follow these steps:
 - Select *Get Started*.
 - Select *Enter Project Location*
 - Use an address, city name or other location to zoom into your project area
 - Use the zoom feature to see the entire extent of your action area on the screen.
 - Use one of the mapping features (e.g., Polygon or line feature) to draw your action.
 - For the aquatic portion of your action area, trace the waterbody(ies) with the tool to characterize your action area.
 - If your proposal will include any upland activities (i.e., discharge-related activities), or if there is some aspect of your discharge that would potentially result in effects to terrestrial species, include the corresponding upland areas within your action area.
 - When you are done, press *Continue*.
 - Select *Request an Official Species List*
 - Complete the fields on the Official Species List Request page, and include "(MSGP)" at the end of the project description.
 - For Classification, select "Water Quality Modification".
 - Select the appropriate requesting agency/organization type (for most applicants, this should be "Other").
 - Submit the request to acquire an Official Species List, which should show both listed species as well as any designated critical habitat that are present in the action area in the previous step.
 - Note: If a link to an Official Species List is not available on the page, follow the web link of the office(s) indicated, or contact the office directly by mail or phone if a web link is not shown.

The principle authority for critical habitat designations and associated requirements is found at 50 CFR Parts 17 and 226. See <http://www.access.gpo.gov>.

Attach a copy of the species and critical habitat list(s) from the Service(s) to [Attachment 2](#) of this appendix and use the list(s) to complete the rest of this worksheet. For FWS species, include the full printout from your IPaC query/Official Species List in Attachment 2. You can include the map from your IPaC query in Attachment 1.

If after following the steps you have determined that there are no listed species and/or designated critical habitat in your action area, you may be eligible for coverage under [criterion A](#).

If you have determined that there are or may be listed species and/or designated critical habitat in your action area, you are not eligible under criterion A and must proceed to [Step 4](#) below.

Criterion A Eligibility Requirements

In order to be eligible for coverage under criterion A, you must confirm that the following is true:

☐ I have confirmed there to be no listed species and no critical habitat in my action area.

- **If the above is true, you may select criterion A on your NOI form.** You must also provide a description of the basis for the criterion selected on your NOI form. You must include this completed worksheet in your SWPPP. *Note: If your Official Species List from the USFWS indicated no species or critical habitat were present in your action area, include the full consultation tracking code at the top of your Official Species List in your NOI submittal in the question "Provide a brief summary of the basis for the criterion selected in Appendix E." If an Official Species List was not available on IPaC, list the contact date and name of the Service staff with whom you corresponded to verify no USFWS species or critical habitat were present in your action area.*
- If the above is not true, you may not select criterion A and must proceed to [Step 4](#) to determine if you can become eligible under criterion C.

Note: For existing dischargers that have previously obtained coverage under criterion A, you must verify whether listed species and/or critical habitat are expected to exist in your action area, as described above. Please note that if you now find that your action area overlaps with listed species or critical habitat, you must proceed to [Step 4](#).

STEP 4: DETERMINE IF YOUR INDUSTRIAL FACILITY'S DISCHARGES OR DISCHARGE-RELATED ACTIVITIES ARE LIKELY TO ADVERSELY AFFECT LISTED THREATENED OR ENDANGERED SPECIES OR DESIGNATED CRITICAL HABITAT AND ANY MEASURES THAT MUST BE IMPLEMENTED TO AVOID ADVERSE EFFECTS

If in Step 3 you determined that listed species and/or designated critical habitat could exist in your action area, you must next assess whether your discharges and discharge-related activities are likely to adversely affect listed threatened or endangered species or designated critical habitat, and whether any additional measures are necessary to ensure no likely adverse effects. In order to make a determination of your facility's likelihood of adverse effects, you must complete the attached [Criterion C Eligibility Form](#) and must submit this form to EPA a minimum of 30 days prior to filing your NOI for permit coverage. After you submit your [Criterion C Eligibility Form](#), you may be contacted by EPA with additional measures that you must implement in order to ensure your eligibility under criterion C.

Criterion C Eligibility Form

Instructions:

In order to be eligible for coverage under criterion C, you must complete the following form and you must submit it to EPA following the instructions in Section VII a **minimum of 30 days prior to filing your NOI for permit coverage**. After you submit your form, you may be contacted by EPA with additional measures (e.g., additional stormwater controls or modifications to your discharge-related activities) that you must implement in order to ensure your eligibility under criterion C.

If after completing this worksheet you cannot make a determination that your discharges and discharge-related activities are not likely to adversely affect listed threatened or endangered species or designated critical habitat, you must submit this completed worksheet to EPA, and you may not file your NOI for permit coverage until you receive a determination from EPA that your discharges and/or discharge-related activities are not likely to adversely affect listed species and critical habitat.

Note: Much of the information needed for this form can be obtained from your draft SWPPP which will be needed when you file your NOI.

SECTION I. OPERATOR, FACILITY, AND SITE LOCATION INFORMATION.

1) Operator Information

a) **Operator Name:** _____

b) **Point of Contact**

First Name: _____ **Last Name:** _____

Phone Number: _____

E-mail: _____

2) Facility Information

a) **Facility Name:** _____

b) **Check which of the following applies:**

☐ I am seeking coverage under the MSGP as a new discharger or as a new source

☐ I am seeking coverage under the MSGP as an existing discharger and my facility has modifications to its discharge characteristics (e.g., changes in discharge flow or area drained, different pollutants) and/or discharge-related activities (e.g., stormwater controls)

Indicate the number of years the facility has been in operation: _____ years

Provide your NPDES ID (i.e., permit tracking number) from your previous MSGP coverage: _____

☐ I am seeking coverage under the MSGP as an existing discharger and there are no modifications to my facility.

Indicate the number of year the facility has been in operation: _____ years

Provide your NPDES ID (i.e., permit tracking number) from your previous MSGP coverage: _____

c) Facility Address:

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip Code: _____

d) Identify the primary industrial sector to be covered under the 2015 MSGP:

SIC Code _____ or Primary Activity Code _____

Sector _____ and Subsector _____

e) Identify the sectors of any co-located activities to be covered under the 201r MSGP:

Sector _____ Subsector _____

Sector _____ Subsector _____

Sector _____ Subsector _____

Sector _____ Subsector _____

Sector _____ Subsector _____

Sector _____ Subsector _____

f) Estimated area of industrial activity exposed to stormwater: _____ acres

g) Provide a general description of the industrial activities that are taking place at this facility:

3) Receiving Waters Information

List all the stormwater outfalls from your facility.				For each outfall, provide the following receiving water information:	
Outfall ID	Design Capacity (if known)	Latitude (decimal degrees)	Longitude (decimal degrees)	Name of the receiving water that receives stormwater from the outfall and/or from the MS4 that the outfall discharges to	Type of Waterbody (e.g., lake, pond, river/stream/creek, estuarine/marine water)
		____.____	____.____		
		____.____	____.____		
		____.____	____.____		
		____.____	____.____		
		____.____	____.____		

SECTION II. ACTION AREA

Ensure that your action area is described in [Attachment 1](#), as required in [Step 2](#).

SECTION III. LISTED SPECIES AND CRITICAL HABITAT LIST

Ensure that the listed species and critical habitat list is included in [Attachment 2](#), as required in [Step 3](#).

Review your species list in Attachment 2, choose one of the following three statements, and follow the corresponding instructions:

☐ The species list includes only terrestrial species and/or their designated critical habitat. No aquatic or aquatic-dependent species or their critical habitat are present in the action area. **You may skip to [Section IV](#) of this form. You are not required to fill out [Section V](#).**

☐ The species list includes only aquatic and/or aquatic-dependent species and/or their designated critical habitat. No terrestrial species or their critical habitat are present in the action area. **You may skip to [Section V](#) of this form and are not required to fill out [Section IV](#).**

☐ The species list includes both terrestrial and aquatic or aquatic-dependent species and/or their designated critical habitat. **You must fill out both [Sections IV](#) and [V](#) of this form.**

Note: For the purposes of this permit, "terrestrial species" would not include animal or plant species that 1) spends any portion of its life cycle in a waterbody or wetland, or 2) if an animal, depends on prey or habitat that occurs in a waterbody or wetland. For example, shorebirds, wading birds, amphibians, and certain reptiles would not be considered terrestrial species under this definition. Please also be aware that some terrestrial animals (e.g., certain insects, amphibians) may have an aquatic egg or larval/juvenile phase.

SECTION IV. EVALUATION OF DISCHARGE-RELATED ACTIVITIES EFFECTS

Note: You are only required to fill out this section if your facility's action area contains terrestrial species and/or their designated critical habitat. If your action area only contains aquatic and/or aquatic-dependent species and/or their designated critical habitat, you can skip directly to [Section V](#).

Most of the potential effects related to coverage under the MSGP are assumed to occur to aquatic and/or aquatic-dependent species. However, in some cases, potential effects to terrestrial species and/or their critical habitat should be considered as well from any discharge-related activities that occur during coverage under the MSGP. Examples of discharge-related activities that could have potential effects on listed terrestrial species or their critical habitat include the storage of materials and land disturbances associated with stormwater management-related activities (e.g., the installation or placement of stormwater control measures).

A. Select the applicable statement(s) below and follow the corresponding instructions:

☐ There are no discharge-related activities that are planned to occur during my coverage under the MSGP. You can conclude that your discharge-related activities will have no likely adverse effects, and:

- If there are any aquatic or aquatic-dependent species and/or their critical habitat in your action area, you must skip to [Section V](#), *Evaluation of Discharge Effects*, below.
- If there are no aquatic or aquatic-dependent species you may skip to [Section VI](#) and verify that your activities will have no likely adverse effects. You must submit this form to EPA as specified in [Section VII](#) of this form. You may select criterion C on your NOI form and may submit your NOI for permit coverage 30 days after you have submitted this *Criterion C Eligibility Form*. You must also provide a description of the basis for the criterion you selected on your NOI form, **including the species and critical habitat list(s) in your action area**, as well as any other documentation supporting your eligibility. You must also include this completed *Criterion C Eligibility Form* in your SWPPP.

☐ There are discharge-related activities planned as part of the proposal. Describe your discharge-related activities in the following box and continue to (b) below.

Describe discharge-related activities:

B. In order to ensure any discharge-related activities will have no likely adverse effects on listed species and/or their designated critical habitat, you must certify that all the following are true:

- ☐ Discharge-related activities will occur:
- on previously cleared/developed areas of the site where maintenance and operation of the facility are currently occurring or where existing conditions of the area(s) in which the discharge-related activities will occur precludes its use by listed species (e.g., work on existing impervious surfaces, work occurring inside buildings, area is not used by species), and
 - if discharge-related activities will include the establishment of structures (including, but not limited to, infiltration ponds and other controls) or any related disturbances, these structures and/or disturbances will be sited in areas that will not result in isolation or degradation of nesting, breeding, or foraging habitat or other habitat functions for listed animal species (or their designated critical habitat), and will avoid the destruction of native vegetation (including listed plant species).

☐ If vegetation removal (e.g., brush clearing) or other similar activities will occur, no terrestrial listed species that use these areas for habitat would be expected to be present during vegetation removal.

If all the above are true, you can conclude that your discharge-related activities will have no likely adverse effects, and:

- If there are any aquatic or aquatic-dependent species and/or critical habitat in your action area, you must skip to [Section V](#), *Evaluation of Discharge Effects*, below.
- If there are no aquatic or aquatic-dependent species you may skip to [Section VI](#) and verify that your activities will have no likely adverse effects. You must submit this form to EPA as specified in [Section VII](#) of this form. You may select criterion C on your NOI and may submit your NOI for permit coverage 30 days after you have submitted this completed form. You must also provide a description of the basis for the criterion you selected on your NOI form, **including the species and critical habitat list(s)**, and any other documentation supporting your eligibility. You must also include this completed *Criterion C Eligibility Form* in your SWPPP.
- **If any of the above are not true**, you cannot conclude that your discharge-related activities will have no likely adverse effects. You must complete the rest of this form (if applicable), and must submit the form to EPA for assistance in determining your eligibility for coverage.

SECTION V. EVALUATION OF DISCHARGE EFFECTS

Note: You are only required to fill out this section if your facility's action area includes aquatic and/or aquatic-dependent species and/or their critical habitat.

In this section, you will evaluate the likelihood of adverse effects from your facility's discharges. The scope of effects to consider will vary with each facility and species/critical habitat characteristics. The following are examples of discharge effects you should consider:

- **Hydrological Effects.** Stormwater discharges may adversely affect receiving waters from pollutant parameters such as turbidity, temperature, salinity, or pH. These effects will vary with the amount of stormwater discharged and the volume and condition of the receiving water. Where a stormwater discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely.
- **Toxicity of Pollutants.** Pollutants in stormwater may have toxic effects on listed species and may adversely affect critical habitat. Exceedances of benchmarks, effluent limitation guidelines, or state or tribal water quality requirements may be indicative of potential adverse effects on listed species or critical habitat. However, some listed species may be adversely affected at pollutant concentrations below benchmarks, effluent limitation guidelines, and state or tribal water quality standards. In addition, stormwater pollutants identified in Part 5.2.3.2 of your SWPPP, but not monitored as benchmarks or effluent limitation guidelines, may also adversely affect listed species and critical habitat.

As these effects are difficult to analyze for listed species, their prey, habitat, and designated critical habitat, this form helps you to analyze your discharges and make a determination of whether your discharges will have likely adverse effects and whether there are any additional controls you can implement to ensure no likely adverse effects.

A. Evaluation of Pollutants and Controls to Avoid Adverse Effects. In this section, you must document all of your pollutant sources and pollutants expected to be discharged in stormwater. You must also document the controls you will implement to avoid adverse effects on listed aquatic and aquatic-dependent species. You must include specific details about the expected effectiveness of the controls in avoiding adverse effects to the listed aquatic-and aquatic-dependent species. Attach additional pages if needed.

Potential Pollutant Source	Potential Pollutants	Controls to Avoid Adverse Effects on Listed Aquatic and Aquatic-Dependent Species. Include information supporting why the control(s) will ensure no adverse effects, including any data you have about the effectiveness of the control(s) in reducing pollutant concentrations. You may also attach photos of your controls to this form.
e.g., vehicle and equipment fueling	e.g., <ul style="list-style-type: none"> • Oil & grease • Diesel • Gasoline • TSS • Antifreeze 	e.g., <ul style="list-style-type: none"> • Fueling operators (including the transfer of fuel from tank trucks) will be conducted on an impervious or contained pad or under cover • Drip pans will be used where leaks or spills of fuel can occur and where making and breaking hose connections • Spill kit will be kept on-site in close proximity to potential spill areas • Any spills will be cleaned-up immediately using dry clean up methods • Stormwater runoff will be diverted around fueling areas using diversion dikes and curbing

Potential Pollutant Source	Potential Pollutants	Controls to Avoid Adverse Effects on Listed Aquatic and Aquatic-Dependent Species.

Potential Pollutant Source	Potential Pollutants	Controls to Avoid Adverse Effects on Listed Aquatic and Aquatic-Dependent Species.

☐ Check if you are not able to make a preliminary determination that any of your pollutants will be controlled to a level necessary to avoid adverse effects on aquatic and/or aquatic-dependent listed species and their designated critical habitat. You must check in [Section VI](#) that you are unable to make a determination of no likely adverse effects, and must complete the rest of the form. You must submit your completed form to EPA for assistance in determining your eligibility for coverage.

B. Analysis of Effects Based on Past Monitoring Data. Select which of the following applies to your facility:

☐ I have no previous monitoring data for my facility because there are no applicable monitoring requirements for my facility's sector(s).

☐ I have no previous monitoring data for my facility because I am a new discharger or a new source, but I am subject to monitoring under the 2015 MSGP. You must provide information to support a conclusion that your facility's discharges are not expected to result in benchmark or numeric effluent limit exceedances that will adversely affect listed species or their critical habitat:

☐ My facility has not had any exceedances under the 2008 MSGP of any required benchmark(s) or numeric effluent limits.

☐ My facility has had exceedances of one or more benchmark(s) or numeric effluent limits under the 2008 MSGP, but I have addressed them during my coverage under the 2008 MSGP, or in my evaluation of controls to avoid adverse effects in (A) above. Describe all actions (including specific controls) that you will implement to ensure that the pollutants in your discharge(s) will not result in likely adverse effects from future exceedances.

☐ Check if your facility has had exceedances of one or more benchmarks or numeric effluent limits under the 2008 MSGP and you have not been able to address them to avoid adverse effects from future exceedances, or if you are a new discharger or a new source but you are not sure if you can avoid adverse effects from possible exceedances. You must check in [Section VI](#) that you are unable to make a determination of no likely adverse effects. You must submit your completed form to EPA for assistance in determining your eligibility for coverage. You may not file your NOI for permit coverage until you are able to make a determination that your discharges will avoid adverse effects on listed species and designated critical habitat.

SECTION VI VERIFICATION OF PRELIMINARY EFFECTS DETERMINATION

Based on Steps I – V of this form, you must verify your preliminary determination of effects on listed species and designated critical habitat from your discharges and/or discharge-related activities :

☐ Following the applicable Steps in I – V above, I have made a preliminary determination that my discharges and/or discharge-related activities are not likely to adversely affect listed species and designated critical habitats.

☐ Following the applicable Steps in I – V above, I am **not** able to make a preliminary determination that my discharges and/or discharge-related activities are not likely to adversely affect listed species and designated critical habitats.

Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Attachment 1

Include a map **and a written description** of the action area of your facility, as required in [Step 2](#). You may choose to include the map that is generated from the FWS' on-line mapping tool IPaC (the Information, Planning, and Consultation System) located at <http://ecos.fws.gov/ipac/>.

The written description of your action area that accompanies your action area map must explain your rationale for the extent of the action area drawn on your map. For example, your action area written description may look something like this:

The action area for the (name of your facility)'s stormwater discharges extends downstream from the outfall(s) in (name of receiving waterbody) (# of meters/feet/kilometers/miles). The downstream limit of the action area reflects the approximate distance at which the discharge waters and any pollutants would be expected to cause potential adverse effects to listed species and/or critical habitat because (insert rationale). The action area does/does not extend to the (name of receiving waterbody)'s confluence with (name of confluence waterbody) because (insert rationale).

Note that your action area written description will be highly site-specific, depending on the expected effects of your facility's discharges and discharge-related activities, receiving waterbody characteristics, etc.

Attachment 2

List or attach the listed species and critical habitat in your action area on this sheet, as required in [Step 3](#). You must include a list for applicable listed NMFS and FWS species and critical habitat. If there are listed species and/or critical habitat for only one Service, you must include a statement confirming there are no listed species and/or critical habitat for the other Service. For FWS species, include the full printout from your IPaC query. *Note: If your Official Species List from the USFWS indicated no species or critical habitat were present in your action area, include the full consultation tracking code at the top of your Official Species List in your NOI submittal in the question "Provide a brief summary of the basis for the criterion selected in Appendix E." If an Official Species List was not available on IPaC, list the contact date and name of the Service staff with whom you corresponded to identify the existence of any USFWS species or critical habitat present in your action area.*

Appendix F - Procedures Relating to Historic Properties Preservation

F.1 Background

Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects of Federal “undertakings”, such as the issuance of this permit, on historic properties that are either listed or eligible for listing on the National Register of Historic Places. To address any issues relating to historic properties in connection with the issuance of this permit, EPA has developed the screening process in this appendix that enables facility operators to appropriately consider the potential impacts, if any, from the installation of stormwater controls that involve subsurface disturbance, on historic properties and to determine whether actions can be taken, if applicable, to mitigate any such impacts. Although the coverage of individual industrial facilities under this permit does not constitute separate Federal undertakings, the screening process in this appendix provides an appropriate site-specific means of addressing historic property issues in connection with EPA’s issuance of the permit.

Before an operator is eligible for coverage under the 2015 MSGP (unless otherwise noted, all references to “eligible” or “eligibility” refer only to coverage under the 2015 MSGP), the operator must meet one of the certification criteria related to historic properties included in the permit. In the event an operator cannot meet any of the certification criteria included in the permit relating to historic properties, the operator must apply for an individual permit.

You must meet one or more of the four criteria (A-D), which are also included in Part 1.1.4.6, to be eligible for coverage under this permit.

Activities with No Potential to Have an Effect on Historic Properties

A determination that a Federal undertaking has no potential to have an effect on historic properties fulfills an agency’s obligations under the NHPA. EPA has reason to believe that the vast majority of activities authorized under the MSGP have no potential to have effects on historic properties. The purpose of this permit is to control pollutants that may be transported in stormwater runoff from industrial facilities. EPA does not anticipate effects on historic properties from the pollutants in the stormwater and allowable non-stormwater discharges from these industrial facilities. Thus, to the extent EPA’s issuance of this general permit authorizes discharges of such constituents, confined to existing stormwater channels or natural drainage areas; the permitting action does not have the potential to cause effects on historic properties.

In addition, the overwhelming majority of sources covered under this permit will be facilities that are seeking renewal of previous permit coverage. These existing dischargers should have already addressed NHPA issues in the 2008 MSGP as they were required to certify that they

Key Terms

Historic Property – Prehistoric or historic districts, sites, buildings, structures, or objects that are included in or eligible for inclusion in the National Register of Historic Places, including artifacts, records, and remains that are related to and located within such properties.

ACHP – Advisory Council on Historic Preservation; an independent Federal agency.

SHPO – The State Historic Preservation Officer for a particular state.

THPO or Authorized Tribal Representative – The Tribal Historic Preservation Officer for a particular Tribe, or if there is no THPO, the representative designated by such Tribe for NHPA purposes. Historic properties could have significance to more than one Indian tribe; therefore, all Indian tribes that attach religious and cultural significance to a historic property must be identified and included in the historic properties screening process.

Area of Potential Effects (APE) – The geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

were either not affecting historic properties or they had obtained written agreement from the applicable State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) regarding methods of mitigating potential impacts. Both existing and new dischargers must follow the historic property screening procedures to determine their eligibility. EPA is not aware of any impacts on historic properties from activities covered under the 2008 MSGP, or, for that matter, any need for a written agreement. Therefore, to the extent this permit authorizes renewal of prior coverage without relevant changes in operations, it has no potential to have an effect on historic properties.

Activities with Potential to Have an Effect on Historic Properties

EPA believes this permit may have some potential to have an effect on historic properties where permittees construct and/or install stormwater control measures that involve subsurface disturbance and impact less than one (1) acre of land to comply with this permit. (Ground disturbances of one (1) acre or more require coverage under a different permit, the Construction General Permit.) Where you have to disturb the land through the construction and/or installation of control measures, there is a possibility that artifacts, records, or remains associated with historic properties could be impacted. Therefore, if you are establishing new or altering existing control measures to manage your stormwater that will involve subsurface ground disturbance of less than one (1) acre, you will need to ensure (1) that historic properties will not be impacted by your activities or (2) that you have consulted with the appropriate SHPO, THPO, or other tribal representative regarding measures that would mitigate or prevent any adverse effects on historic properties.

Examples of Control Measures Which Involve Subsurface Disturbance

EPA reviewed typical control measures currently employed to determine which practices involve some level of earth disturbance. The types of control measures that are presumptively expected to cause subsurface ground disturbance include:

- Dikes
- Berms
- Catch Basins
- Ponds
- Ditches
- Trenches
- Culverts
- Land manipulation: contouring, sloping, and grading
- Channels
- Perimeter Drains
- Swales

EPA cautions dischargers that this list is non-inclusive. Other control measures that involve earth disturbing activities that are not on this list must also be examined for the potential to affect historic properties.

Historic Property Screening Process

You should follow the following screening process in order to certify your compliance with historic property eligibility requirements under this permit (see Part 1.1.4.6). The following four steps describe how applicants can meet the permit eligibility criteria for protection of historic properties under this permit:

Step One: Are you an existing facility that is reapplying for certification under the 2015 MSGP?

If you are an existing facility you should have already addressed NHPA issues. To gain coverage under the 2008 MSGP you were required to certify that you were either not affecting historic properties or had obtained written agreement from the relevant SHPO or THPO regarding methods of mitigating potential impacts. As long as you are not constructing or installing any new stormwater control measures then you have met eligibility Criterion A of the MSGP. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

If you are an existing facility and will construct or install stormwater control measures that require subsurface disturbance of less than one (1) acre then you should proceed to Step Three. (Note: Construction activities disturbing one (1) acre or more are not eligible for coverage under this permit.)

If you are a new facility then you should proceed to Step Two.

Step Two: Are you constructing or installing any stormwater control measures that require subsurface disturbance of less than one (1) acre?

If, as part of your coverage under this permit, you are not building or installing control measures on your site that cause less than one (1) acre of subsurface disturbance, then your discharge-related activities do not have the potential to have an effect on historic properties. You have no further obligations relating to historic properties. You have met eligibility Criterion A of the MSGP. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

If the answer to the Step Two question is yes, then you should proceed to Step Three.

Step Three: Have prior earth disturbances determined that historic properties do not exist, or have prior disturbances precluded the existence of historic properties?

If previous construction either revealed the absence of historic properties or prior disturbances preclude the existence of historic properties, then you have no further obligations relating to historic properties. You have met eligibility Criterion B of the MSGP. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

If the answer to the Step Three question is no, then you should proceed to Step Four.

Step Four: Contact the appropriate historic preservation authorities

Where you are building and/or installing control measures affecting less than one (1) acre of land to control stormwater or allowable non-stormwater discharges associated with this

permit, and the answer to Step Three is no, then you should contact the relevant SHPO, THPO, or other tribal representative to determine the likelihood that artifacts, records, or remains are potentially present on your site. This may involve examining local records to determine if historic artifacts have been found in nearby areas, as well as limited surface and subsurface examination carried out by qualified professionals.

If through this process it is determined that such historic properties potentially exist and may be impacted by your construction or installation of control measures, you should contact the relevant SHPO, THPO, or tribal representative in writing and request to discuss mitigation or prevention of any adverse effects. The letter should describe your facility, the nature and location of subsurface disturbance activities that are contemplated, any known or suspected historic properties in the area, and any anticipated effects on such properties. The letter should state that if the SHPO, THPO, or tribal representative does not respond within 30 days of receiving your letter, you may submit your NOI without further consultation. EPA encourages applicants to contact the appropriate authorities as soon as possible in the event of a potential adverse effect to an historic property.

If the SHPO, THPO, or tribal representative sent you a response within 30 days of receiving your letter and you enter into, and comply with, a written agreement with the SHPO, THPO, or other tribal representative regarding how to address any adverse impacts on historic properties, you have met eligibility Criterion C. In this case, you should retain a copy of the written agreement consistent with Part 5.1.6.2 of the MSGP. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA delay authorization based on concerns about potential adverse impacts to historic properties. However, EPA would generally accept any written agreement as fully addressing such concerns unless new information was brought to the Agency's attention that was not considered in your previous discussions with the SHPO, THPO or other tribal representative.

If you receive a response within 30 days after the SHPO, THPO, or tribal representative received your letter and you consult with the SHPO, THPO or tribal representative regarding adverse impacts to historic properties and measures to mitigate them but an agreement cannot be reached between you and the SHPO, THPO, or other tribal representative, you have still met the eligibility for Criterion C. In this case you should include in your SWPPP a brief description of potential effects to historic properties, the consultation process, any measures you will adopt to address the potential adverse impacts, and any significant remaining disagreements between you and the SHPO, THPO or other tribal representative. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA delay authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.


If you have contacted the SHPO, THPO, or tribal representative in writing regarding your potential to have an effect on historic properties and the SHPO, THPO, or tribal representative did not respond within 30 days of receiving your letter, you have met eligibility Criterion D. You are advised to get a receipt from the post office or other carrier confirming the date on which your letter was received. In this case, you should submit a copy of your letter notifying the SHPO, THPO or tribal representative of potential impacts with your NOI. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will

evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

Addresses for State Historic Preservation Officers and Tribal Historic Preservation Officers may be found on the Advisory Council on Historic Preservation's website (www.achp.gov/programs.html). In instances where a Tribe does not have a Tribal Historic Preservation Officer, you should contact the appropriate Tribal government office when responding to this permit eligibility condition.

Appendix G - Notice of Intent (NOI) Form

Part 7.1 requires you to use the NPDES eReporting Tool, or "NeT", to prepare and submit your NOI. However, if you are given a waiver by the EPA Regional Office to use a paper NOI form, and you elect to use it, you must complete and submit the following form.

NPDES FORM 3510-6		<p align="center"> UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 NOTICE OF INTENT (NOI) FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY UNDER THE NPDES MULTI-SECTOR GENERAL PERMIT </p>	Form Approved. OMB No. 2040-0004
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Submission of this Notice of Intent (NOI) constitutes notice that the operator identified in Section C of this form requests authorization to discharge pursuant to the NPDES Stormwater Multi-Sector General Permit (MSGP) permit number identified in Section B of this form. Submission of this NOI also constitutes notice that the operator identified in Section C of this form meets the eligibility conditions of Part 1.1 of the MSGP for the facility identified in Section D of this form. To obtain authorization, you must submit a complete and accurate NOI form. Discharges are not authorized if your NOI is incomplete or inaccurate or if you were never eligible for permit coverage. Refer to the instructions at the end of this form to complete your NOI.

A. Approval to Use Paper NOI Form

1. Have you been granted a waiver from electronic reporting from the EPA Regional Office*? ☐ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

- Waiver granted: ☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.
- ☐ The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver:

Date approval obtained: / /

* **Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper NOI form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (Net) at <http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm>**

B. Permit Information

NPDES ID (EPA Use Only):

1. Master Permit Number: (see Appendix C of the MSGP for the list of eligible master permit numbers)

2. Are you a new discharger or a new source as defined in Appendix A? ☐ YES ☐ NO (If yes, skip to Part C of this form).

3. If you are not a new discharger or a new source, have stormwater discharges from your facility been covered previously under an NPDES permit?

☐ YES ☐ NO

If yes, provide the NPDES ID if you had coverage under EPA's 2008 MSGP or the NPDES ID if you had coverage under an EPA individual permit:

C. Facility Operator Information

1. Operator Information:

Operator Name:

Mailing Address:

Street:

City: State: ZIP Code: -

County or Similar Government Subdivision:

Phone: - - Ext.

E-mail:

2. Operator Point of Contact Information:

First Name, Middle Initial, Last Name:

Title:

3. NOI Preparer Information (Complete if NOI was prepared by someone other than the certifier):

First Name, Middle Initial, Last Name:

Organization:

Phone: - - Ext.

E-mail:

D. Facility Information

1. Facility Name:

2. Facility Address:
Street/Location:

City: State: ZIP Code: -

County or Similar Government Subdivision:

3. Latitude/Longitude for the facility:
Latitude: ° N (decimal degrees) Longitude: ° W (decimal degrees)
Latitude/Longitude Data Source: ☐ Map ☐ GPS ☐ Other
If you used a USGS topographic map, what was the scale?

Horizontal Reference Datum: ☐ NAD 27 ☐ NAD 83 ☐ WGS 84

4. Is your facility located on Indian Country lands? ☐ YES ☐ NO
If yes, provide the name of the Indian tribe associated with the area of Indian country (including name of Indian reservation, if applicable):

5. Are you requesting coverage under this NOI as a "federal operator" as defined in Appendix A? ☐ YES ☐ NO

6. What is the ownership type of the facility?
☐ Corporation ☐ State Government ☐ Tribal Government ☐ School District
☐ District ☐ Mixed Ownership (e.g. Public/Private) ☐ Municipal or Water District
☐ Federal Facility (U.S. Government) ☐ Privately Owned Facility ☐ Municipality ☐ County Government

7. Estimated area of industrial activity at your facility exposed to stormwater: (to the nearest quarter acre)

8. Sector-Specific Information
Identify the 4-digit Standard Industrial Classification (SIC) code or 2-letter Activity Code that best represents the products produced or services rendered for which your facility is primarily engaged, as defined in the MSGP, and the applicable sector and subsector of your primary industrial activity (See Appendix D):
Primary SIC Code: OR Primary Activity Code:
Sector: Subsector:

Identify the applicable sector(s) and subsector(s) of any co-located industrial activity for which you are requesting permit coverage:
Sector: Subsector: Sector: Subsector: Sector: Subsector:
Sector: Subsector: Sector: Subsector: Sector: Subsector:

If you are a Sector S (Air Transportation) facility, do you anticipate using more than 100,000 gallons of pure glycol in glycol-based deicing fluids and/or 100 tons or more of urea on an average annual basis? ☐ YES ☐ NO

If you are a Sector G (Metal Mining) facility, do you have discharges from waste rock and overburden piles? ☐ YES ☐ NO

Check the type of ore you mine at your facility: ☐ Tungsten Ore ☐ Nickel Ore ☐ Aluminum Ore
☐ Mercury Ore ☐ Iron Ore ☐ Platinum Ore ☐ Titanium Ore ☐ Vanadium Ore ☐ Molybdenum ☐ Uranium, Radium, and/or Vanadium Ore

9. Is your facility presently inactive and unstaffed?* ☐ YES ☐ NO
* Note that if your facility becomes inactive and unstaffed during the permit term, you must submit an NOI modification to reflect the change.

E. Discharge Information

1. By indicating "Yes" below, I confirm that I understand that the MSGP only authorizes the allowable stormwater discharges in Part 1.1.2 and the allowable non-stormwater discharges listed in Part 1.1.3. Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the Stormwater Pollution Prevention Plan (SWPPP), during an inspection, etc. If any discharges requiring NPDES permit coverage other than the allowable stormwater and non-stormwater discharges listed in Parts 1.1.2 and 1.1.3 will be discharged, they must be covered under another NPDES permit. ☐ YES

2. Federal Effluent Limitation Guidelines
Are you requesting permit coverage for any stormwater discharges subject to effluent limitation guidelines? ☐ YES ☐ NO

If yes, which effluent limitation guidelines apply to your stormwater discharges?

40 CFR Part/Subpart	Eligible Discharges	Affected MSGP Sector	New Source Date	Check if Applicable
Part 411, Subpart C	Runoff from material storage piles at cement manufacturing facilities	E	2/20/1974	<input type="checkbox"/>
Part 418 Subpart A	Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874)	C	4/8/1974	<input type="checkbox"/>
Part 423	Coal pile runoff at steam electric generating facilities	O	11/19/1982 10/8/1974 ¹	<input type="checkbox"/>
Part 429, Subpart I	Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	A	1/26/1981	<input type="checkbox"/>
Part 436, Subpart B, C, or D	Mine dewatering discharges at crushed stone mines, construction sand and gravel mines, or industrial sand mines	J	N/A	<input type="checkbox"/>
Part 443, Subpart A	Runoff from asphalt emulsion facilities	D	7/28/1975	<input type="checkbox"/>
Part 445, Subparts A & B	Runoff from hazardous waste and non-hazardous waste landfills	K, L	2/2/2000	<input type="checkbox"/>
Part 449	Runoff containing urea from airfield pavement deicing at existing and new primary airports with 1,000 or more annual non-propeller aircraft departures	S	6/15/2012	<input type="checkbox"/>

¹NSPS promulgated in 1974 were not removed via the 1982 regulation; therefore wastewaters generated by Part 423-applicable sources that were New Sources under the 1974 regulations are subject to the 1974 NSPS.

3. Receiving Waters Information: (Attach a separate list if necessary)

List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002). Also provide the latitude and longitude in degrees decimal for each outfall.		For each outfall, provide the following receiving water information:		
		Provide the name of the first water of the U.S. that receives stormwater directly from the outfall and/or from the MS4 that the outfall discharges to:	If the receiving water is impaired (on the CWA 303(d) list), list the pollutants that are causing the impairment:	If a TMDL been completed for this receiving waterbody, providing the following information:
Outfall ID				TMDL Name and ID:
Latitude				Pollutant(s) for which there is a TMDL:
Longitude				
Outfall ID				TMDL Name and ID:
Latitude				Pollutant(s) for which there is a TMDL:
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				

Outfall ID				TMDL Name and ID:
Latitude				Pollutant(s) for which there is a TMDL:
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID				TMDL Name and ID:
Latitude				Pollutant(s) for which there is a TMDL:
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID				TMDL Name and ID:
Latitude				Pollutant(s) for which there is a TMDL:
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID				TMDL Name and ID:
Latitude				Pollutant(s) for which there is a TMDL:
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				

Latitude/Longitude Data Source: ☐ Map ☐ GPS ☐ Other

If you used a USGS topographic map, what was the scale? _____

Horizontal Reference Datum: ☐ NAD 27 ☐ NAD 83 ☐ WGS 84

5. Does your facility discharge into a Municipal Separate Storm Sewer System (MS4)? ☐ YES ☐ NO

If yes, provide the name of the MS4 operator: _____

6. Check if you discharge to any of the waters of the U.S. that are designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water) or as a Tier 3 water (Outstanding National Resource Water)? (See Appendix L).

☐ Tier 2/2.5. Provide the name(s) of receiving water(s):

☐ Tier 3 (Outstanding National Resource Waters)*

* Note: You are ineligible for coverage if you are a new discharger or new source to waters designated as Tier 3 (outstanding national resource waters) for antidegradation purposes under 40 CFR 131.13(a)(3).

7. If you are subject to benchmark monitoring requirements for a hardness-dependent metal, what is the hardness of your receiving water(s) (see Appendix J)?
 _____ (mg/L)

8. If you are subject to benchmark monitoring requirements for a hardness-dependent metal, does your facility discharge into any saltwater receiving waters?

☐ YES ☐ NO

9. Does your facility discharge to a federal CERCLA site listed in Appendix P? ☐ YES ☐ NO

If yes, did you notify the EPA Regional Office in advance of filing your NOI, and did the EPA Regional Office determine that you are eligible for permit coverage pursuant to Part 1.1.4.10*? ☐ YES ☐ NO

* Note: If you discharge to a federal CERCLA site listed in Appendix P, you are ineligible for coverage under this permit unless you notify the EPA Regional Office in advance and the EPA Regional Office determines you are eligible coverage under this permit. In determining your eligibility for coverage under this Part, the EPA Regional Office may evaluate whether you have included adequate controls and/or procedures to ensure that your discharges will not lead to recontamination of aquatic media at the CERCLA Site such that it will to cause or contribute to an exceedance of a water quality standard.

F. Stormwater Pollution Prevention Plan (SWPPP) Information

1. Has the SWPPP been prepared in advance of filing this NOI, as required? ☐ YES ☐ NO

2. SWPPP Contact Information:

First Name, Middle Initial, Last Name:

[illegible]

Phone:				-			-				Ext.			
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[illegible]

3. SWPPP Availability:

Your current SWPPP or certain information from your SWPPP must be made available through one of the following two options. Select one of the options and provide the required information*:

* Note: You are not required to post any confidential business information (CBI) or restricted information (as defined in Appendix A) (such information may be redacted), but you must clearly identify those portions of the SWPPP that are being withheld from public access.

☐ **Option 1:** Maintain a current copy of your SWPPP on an Internet page (Universal Resource Locator or URL).

Provide the web address URL:

☐ **Option 2:** Provide the following information from your SWPPP:

A. Describe your onsite industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams), and potential spill and leak areas:

B. List the pollutant(s) or pollutant constituent(s) associated with each industrial activity exposed to stormwater that could be discharged in stormwater and any authorized non-stormwater discharges listed in Part 1.1.3:

C. Describe the control measures you will employ to comply with the non-numeric technology-based effluent limits required in Part 2.1.2 and Part 8, and any other measures taken to comply with the requirements in Part 2.2 Water Quality-Based Effluent Limitations (see Part 5.2.4):

D. Provide a schedule for good housekeeping and maintenance (see Part 5.2.5.1) and a schedule for all inspections required in Part 4 (see Part 5.2.5.2):

G. Endangered Species Protection

1. Using the instructions in Appendix E of the MSGP, under which endangered species criterion listed in Part 1.1.4.5 are you eligible for coverage under this permit (only check 1 box)?*

☐ A ☐ B ☐ C ☐ D ☐ E

* **Note: After you submit your NOI and before your NOI is authorized, EPA may notify you if any additional controls are necessary to ensure your discharges have no likely adverse effects on listed species and critical habitat.**

2. Provide a brief summary of the basis for the criterion selected in Appendix E (e.g., communication with U.S. Fish and Wildlife Service or National Marine Fisheries Service to determine no species in action area; implementation of controls approved by EPA and the Services):

3. If you select criterion B, provide the NPDES ID from the other operator's NOI authorized under this permit:

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4. If you select criterion C, you must answer the following questions:

a. What federally-listed species or designated critical habitat are located in your "action area":

b. Using the Appendix E worksheet, check which of the following is applicable to your facility and answer any corresponding questions:

☐ I submitted my completed *Criterion C Eligibility Form* to EPA at least 30 days prior to submitting this NOI and agree to implement any additional measures that were determined by EPA to be necessary to ensure that my discharges and/or discharge-related activities will not have likely adverse effects on listed species and critical habitat.

Date your *Criterion C Eligibility Form* was sent to EPA:

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Describe any EPA-approved measures you will implement to ensure no likely adverse effects on listed species and critical habitat:

☐ I submitted my completed *Criterion C Eligibility Form* to EPA at least 30 days prior to submitting this NOI and have not been notified of any additional measures necessary to ensure no likely adverse effects on listed species and critical habitat.

Date your *Criterion C Eligibility Form* was sent to EPA:

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 /

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5. If you select criterion D or E, you must attach copies of any letters or other communications with the U.S. Fish and Wildlife Service or National Marine Fisheries Service.

H. Historic Preservation

☐ YES ☐ NO

If yes, provide the name of the Indian tribe associated with the property: _____

☐ A ☐ B ☐ C ☐ D

I. Certification Information

First Name: Middle Initial Last Name:

[illegible]

[illegible][illegible]

**Notice of Intent (NOI) for Stormwater Discharges
Associated with Industrial Activity Under the NPDES Multi-Sector General Permit**

NPDES Form Date (06/15)

This Form Replaces From 3510-6 (09/08)

Form Approved OMB No. 2040-0004

Who Must File an NOI Form

Under section 402(p) of the Clean Water Act (CWA) and regulations at 40 CFR Part 122, stormwater discharges associated with industrial activity are prohibited to waters of the United States unless authorized under a National Pollutant Discharge Elimination System (NPDES) permit. You can obtain coverage under the MSGP by submitting a completed Notice of Intent (NOI) if you are an operator a facility:

- that is located in a jurisdiction where EPA is the permitting authority, listed in Appendix C of the MSGP,
- that discharges stormwater associated with industrial activities, identified in Appendix D of the MSGP,
- that meets the eligibility requirements in Part 1.1 of the permit,
- that has developed a stormwater pollution prevention plan (SWPPP) in accordance with Part 5 of the MSGP; and
- that installs and implements control measures in accordance with Part 2 and Part 8 to meet numeric and non-numeric effluent limits.

Completing the Form

Obtain and read a copy of the 2015 MSGP, viewable at <http://water.epa.gov/polwaste/npdes/stormwater/EPA-Multi-Sector-General-Permit-MSGP.cfm>. To complete this form, type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. **Please submit original document with signature in ink - do not send a photocopied signature.**

Section A. Approval to Use Paper NOI Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper NOI form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA staff person who granted the waiver, and the date that approval was provided.

See <http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-Contacts.cfm> for a list of EPA Regional Office contacts.

Section B. Permit Information

Provide the master permit number of the permit under which you are applying for coverage (see Appendix C of the general permit for the list of eligible master permit numbers).

You must indicate whether you are a new discharger or a new source (see Appendix A for the definitions). If you are not a new discharger or a new source, you must indicate whether stormwater discharges from your facility have been previously covered under another NPDES permit. If yes, you must provide the unique NPDES ID (i.e., permit tracking number) for the previous permit your facility was covered under.

Section C. Facility Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the facility described in this NOI. An operator of a facility is the legal entity that controls the operation of the facility. Refer to Appendix A of the permit for the definition of "operator". Provide the operator's mailing address, phone number,

and e-mail. Correspondence for the NOI will be sent to this address. Also provide the name and title for the operator point of contact (note that the point of contact name may be the same as the operator name).

If the NOI was prepared by someone other than the certifier (for example, if the NOI was prepared by the facility SWPPP contact or a consultant for the certifier's signature), include the full name, organization, phone number, and email address of the NOI preparer.

Section D. Facility Information

Enter the official or legal name and complete address, including city, state, ZIP code, and county or similar government subdivision of the facility. If the facility lacks a street address, indicate the general location of the facility (e.g., Intersection of State Highways 61 and 34). Complete facility information must be provided for permit coverage to be granted.

Provide the latitude and longitude of your facility in decimal degrees format. The latitude and longitude of your facility can be determined in several different ways, including through the use of global positioning system (GPS) receivers, U.S. Geological Survey (U.S.G.S.) topographic or quadrangle maps. Refer to <http://transition.fcc.gov/mb/audio/bickel/DDDMSS-decimal.html/> for assistance in providing the proper latitude/longitude format. For consistency, EPA requests that measurements be taken from the approximate center of the facility. Specify which method you used to determine latitude and longitude. If a U.S.G.S. topographic map is used, specify the scale of the map used. Enter the horizontal reference datum for your latitude and longitude. The horizontal reference datum used on USGS topographic maps is shown on the bottom left corner of USGS topographic maps; it is also available for GPS receivers.

Indicate whether the facility is on Indian country lands, and if so, provide the name of the Indian tribe associated with the area of Indian country (including name of Indian reservation, if applicable).

Indicate whether you are seeking coverage under this permit as a "federal operator" as defined in Appendix A. Also check the ownership type for the facility (e.g., Federal Facility, Privately Owned Facility, Municipality, County Government, Corporation, State Government, Tribal Government, School District, District, Mixed Ownership [e.g., public/private], Municipal or Water District).

Enter the estimated area of industrial activity at your facility exposed to stormwater to the nearest quarter acre.

List the four-digit Standard Industrial Classification (SIC) code or two character activity code that best describes the primary industrial activities performed by your facility under which you are required to obtain permit coverage. Your primary industrial activity includes any activities performed on-site which are (1) identified by the facility's primary SIC code and included in the descriptions of 40 CFR 122.26(b)(14)(ii), (iii), (vi), or (viii); or (2) included in the narrative descriptions of 40 CFR 122.26(b)(14)(i), (iv), (v), (vii), or (ix). See Appendix D of the MSGP for a complete list of SIC codes and activities codes covered under the MSGP. Also provide the applicable sector and subsector associated with the SIC code or activity code for your primary industrial activities. For a complete list of sector and subsector codes, see Appendix D of the MSGP.

If your facility has co-located industrial activities that are not identified as your primary industrial activity, identify the sector and subsector codes that describe these other industrial activities.

**Notice of Intent (NOI) for Stormwater Discharges
Associated with Industrial Activity Under the NPDES Multi-Sector General Permit**

NPDES Form Date (06/15)

This Form Replaces From 3510-6 (09/08)

Form Approved OMB No. 2040-0004

For Sector S facilities (Air Transportation), indicate whether you anticipate that the entire airport facility will use more than 100,000 gallons of pure glycol in glycol-based deicing fluids and/or 100 tons or more of urea on an average annual basis. If so, additional effluent limits and monitoring conditions apply to your discharge (see Part 8.S of the permit).

For Sector G facilities (Metal Mining), check the type of ore(s) mined at the facility.

Indicate whether your facility is currently inactive and unstaffed. Note that if your facility becomes inactive and unstaffed during the permit term, you must submit an NOI modification to reflect the change.

Section E. Discharge Information

You must confirm that you understand that the MSGP only authorizes the allowable stormwater discharges listed in Part 1.1.2 and the allowable non-stormwater discharges listed in Part 1.1.3. Any discharges not expressly authorized under the MSGP are not covered by the MSGP or the permit shield provision of the CWA Section 402(k) and they cannot become authorized or shielded by disclosure to EPA, state, or local authorities via the NOI to be covered by the permit or by any other means (e.g., in the SWPPP or during an inspection). If any discharges requiring NPDES permit coverage other than the allowable stormwater and non-stormwater discharges listed in Parts 1.1.2 and 1.1.3 will be discharged, they must either be eliminated or covered under another NPDES permit.

Depending on your industrial activities, your facility may be subject to federal effluent limitation guidelines which include additional effluent limits and monitoring requirements for your facility. Please review these requirements, described in Part 2.1.3 of the MSGP, and check any appropriate boxes on the NOI form.

You must identify all the outfalls from your facility that discharge stormwater. Each outfall must be assigned a unique 3-digit ID (e.g., 001, 002, 003). You must also provide the latitude and longitude for each outfall from your facility. Indicate whether any outfalls are substantially identical to an outfall already listed, and identify the outfall it is identical to. For each unique outfall you list, you must specify the name of the first water of the U.S. that receives stormwater directly from the outfall and/or from the MS4 that the outfall discharges to. You must specify whether any receiving waters that you discharge to are listed as "impaired" as defined in Appendix A, and the pollutants for which the water is impaired. You must also check identify any Total Maximum Daily Loads (TMDL) that have been completed for any of the waters of the U.S. that you discharge to. You must also provide information about the outfall latitude/longitude, including data source, the scale (if applicable), and the horizontal reference datum. See the instructions in Section D for more information about determining the latitude and longitude.

Identify whether your facility discharges into a Municipal Separate Storm Sewer System (MS4). If yes, provide the name of the MS4 operator. If you are uncertain of the MS4 operator, contact your local government for that information.

Indicate whether discharges from the facility will enter into a water of the U.S. that is designated as a Tier 2, Tier 2.5, or Tier 3 water. A list of Tier 2, 2.5, and 3 waters is provided as Appendix L. If the answer is "yes", name all waters designated as Tier 2, Tier 2.5, or Tier 3 to which the facility will discharge. Note that you are ineligible for coverage if you are a new discharger or a new source to waters designated as Tier 3 (outstanding national resource waters) for antidegradation purposes under 40 CFR 131.13(a)(3).

If you are subject to any benchmark monitoring requirements for metals (see the requirements applicable to your Sector(s) in Part 8 of the permit), indicate the hardness for your receiving water(s). See Appendix J of the permit for information about determining waterbody hardness.

If you are subject to benchmark monitoring requirements for hardness-dependent metals you must also answer whether your facility discharges into any saltwater receiving waters.

Indicate whether your facility will discharge to a federal CERCLA site listed in Appendix P. Note that if your facility will discharge into a federal CERCLA site listed in Appendix P, you are not eligible for coverage under this permit unless you notify the EPA Regional Office in advance and the EPA Regional Office authorizes coverage under this permit after you have included adequate controls and/or procedures designed to ensure that discharges will not lead to recontamination of aquatic media at the CERCLA site such that your discharge will cause or contribute to an exceedance of a water quality standard.

Section F. Stormwater Pollution Prevention Plan (SWPPP) Information

All facilities eligible for coverage under this permit are required to prepare a SWPPP in advance of filing the NOI, in accordance with Part 5. Indicate whether the SWPPP has been prepared in advance of filing the NOI.

Indicate the contact information (name, phone, and email) for the person who developed the SWPPP for this facility.

You identify how your SWPPP information will be made available, consistent with Part 5.4 and 7.3 of the permit. If you are making your SWPPP publicly available on a web site, check Option 1 and provide the appropriate Internet URL address. If you are not providing a URL, check Option 2 and provide the selected SWPPP information on this NOI form. You may copy and paste this information directly from your SWPPP.

Section G. Endangered Species Protection

Using the instructions in Appendix E, indicate the Part 1.1.4.5 criterion (i.e., A, B, C, D, or E) you are eligible under with regard to the protection of federally listed endangered and threatened species and designated critical habitat. A description of the basis for the criterion selected must also be provided.

If criterion B is selected, provide the NPDES ID (i.e., permit tracking number) for the other operator who has certified their eligibility under this permit. The NPDES ID was assigned when the operator received coverage under this permit.

If criterion C is selected, you must specify the federally-listed species or designated critical habitat that are located in the "action area" of the facility. You must also indicate under which scenario you determined you were eligible to submit your NOI under criterion C using Appendix E, and answer any corresponding questions.

If criterion D or E is selected, attach copies of any communications between you and the U.S. Fish and Wildlife Service and National Marine Fisheries Service to this NOI.

Section H. Historic Preservation

If the project is not located in Indian country lands, indicate whether the project is located on a property of religious or cultural significance to an Indian tribe, and if so, provide the name of the Indian tribe associated with the property. Use the instructions in Appendix F to complete the questions on the NOI form regarding historic preservation.

**Notice of Intent (NOI) for Stormwater Discharges
Associated with Industrial Activity Under the NPDES Multi-Sector General Permit**

NPDES Form Date (06/15) This Form Replaces From 3510-6 (09/08)

Form Approved OMB No. 2040-0004

Section H. Certification

Certification statement and signature (see Section B.11 of Appendix B of the MSGP for more information). Enter certifier's printed name, title and email address. Sign and date the form. (CAUTION: An unsigned or undated NOI form will prevent the granting of permit coverage.) Federal statutes provide for severe penalties for submitting false information on this application form. Federal regulations require this application to be signed as follows:

For a corporation: by a responsible corporate officer, which means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing.

An unsigned or undated NOI form will not be considered eligible for permit coverage.

Modifying Your NOI

If you have been granted a waiver from your Regional Office from electronic reporting, and if after submitting your NOI you need to correct or update any fields on this NOI form, you may do so by indicating changes on this same form.

Paperwork Reduction Act Notice

Public reporting burden for this NOI is estimated to average 3.7 hours, plus an additional 2 hours for certain respondents required to gather hardness data. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number on any correspondence. Do not send the completed form to this address.

Submitting Your Form

If you have been granted a waiver from your Regional Office to submit a paper NOI form, you must send your NOI by mail to one of the following addresses:

For Regular U.S. Mail Delivery:

Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2015 MSGP Reports
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:

Stormwater Notice Processing Center
William Jefferson Clinton East Building - Room 7420
ATTN: 2015 MSGP Reports
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Visit this website for instructions on how to submit electronically:

<http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm>

Appendix H - Notice of Termination (NOT) Form

Part 7.1 requires you to use the NPDES eReporting Tool, or "NeT", to prepare and submit your Notice of Termination (NOT). However, if you are given a waiver by the EPA Regional Office to use a paper NOT form, and you elect to use it, you must complete and submit the following form.

NPDES FORM 3510-7		UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 NOTICE OF TERMINATION (NOT) FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY UNDER THE NPDES MULTI-SECTOR GENERAL PERMIT	Form Approved. OMB No. 2040-0004
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Submission of this Notice of Termination constitutes notice that the operator identified in Section C of this form is no longer authorized to discharge pursuant to the NPDES Multi-Sector General Permit (MSGP) from the facility identified in Section D of this form. All necessary information must be included on this form. Refer to the instructions at the end of this form.

A. Approval to use Paper NOT Form

1. Have you been granted a waiver from electronic reporting from the Regional Office*? ☐ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted: ☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.

☐ The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver:

Date approval obtained: / /

* Note: You are required to obtain approval from the applicable Regional Office prior to using this paper NOT form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (NeT) at <http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm>

B. Permit Information

1. NPDES ID:

2. Reason for Termination (check one only):

☐ A new owner or operator has taken over responsibility for the facility.

☐ You have ceased operations at the facility, there are not or no longer will be discharges of stormwater associated with industrial activity from the facility, and you have already implemented necessary sediment and erosion controls as required by Part 2.1.2.5.

☐ You are a Sector G, H, or J facility and you have met the applicable termination requirements.

☐ You obtained coverage under an individual or alternative general permit for all discharges required to be covered by an NPDES permit.

C. Facility Operator Information

1. Operator Name:

2. Mailing Address:

Street:

City: State: ZIP Code: -

3. Phone: - - Ext.

4. E-mail:

D. Facility Information

1. Facility Name:

2. Facility Address:

Street:

City: State: ZIP Code: -

County or similar government subdivision:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

[illegible]

Date: | | / | | / | | |

[illegible]

**Notice of Termination for Stormwater Discharges
Associated with Industrial Activity Under the NPDES Multi-Sector General Permit**

NPDES Form Date (06/15)

This Form Replaces Form 3510-7 (09/08)

Form Approved OMB No. 2040-0004

Who May File Notice of Termination (NOT) Form

Permittees currently covered by EPA's NPDES Stormwater Multi-Sector General must submit a Notice of Termination (NOT) within 30 days after one or more of the following conditions have been met:

- A new owner or operator has assumed responsibility for the facility;
- You have ceased operations at the facility and there are not or no longer will be discharges of stormwater associated with industrial activity from the facility and you have already implemented necessary sediment and erosion controls per Part 2.1.2.5;
- You are a Sector G, H, or J facility and you have met the applicable termination requirements; or
- You obtained coverage under an individual or alternative general permit for all discharges required to be covered by an NPDES permit.

See the MSGP Part 1.3.3 for more information.

Completing the Form

To complete this form, type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. Please submit original document with signature in ink - do not send a photocopied signature.

Section A. Approval to Use Paper NOT Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper NOT form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date that approval was provided. See

<http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-Contacts.cfm> for a list of EPA Regional Office contacts.

Section B. Permit Information

Enter the existing NPDES ID (i.e., NOI tracking number) assigned to your permit authorization.

Indicate your reason for submitting this Notice of Termination by checking the appropriate box. Check only one box (see MSGP Part 1.3.3 for more information).

Section C. Facility Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the facility described in this NOT. An operator of a facility is the legal entity that controls the operation of the facility. Refer to Appendix A of the permit for the definition of "operator". Provide the operator's mailing address, phone number, and e-mail.

Section D. Facility Information

Enter the official or legal name and complete street address, including city, state, ZIP code, and county or similar government subdivision of the facility. If the facility lacks a street address, indicate the general location of the facility (e.g., Intersection of State Highways 61 and 34). Complete facility information must be provided for termination of permit coverage to be valid.

Section E. Certification Information

All NOTs must be signed as follows:

For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing.

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated NOT form will not be considered valid termination of permit coverage.

Paperwork Reduction Act Notice

Public reporting burden for this Notice of Termination is estimated to average 0.5 hours, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number of this form on any correspondence. Do not send the completed NOT form to this address.

Instructions for Completing EPA Form 3510-7

**Notice of Termination for Stormwater Discharges
Associated with Industrial Activity Under the NPDES Multi-Sector General Permit**

NPDES Form Date (06/15)

This Form Replaces Form 3510-7 (09/08)

Form Approved OMB No. 2040-0004

Submitting Your Form

If you have been granted a waiver from your Regional Office to submit a paper NOT form, you must send your NOT by mail to one of the following addresses:

For Regular U.S. Mail Delivery:

Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2015 MSGP Reports
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:


Stormwater Notice Processing Center
William Jefferson Clinton East Building - Room 7420
ATTN: 2015 MSGP Reports
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Visit this website for instructions on how to submit electronically:

<http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm>

Appendix I - Annual Report Form

Part 7.1 requires you to use the NPDES eReporting Tool, or "NeT", to prepare and submit your Annual Report. However, if you are given a waiver by the EPA Regional Office to use a paper annual report form, and you elect to use it, you must complete and submit the following form.

NPDES FORM 6100-28		UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 ANNUAL REPORT FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY UNDER THE NPDES THE NPDES MULTI-SECTOR GENERAL PERMIT	Form Approved. OMB No. 2040-0004
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A. Approval to Use Paper Annual Report Form

1. Have you been granted a waiver from electronic reporting from the EPA Regional Office*? ☐ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted: ☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.

☐ The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver:

Date approval obtained:

* Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper annual report form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (NeT) at <http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm>

B. Permit Information

1. NPDES ID:

C. Facility Information

1. Facility Name:

2. Facility Phone: - - Ext.

3. Facility Mailing Address:

Street:

City: State: ZIP Code: -

County or Similar Government Subdivision:

4. Point of Contact:

First Name, Middle Initial, Last Name:

D. General Findings

1. Provide a summary of your past year's routine facility inspection documentation (see Part 3.1.2 of the permit). In addition, if you are an operator of an airport facility (Sector S) that is subject to the airport effluent limitations guidelines, and are complying with the MSGP Part 8.S.8.1 effluent limitation through the use of non-urea-containing deicers, provide a statement certifying that you do not use pavement deicers containing urea (e.g., "Urea was not used at [name of airport] for pavement deicing in the past year and will also not be used in 2015." (Note: Operators of airport facilities that are complying with Part 8.S.8.1 by meeting the numeric effluent limitation for ammonia do not need to include this statement.)

2. Provide a summary of your past year's quarterly visual assessment documentation (see Part 3.2.2 of the permit).

3. For any four-sample (minimum) average benchmark monitoring exceedance, if after reviewing the selection, design, installation, and implementation of your control measures and considering whether any modifications are necessary to meet the effluent limits in the permit, you determine that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice, provide your rationale for why you believe no further reductions are achievable (see Part 6.2.1.2 of the permit). Enter "NA" if not applicable.

4. Provide a summary of your past year's corrective action documentation (See Part 4.4 of the permit). (Note: If corrective action is not yet completed at the time of submission of this annual report, you must describe the status of any outstanding corrective action(s).) Also describe any incidents of noncompliance in the past year or currently ongoing, or if none, provide a statement that you are in compliance with the permit.

E. Certification Information	
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I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

[illegible][illegible]

Signature: _____ Date: ____/____/____

[illegible]

**Annual Report for Stormwater Discharges
Associated with Industrial Activity Under an NPDES General Permit**

Who Must File an Annual Report

Operators must submit an Annual Report to EPA electronically, per Part 7.5, by January 30th for each year of permit coverage containing information generated from the past calendar year.

Completing the Form

To complete this form, type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. Please submit original document with signature in ink - do not send a photocopied signature.

Section A. Approval to Use Paper Annual Report Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA staff person who granted the waiver, and the date that approval was provided. See <http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-Contacts.cfm> for a list of EPA Regional Office contacts.

Section B. Permit Information

Provide the NPDES ID (i.e., NOI tracking number) assigned to your facility.

Section C. Facility Information

Enter the official or legal name, phone number, and complete street address, including city, state, ZIP code, and county or similar government subdivision, for the facility that is covered by the NPDES ID identified in Section B. If the facility lacks a street address, indicate the general location of the facility (e.g., Intersection of State Highways 61 and 34). Also provide a point of contact name for the facility.

Section D. General Findings

To complete this section you must provide the following information in your annual report:

1. A summary of your past year's routine facility inspection documentation required by Part 3.1.2 of the permit.
2. A summary of your past year's quarterly visual assessment documentation required by Part 3.2.2 of the permit.
3. If, after finding the average of your four monitoring values for any pollutant exceeds the benchmark, you decide no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice, your rationale for why you believe no further reductions are achievable.
4. Information copied or summarized from the corrective action documentation required per Part 4.4 (if applicable). If corrective action is not yet completed at the time of submission of this Annual Report, you must describe the status of any outstanding corrective action(s). You must also describe any incidents of noncompliance in the past year or currently ongoing, or if none, provide a statement that you are in compliance with the permit.

Section E. Certification Information

The Annual Report must be signed by a person described below, or by a duly authorized representative of that person.

For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing.

A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above;
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and
3. The written authorization is submitted to the Director.

An unsigned or undated Annual Report form be considered incomplete.

Paperwork Reduction Act Notice

Public reporting burden for this form is estimated to average 2.5 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number of this form on any correspondence. Do not send the completed Annual Report form to this address.

Instructions for Completing the Annual Report Form

**Annual Report for Stormwater Discharges
Associated with Industrial Activity Under an NPDES General Permit**

Submitting Your Form

If you have been granted a waiver from your Regional Office to submit a paper Annual Report form, you must send your Annual Report form by mail to one of the following addresses:

For Regular U.S. Mail Delivery:

Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2015 MSGP Reports
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:

Stormwater Notice Processing Center
William Jefferson Clinton East Building - Room 7420
ATTN: 2015 MSGP Reports
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Visit this website for instructions on how to submit electronically:
<http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOL-System-for-EPAs-MultiSector-General-Permit.cfm>

Appendix J - Calculating Hardness in Freshwater Receiving Waters for Hardness Dependent Metals

Overview

For any sectors required to conduct benchmark samples for a hardness-dependent metal, EPA includes 'hardness ranges' from which benchmark values are determined. To determine which hardness range to use, you must collect data on the hardness of your receiving water(s). Once the site-specific hardness data have been collected, the corresponding benchmark value for each metal is determined by comparing where the hardness data fall within hardness ranges, as shown in Table 1. You only need to determine hardness for your discharges into freshwater as the benchmark values for metals do not vary for discharges to saline waters.

Table 1. Hardness Ranges to Be Used to Determine Benchmark Values for Cadmium, Copper, Lead, Nickel, Silver, and Zinc.

All Units mg/L	Benchmark Values (mg/L, total)					
	Cadmium	Copper	Lead	Nickel	Silver	Zinc
0-24.99 mg/L	0.0005	0.0038	0.014	0.15	0.0007	0.04
25-49.99 mg/L	0.0008	0.0056	0.023	0.20	0.0007	0.05
50-74.99 mg/L	0.0013	0.0090	0.045	0.32	0.0017	0.08
75-99.99 mg/L	0.0018	0.0123	0.069	0.42	0.0030	0.11
100-124.99 mg/L	0.0023	0.0156	0.095	0.52	0.0046	0.13
125-149.99 mg/L	0.0029	0.0189	0.122	0.61	0.0065	0.16
150-174.99 mg/L	0.0034	0.0221	0.151	0.71	0.0087	0.18
175-199.99 mg/L	0.0039	0.0253	0.182	0.80	0.0112	0.20
200-224.99 mg/L	0.0045	0.0285	0.213	0.89	0.0138	0.23
225-249.99 mg/L	0.0050	0.0316	0.246	0.98	0.0168	0.25
250+ mg/L	0.0053	0.0332	0.262	1.02	0.0183	0.26

How to Determine Hardness for Hardness-Dependent Parameters in Freshwater.

You may select one of three methods to determine hardness, including: individual grab sampling, grab sampling by a group of operators which discharge to the same receiving water, or using third-party data. Regardless of the method used, you are responsible for documenting the procedures used for determining hardness values. The hardness value is required to be submitted to EPA with your Notice of Intent (NOI) so that your electronic Discharge Monitoring Report (DMR) which you will submit through NetDMR will include the appropriate limits. You must retain all report and monitoring data in accordance with Part 7.5 of the permit. The three method options for determining hardness are detailed in the following sections.

(1) Permittee Samples for Receiving Stream Hardness

This method involves collecting samples in the receiving water and submitting these to a laboratory for analysis. If you elect to sample your receiving water(s) and submit samples for analysis, hardness must be determined from the closest intermittent or perennial stream downstream of your point of discharge. The sample can be collected during either dry or wet weather. Collection of the sample during wet weather is more representative of conditions

during stormwater discharges; however, collection of in-stream samples during wet weather events may be impracticable or present safety issues.

Hardness must be sampled and analyzed using approved methods as described in 40 CFR Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants).

(2) Group Monitoring for Receiving Stream Hardness

You can be part of a group of permittees discharging to the same receiving waters and collect samples that are representative of the hardness values for all members of the group. In this scenario, hardness of the receiving water must be determined using 40 CFR Part 136 procedures and the results shared by group members. To use the same results, hardness measurements must be taken on a stream reach within a reasonable distance of the discharge points of each of the group members.

(3) Collection of Third-Party Hardness Data

You can submit receiving stream hardness data collected by a third party provided the results are collected consistent with the approved 40 CFR Part 136 methods. These data may come from a local water utility, previously conducted stream reports, TMDLs, peer reviewed literature, other government publications, or data previously collected by the permittee. Data should be less than 10 years old.


Water quality data for many of the nation's surface waters are available on-line or by contacting EPA or a state environmental agency. EPA's data system STORET, short for STORage and RETrieval, is a repository for receiving water quality, biological, and physical data and is used by state environmental agencies, EPA and other federal agencies, universities, private citizens, and many others. Similarly, state environmental agencies and the U.S. Geological Service (USGS) also have water quality data available that, in some instances, can be accessed online. "Legacy STORET" codes for hardness include: 259 hardness, carbonate; 260 hardness, noncarbonated; and 261 calcium + magnesium, while more recent, "Modern STORET" data codes include: 00900 hardness, 00901 carbonate hardness, and 00902 noncarbonate hardness; or the discrete measurements of calcium (00915) and magnesium (00925) can be used to calculate hardness. Hardness data historically has been reported as "carbonate," "noncarbonate," or "Ca + Mg." If these are unavailable, then individual results for calcium (Ca) and magnesium (Mg) may be used to calculate hardness using the following equation:

$$\text{mg/L CaCO}_3 = 2.497 (\text{Ca mg/L}) + 4.118 (\text{Mg mg/L})$$

When interpreting the data for carbonate and non-carbonate hardness, note that total hardness is equivalent to the sum of carbonate and noncarbonate hardness if both forms are reported. If only carbonate hardness is reported, it is more than likely that noncarbonate hardness is absent and the total hardness is equivalent to the available carbonate hardness.

Appendix K - No Exposure Certification Form

Part 7.1 requires you to use the NPDES eReporting Tool, or "NeT", to prepare and submit your No Exposure Certification (NOE) form. However, if you are given a waiver by the EPA Regional Office to use a paper NOE form, and you elect to use it, you must complete and submit the following form.

NPDES FORM 3510-11		UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 NO EXPOSURE CERTIFICATION (NOE) FOR EXCLUSION FROM EPA'S MULTI-SECTOR GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY (MSGP)	Form Approved OMB No. 2040-0004
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Submission of this No Exposure Certification constitutes notice that the operator identified in Section C does not require permit authorization under EPA's Stormwater Multi Sector General Permit for its stormwater discharges associated with industrial activity from the facility identified in Section D of this form due to the existence of a condition of no exposure.

A condition of no exposure exists at an industrial facility when all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product. A storm resistant shelter is not required for the following industrial materials and activities:

- drums, barrels, tanks, and similar containers that are tightly sealed, provided those containers are not deteriorated and do not leak. "Sealed" means banded or otherwise secured and without operational taps or valves;
- adequately maintained vehicles used in material handling; and
- final products, other than products that would be mobilized in stormwater discharges (e.g., rock salt).

A No Exposure Certification must be provided for each facility qualifying for the no exposure exclusion. In addition, the exclusion from NPDES permitting is available on a facility-wide basis only, not for individual outfalls. If any industrial activities or materials are or will be exposed to precipitation, the facility is not eligible for the no exposure exclusion.

By signing and submitting this No Exposure Certification form, the operator in Section C is certifying that a condition of no exposure exists at its facility or site, and is obligated to comply with the terms and conditions of 40 CFR 122.26(g).

A. Approval to Use Paper NOE Form

1. Have you been granted a waiver from electronic reporting from the EPA Regional Office*? ☐ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

- Waiver granted: ☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.
- ☐ The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver:

Date approval obtained: / /

*** Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper NOE form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (Net) at <http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPA's-MultiSector-General-Permit.cfm>**

B. Reason for Submission

Select the purpose for filling out this form (check only 1).

☐ **To obtain a new No Exposure Certification.** Fill in Sections C, D, E and F.

☐ **To discontinue an existing No Exposure Certification.** Select this option if you would like to discontinue an existing No Exposure Certification because your facility is no longer subject to regulation under 40 CFR 122.26 (e.g., the facility has ceased the industrial activity that necessitated the No Exposure Certification)*. Provide the following information and fill out Section G.

Provide the existing NPDES ID for the No Exposure Certification that you would like to discontinue:

*** Note that if your facility no longer qualifies for the No Exposure Certification because permit coverage is required for exposed industrial materials or activities, you should not check this box, and must instead file for coverage under the Multi-Sector General Permit or an individual permit. Your No Exposure Certification will be automatically discontinued after you obtain coverage under the MSGP or an individual permit.**

C. Facility Operator Information

1. Operator Name:

2. Mailing Address

Street:

City: State: ZIP Code: -

3. Phone: - - Ext.

4. E-mail:

5. Operator Point of Contact Information:

First Name, Middle Initial, Last Name:

Title:

D. Facility Information

1. Facility Name:

2. Facility Address:

Street/Location:

City: State: ZIP Code: -

County or Similar Government Subdivision:

3. Latitude/Longitude for the facility:

Latitude: _____. _____. _____. ° N (decimal degrees) Longitude: _____. _____. _____. ° W (decimal degrees)

Latitude/Longitude Data Source: ☐ Map ☐ GPS ☐ Other: _____

If you used a USGS topographic map, what was the scale? _____

Horizontal Reference Datum: ☐ NAD 27 ☐ NAD 83 ☐ WGS 84

4. Is your project/site located on Indian country lands? ☐ YES ☐ NO

If yes, provide the name of the Indian tribe associated with the area of Indian country (including name of Indian reservation, if applicable):

5. Are you a "federal operator" as defined in Appendix A? ☐ YES ☐ NO

6. What is the ownership type of the facility? ☐ Federal Facility (U.S. Government) ☐ Privately Owned Facility ☐ Municipality

☐ County Government ☐ Corporation ☐ State Government ☐ Tribal Government ☐ School District

☐ District ☐ Mixed Ownership (e.g. Public/Private) ☐ Municipal or Water District

7. Have stormwater discharges from your facility been covered previously under an NPDES permit? ☐ YES ☐ NO

If yes, provide the NPDES ID if you had coverage under EPA's MSGP or the NPDES permit number if you had coverage under an EPA individual permit:

8. Has your facility previously been covered by a No Exposure exclusion? ☐ YES ☐ NO

If yes, provide the NPDES ID for your previous No Exposure exclusion:

9. Identify the 4-digit Standard Industrial Classification (SIC) code or 2-letter Activity Code that best represents the products produced or services rendered for which your facility is primarily engaged, as defined in MSGP:

Primary SIC Code: OR Primary Activity Code

10. Total size of site associated with industrial activity: _____ (to the nearest quarter acre)

11. Have you paved or roofed over a formerly exposed, pervious area in order to qualify for the no exposure exclusion? ☐ YES ☐ NO

If yes, please indicate approximately how much area was paved or roofed over. Completing this question does not disqualify you for the no exposure exclusion. However, your permitting authority may use this information in considering whether stormwater discharges from your site are likely to have an adverse impact on water quality, in which case you could be required to obtain permit coverage.

☐ Less than one (1) acre ☐ One (1) to five (5) acres ☐ More than five (5) acres

E. Exposure Checklist

Are any of the following materials or activities exposed to precipitation, now or in the foreseeable future?

(Please check either "Yes" or "No" in the appropriate box.) **If you answer "Yes" to any of these questions, you are not eligible for the no exposure exclusion.**

	Yes	No
Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed to stormwater	<input type="checkbox"/>	<input type="checkbox"/>
Materials or residuals on the ground or in stormwater inlets from spills/leaks	<input type="checkbox"/>	<input type="checkbox"/>
Materials or products from past industrial activity	<input type="checkbox"/>	<input type="checkbox"/>
Material handling equipment (except adequately maintained vehicles)	<input type="checkbox"/>	<input type="checkbox"/>
Materials or products during loading/unloading or transporting activities	<input type="checkbox"/>	<input type="checkbox"/>
Materials or products stored outdoors (except final products intended for outside use [e.g., new cars] where exposure to stormwater does not result in the discharge of pollutants)	<input type="checkbox"/>	<input type="checkbox"/>
Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers	<input type="checkbox"/>	<input type="checkbox"/>
Materials or products handled/stored on roads or railways owned or maintained by the discharger	<input type="checkbox"/>	<input type="checkbox"/>
Waste material (except waste in covered, non-leaking containers [e.g., dumpsters])	<input type="checkbox"/>	<input type="checkbox"/>
Application or disposal of process wastewater (unless otherwise permitted)	<input type="checkbox"/>	<input type="checkbox"/>
Particulate matter or visible deposits of residuals from roof stacks and/or vents not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater outflow	<input type="checkbox"/>	<input type="checkbox"/>

F. Certification Information

I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of "no exposure" and obtaining an exclusion from NPDES stormwater permitting.

I certify under penalty of law that there are no discharges of stormwater contaminated by exposure to industrial activities or materials from the industrial facility or site identified in this document (except as allowed under 40 CFR 122.26(g)(2)).

I understand that I am obligated to submit a no exposure certification form once every five years to the NPDES permitting authority and, if requested, to the operator of the local municipal separate storm sewer system (MS4) into which the facility discharges (where applicable). I understand that I must allow the NPDES permitting authority, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain coverage under an NPDES permit prior to any point source discharge of stormwater from the facility.

Additionally, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name:

Title:

Signature:

Date:

E-mail:

G. Discontinuation of No Exposure Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name:

Title:

Signature:

Date:

E-mail:

**No Exposure Certification (NOE) for Exclusion from Stormwater Discharges
Associated with Industrial Activity Under an NPDES General Permit**

NPDES Form Date (06/15) This Form Replaces Form 3510-11 (09/08)

Form Approved OMB No. 2040-0004

Who May File a No Exposure Certification

Federal law at 40 CFR Part 122.26 prohibits point source discharges of stormwater associated with industrial activity to waters of the U.S. without a National Pollutant Discharge Elimination System (NPDES) permit. However, NPDES permit coverage is not required for discharges of stormwater associated with industrial activities identified at 40 CFR 122.26(b)(14)(i)-(ix) and (xi) if the discharger can certify that a condition of "no exposure" exists at the industrial facility or site.

Stormwater discharges from construction activities identified in 40 CFR 122.26(b)(14)(x) and (b)(15) are not eligible for the no exposure exclusion.

Obtaining and Maintaining the No Exposure Exclusion

This form is used to certify that a condition of no exposure exists at the industrial facility or site described herein. This certification is only applicable in jurisdictions where EPA is the NPDES permitting authority and must be re-submitted at least once every five years.

The industrial facility operator must maintain a condition of no exposure at its facility or site in order for the no exposure exclusion to remain applicable. If conditions change resulting in the exposure of materials and activities to stormwater, the facility operator must obtain coverage under an NPDES stormwater permit immediately.

Completing the Form

You must type or print, using uppercase letters, in appropriate areas only. Enter only one character per space (i.e., between the marks). Abbreviate if necessary to stay within the number of characters allowed for each item. Use one space for breaks between words. One form must be completed for each facility or site for which you are seeking to certify a condition of no exposure. Please make sure you have addressed all applicable questions and have made a photocopy for your records before sending the completed form to the above address.

Section A. Approval to Use Paper NOE Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper No Exposure Certification (NOE) form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date that approval was provided. See <http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-Contacts.cfm> for a list of EPA Regional Office contacts.

Section B. Reason for Submission

You must check your reason for submitting this form. You may submit this form for obtaining a new No Exposure Certification, for renewing a previous No Exposure Certification, or for discontinuing an existing No Exposure Certification (for facilities that no longer need the exclusion from permit coverage for industrial stormwater discharges).

Section C. Facility Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the facility described in this certification form. An operator of a facility is the legal entity that controls the operation of the facility. Refer to Appendix A of the

MSGP for the definition of "operator". Provide the operator's mailing address, phone number, and e-mail. Correspondence for the NOE will be sent to this address. Also provide the name and title for the operator point of contact (note that the point of contact name may be the same as the operator name).

Section D. Facility Information

Enter the official or legal name and complete street address, including city, state, ZIP code, and county or similar government subdivision of the facility. If the facility lacks a street address, indicate the general location of the facility (e.g., Intersection of State Highways 61 and 34). Complete facility information must be provided for permit coverage to be granted.

Provide the latitude and longitude of your facility in decimal degrees format. The latitude and longitude of your facility can be determined in several different ways, including through the use of global positioning system (GPS) receivers and U.S. Geological Survey (U.S.G.S.) topographic or quadrangle maps. Refer to <http://transition.fcc.gov/mb/audio/bickel/DDMMSS-decimal.html/> for assistance in providing the proper latitude/longitude format. For consistency, EPA requests that measurements be taken from the approximate center of the facility. Specify which method you used to determine latitude and longitude. If a U.S.G.S. topographic map is used, specify the scale of the map used. Enter the horizontal reference datum for your latitude and longitude. The horizontal reference datum used on USGS topographic maps is shown on the bottom left corner of USGS topographic maps; it is also available for GPS receivers.

Indicate whether the facility is on Indian country lands, and if so, provide the name of the Indian tribe associated with the area of Indian country (including name of Indian reservation, if applicable).

Indicate whether you are a "federal operator" as defined in Appendix A of the MSGP. Also check the facility's ownership type.

Indicate whether the facility was previously covered under an NPDES stormwater permit. If so, include the NPDES ID (i.e., NOI tracking number).

List the four-digit Standard Industrial Classification (SIC) code or two character activity code that best describes the primary industrial activities performed by your facility.

Enter the total size of the site associated with industrial activity in acres.

Check "Yes" or "No" as appropriate to indicate whether you have paved or roofed over a formerly exposed, pervious area (i.e., lawn, meadow, dirt or gravel road/parking lot) in order to qualify for no exposure. If yes, also indicate approximately how much area was paved or roofed over and is now impervious area.

**No Exposure Certification (NOE) for Exclusion from Stormwater Discharges
Associated with Industrial Activity Under an NPDES General Permit**

NPDES Form Date (06/15)

This Form Replaces Form 3510-11 (09/08)

Form Approved OMB No. 2040-0004

Section E. Exposure Checklist

Check "Yes" or "No" as appropriate to describe the exposure condition at your facility. If you answer "Yes" to **ANY** of the questions in this section, a potential for exposure exists at your site and you cannot certify to a condition of no exposure. You must obtain (or already have) coverage under an NPDES stormwater permit. After obtaining permit coverage, you can institute modifications to eliminate the potential for a discharge of stormwater exposed to industrial activity, and then certify to a condition of no exposure.

Section F and G. Certification Information

The NOE form must be signed as follows:

For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing.

Include the name, title, and email address of the person signing the form and the date of signing.

An unsigned or undated NOE certification will not be considered valid.

Paperwork Reduction Act Notice

Public reporting burden for this certification is estimated to average 1.0 hour per certification, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose to provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and

disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number of this form on any correspondence. Do not send the completed No Exposure Certification form to this address.

Submitting Your Form

If you have been granted a waiver from your Regional Office to submit a paper No Exposure Certification form, you must send your No Exposure Certification form by mail to one of the following addresses:

For Regular U.S. Mail Delivery:

Stormwater Notice Processing Center
Mail Code 4203M, ATTN: MSGP No Exposure
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:

Stormwater Notice Processing Center
William Jefferson Clinton East Building - Room 7420
ATTN: MSGP No Exposure
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Visit this website for instructions on how to submit electronically:
<http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm>

Appendix L - List of Tier 3, Tier 2, and Tier 2.5 Waters

EPA's MSGP has special requirements for discharges to waters designated by a state or tribe as Tier 2/2.5 or Tier 3 for antidegradation purposes under 40 CFR 131.12(a). See Parts 1.1.4.8 and 1.1.4.10

The list below is provided as a resource for operators who must determine whether they discharge to a Tier 2/2.5 or Tier 3 water. Only Tier 2/2.5 or Tier 3 waters specifically identified by a water quality standard authority (e.g., a state, territory, or tribe) are identified in the table below. Many authorities evaluate the existing and protected quality of the receiving water on a pollutant-by-pollutant basis and determine whether water quality is better than the applicable criteria that would be affected by a new discharger or a new source or an increase in an existing discharge of the pollutant. In instances where water quality is better, the authority may choose to allow lower water quality, where lower water quality is determined to be necessary to support important social and economic development. Permittees are not required to identify those waters which are evaluated on an individual basis.

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
MAR050000	Commonwealth of Massachusetts, except Indian Country lands	
	Tier 2, Tier 2.5, and 3 waters are identified and listed in the Massachusetts Water Quality Standards 314 CMR 4.00. Surface water qualifiers that correspond with Tier classifications are defined at 314 CMR 4.06(1)(d)m and listed in tables and figures at the end of 314 CMR 4.06. See MassDEP's web page at http://www.mass.gov/eea/agencies/massdep/water/regulations/314-cmr-4-00-mass-surface-water-quality-standards.html .	
	Tier 2	Listed as "High Quality Waters", and all wetlands that are not designated as an Outstanding Resource Water
	Tier 2.5	Listed as "Outstanding Resource Water", "Public Water Supply", "Tributary to Public Water Supply", all wetlands bordering Outstanding Resource Waters, and vernal pools
	Tier 3	Defined as "Special Resource Water". Note: No waters have been defined as a Special Resource Water as of the issuance of this permit.
NHR050000	State of New Hampshire	
	Tier 2/2.5	There is no list of Tier 2/Tier 2.5 waters. New dischargers and new sources should contact Thelma Murphy (EPA Region 1's stormwater coordinator) at murphy.thelma@epa.gov .
	Tier 3	Env-Ws 1708.05(a) Surface waters of national forests and surface waters designated as "natural" under RSA 483:7-a, I shall be considered outstanding resource waters (ORW). "Natural waters" are listed at http://www.gencourt.state.nh.us/rsa/html/L/483/483-15.htm . Surface waters of national forests are not included in an official list. For further questions, new dischargers and new sources should contact Thelma Murphy (EPA Region 1's stormwater coordinator) at murphy.thelma@epa.gov .

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
PRR050000	Commonwealth of Puerto Rico	
	Tier 3	Tier III waters are those which are classified as either Class SA or Class SE. Class SA waters are defined as "Coastal waters and estuarine waters of high quality and/or exceptional ecological or recreational value whose existing characteristics shall not be altered, except by natural causes, in order to preserve the existing natural phenomena." Class SA waters include bioluminescent lagoons and bays such as La Parguera and Monsio José on the Southern Coast, Bahía de Mosquito in Vieques, and any other coastal or estuarine waters of exceptional quality of high ecological value or recreational which may be designated by Puerto Rico, through Resolution, as requiring this classification for protection of the waters. Class SE waters are defined as "Surface waters and wetlands of exceptional ecological value, whose existing characteristics should not be altered in order to preserve the existing natural phenomena." Class SE waters include Laguna Tortuguero, Laguna Cartagena and any other surface water bodies of exceptional ecological value as may be designated by Puerto Rico through Resolution.
DCR050000	District of Columbia	
	Tier 2/2.5	Rule 1102.4 SPECIAL WATERS OF THE DISTRICT OF COLUMBIA (SWDC): Any segment or segments of the surface waters of the District that are of water quality better than needed for the current use or have scenic or aesthetic importance shall be designated as Special Waters of the District of Columbia (SWDC). Rock Creek and its tributaries and Battery Kemble Creek and its tributaries are considered Special Waters of the District of Columbia (SWDC) under its antidegradation program.
MNR050001	Fond du Lac Band of MN Chippewa	
	Tier 3	Six lakes are presently identified as Tier 3: (1) Dead Fish, (2) Jaskari, (3) Miller (Mud), (4) Perch, (5) Rice Portage, (6) Wild Rice.
	Grand Portage Band of MN Chippewa	
	Tier 2/2.5	All waters, not already classified as Tier 3, are high quality Tier 2 waters. (see Grand Portage Reservation Water Quality Standards, Section VI & VII, Pages 14-16).
WIR050001	Tier 3	"The portion of Lake Superior north of latitude 47 degrees, 57 minutes, 13 seconds, east of Hat Point, south of the Minnesota-Ontario boundary, and west of the Minnesota-Michigan boundary." (see Section VII, Page 16).
	Lac du Flambeau Band of the Lake Superior Chippewa	
	Tier 2	All named waters, including wetlands, not specified under an antidegradation classification.
	Tier 2.5	Bills Lake, Birch Lake, Bobidosh Lake, Bog Lake (SE SE Sec. 31, T40NR6E), Bolton Lake, Broken Bow Lake, Chewalah Lake, Clear Lake (Sec. 2, T39NR4E), Corn Great, Great, Corn Lake, Little "Least/Lesser", Crawling Stone Lake, Big, Crawling Stone Lake, Little, Crescent Lake, Crooked Lake, Big, David Lake, Ellerson Lake, Middle, Ellerson Lake, West, Elsie Lake "Boundary Lake", Fat Lake, Fence Lake, Gresham

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
		Creek, Green Lake (NW NW Sec. 19, T41R6E), Grey Lake, Gunlock Lake, Haskell Lake, Headflyer Lake (Sec. 19, T41NR5E), Highway Lake (NW NW Sec. 19, T41NR5E), Horsehead Lake (SE SW Sec. 9, T40NR5E), Hutton's Creek, Ike Walton Lake, Lily Lake (SE SW Sec. 35, T40NR5E), Little Ten Lake, Lodge Lake "L. Rice" (NW NW Sec. 8, T41NR6E), Lucy Lake, Mindys Lake (Sec. 8, T40NR5E), Minette Lake, Mitten Lake, Monk's Lake (Sec. 13, T40NR5E), Moving Cloud Lake, Mud Creek, Muskesin Lake, Patterson Lake, Placid Twin Lake (North), Placid Twin Lake (South), Plummer Lake, Poupart Lake, Prairie Lake (NE SW Sec. 13, T40NR4E), Raven Lake, Ross Allen Lake, Sand Lake, Little, Scott Lake (Sec. 22, T40N, R4E), Shishebogama Lake, Signal Lake, Snort Lake (Sec. 5, T41N, R6E), Spring Lake "Jerms", Squirrel Lake, Statenaker Lake "Hollow", Stearns Lake "Hourglass", Sugarbush "Hidden Lake" (NW NW Sec. 17, T41NR5E), Sugarbush Creek, Sugarbush Lake, Little, Sugarbush Lake, Lower, Sugarbush Lake, Middle, Sugarbush Lake, Upper, Sunfish Lake, Tippecanoe Lake, Tomahawk River, To-To Tom Lake, Toulish Lake, Trout River, Warrior Lake, White Sand Lake, Whitefish Lake "Cattail Lake" (Sec. 34, T40N5R), Wishow Lake, Wyandock Lake
	Tier 3	Bear River (1st bridge to Reservation boundary), Big Springs (Sec. 25, T40NR4E), Black Lake, Cranberry Lake, Doud Lake, Eagle Lake, Gene Lake, Johnson Springs, Little Trout Lake, Lost Lake (Sect. 1, T41NR4E), Mishonagon Creek, Munnomin (Jesse, Duck) Lake, Negani (Hegani) Lake, Reservation Line Lake, Spring Creek, Tank Lake, Thomas Lake, Wild Rice Lake, Zee Lake
	Mole Lake Band of the Lake Superior Tribe of the Chippewa Indians, Sokaogon Chippewa Community	
	Tier 2.9	One Tribal Water, Wetland 22, is classified as Exceptional High Quality Water (EHQW). It is a high-quality water body of significant cultural, religious, social, ecological and recreational attributes.
	Tier 3	All waters in the Sokaogon Chippewa Community (WI) as classified as Tier 3, with one exception (Wetland 22).
COR0500I	State of Colorado	
	Ute Mountain Ute Tribe	
	Tier 3	(2010 Proposed) Designations: 1. Ute Spring and unnamed creek from Ute Spring downstream within Section 12, TWP35N R18W (Colorado). 2. Allen Canyon Creek, Sections 17, 20, 29, 30, 31, TWP 35S, R21E (Utah) 3. "Lopez" Spring and unnamed creek tributary to and downstream from the spring, within Section 35, TWP 34N, R18W
NMR050000	State of New Mexico	
	Tier 3	(1) Rio Santa Barbara, including the west, middle and east forks from their headwaters downstream to the boundary of the Pecos Wilderness; and (2) the waters within the United States forest service Valle Vidal special management unit including:

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
	<p>(a) Rio Costilla, including Comanche, La Cueva, Fernandez, Chuckwagon, Little Costilla, Holman, Gold, Grassy, LaBelle and Vidal creeks, from their headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit;</p> <p>(b) Middle Ponil creek, including the waters of Greenwood Canyon, from their headwaters downstream to the boundary of the Elliott S. Barker wildlife management area;</p> <p>(c) Shuree lakes;</p> <p>(d) North Ponil creek, including McCrystal and Seally Canyon creeks, from their headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit; and</p> <p>(e) Leandro creek from its headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit.</p> <p>(3) the named perennial surface waters of the state, identified in Subparagraph (a) below, located within United States department of agriculture forest service wilderness. Wilderness are those lands designated by the United States congress as wilderness pursuant to the Wilderness Act. Wilderness areas included in this designation are the Aldo Leopold wilderness, Apache Kid wilderness, Blue Range wilderness, Chama River Canyon wilderness, Cruces Basin wilderness, Dome wilderness, Gila wilderness, Latir Peak wilderness, Pecos wilderness, San Pedro Parks wilderness, Wheeler Peak wilderness, and White Mountain wilderness.</p> <p>(a) The following waters are designated in the Rio Grande basin:</p> <p>(i) in the Aldo Leopold wilderness: Byers Run, Circle Seven creek, Flower canyon, Holden Prong, Indian canyon, Las Animas creek, Mud Spring canyon, North Fork Palomas creek, North Seco creek, Pretty canyon, Sids Prong, South Animas canyon, Victorio Park canyon, Water canyon;</p> <p>(ii) in the Apache Kid wilderness Indian creek and Smith canyon;</p> <p>(iii) in the Chama River Canyon wilderness: Chavez canyon, Ojitos canyon, Rio Chama;</p> <p>(iv) in the Cruces Basin wilderness: Beaver creek, Cruces creek, Diablo creek, Escondido creek, Lobo creek, Osha creek;</p> <p>(v) in the Dome wilderness: Capulin creek, Medio creek, Sanchez canyon/creek;</p> <p>(vi) in the Latir Peak wilderness: Bull creek, Bull Creek lake, Heart lake, Lagunitas Fork, Lake Fork creek, Rito del Medio, Rito Primero, West Latir creek;</p> <p>(vii) in the Pecos wilderness: Agua Sarca, Hidden lake, Horseshoe lake (Alamitos), Jose Vigil lake, Nambe lake, Nat lake IV, No Fish lake, North Fork Rio Quemado, Rinconada, Rio Capulin, Rio de las Trampas (Trampas creek), Rio de Truchas, Rio Frijoles, Rio Medio, Rio Molino, Rio Nambe, Rio San Leonardo, Rito con Agua, Rito Gallina, Rito Jaroso, Rito Quemado, San Leonardo lake, Santa Fe lake, Santa Fe river, Serpent lake, South Fork Rio Quemado, Trampas lake (East), Trampas lake (West);</p> <p>(viii) in the San Pedro Parks wilderness: Agua Sarca, Cañon Madera, Cave creek, Cecilia Canyon creek, Clear creek (North SPP), Clear creek (South SPP), Corralitos creek, Dove creek, Jose Miguel creek, La</p>

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
	<p>Jara creek, Oso creek, Rio Capulin, Rio de las Vacas, Rio Gallina, Rio Puerco de Chama, Rito Anastacio East, Rito Anastacio West, Rito de las Palomas, Rito de las Perchas, Rito de los Pinos, Rito de los Utes, Rito Leche, Rito Redondo, Rito Resumidero, San Gregorio lake;</p> <p>(ix) in the Wheeler Peak wilderness: Black Copper canyon, East Fork Red river, Elk lake, Horseshoe lake, Lost lake, Sawmill creek, South Fork lake, South Fork Rio Hondo, Williams lake.</p> <p>(b) The following waters are designated in the Pecos River basin:</p> <p>(i) in the Pecos wilderness: Albright creek, Bear creek, Beatty creek, Beaver creek, Carpenter creek, Cascade canyon, Cave creek, El Porvenir creek, Hollinger creek, Holy Ghost creek, Horsethief creek, Jack's creek, Jarosa canyon/creek, Johnson lake, Lake Katherine, Lost Bear lake, Noisy brook, Panchuela creek, Pecos Baldy lake, Pecos river, Rio Mora, Rio Valdez, Rito Azul, Rito de los Chimayosos, Rito de los Esteros, Rito del Oso, Rito del Padre, Rito las Trampas, Rito Maestas, Rito Oscuro, Rito Perro, Rito Sebadilloses, South Fork Bear creek, South Fork Rito Azul, Spirit lake, Stewart lake, Truchas lake (North), Truchas lake (South), Winsor creek;</p> <p>(ii) in the White Mountain wilderness: Argentina creek, Aspen creek, Bonito creek, Little Bonito creek, Mills canyon/creek, Rodamaker creek, South Fork Rio Bonito, Turkey canyon/creek.</p> <p>(c) The following waters are designated in the Gila River basin:</p> <p>(i) in the Aldo Leopold wilderness: Aspen canyon, Black Canyon creek, Bonner canyon, Burnt canyon, Diamond creek, Falls canyon, Fisherman canyon, Running Water canyon, South Diamond creek;</p> <p>(ii) in the Gila wilderness: Apache creek, Black Canyon creek, Brush canyon, Canyon creek, Chicken Coop canyon, Clear creek, Cooper canyon, Cow creek, Cub creek, Diamond creek, East Fork Gila river, Gila river, Gilita creek, Indian creek, Iron creek, Langstroth canyon, Lilley canyon, Little creek, Little Turkey creek, Lookout canyon, McKenna creek, Middle Fork Gila river, Miller Spring canyon, Mogollon creek, Panther canyon, Prior creek, Rain creek, Raw Meat creek, Rocky canyon, Sacaton creek, Sapillo creek, Sheep Corral canyon, Skeleton canyon, Squaw creek, Sycamore canyon, Trail canyon, Trail creek, Trout creek, Turkey creek, Turkey Feather creek, Turnbo canyon, West Fork Gila river, West Fork Mogollon creek, White creek, Willow creek, Woodrow canyon.</p> <p>(d) The following waters are designated in the Canadian River basin: in the Pecos wilderness Daily creek, Johns canyon, Middle Fork Lake of Rio de la Casa, Middle Fork Rio de la Casa, North Fork Lake of Rio de la Casa, Rito de Gascon, Rito San Jose, Sapello river, South Fork Rio de la Casa, Sparks creek (Manuelitas creek).</p> <p>(e) The following waters are designated in the San Francisco River basin:</p> <p>(i) in the Blue Range wilderness: Pueblo creek;</p> <p>(ii) in the Gila wilderness: Big Dry creek, Lipsey canyon, Little Dry creek, Little Whitewater creek, South Fork Whitewater creek, Spider creek, Spruce creek, Whitewater creek.</p>

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
		<p>(f) The following waters are designated in the Mimbres Closed basin: in the Aldo Leopold wilderness Corral canyon, Mimbres river, North Fork Mimbres river, South Fork Mimbres river.</p> <p>(g) The following waters are designated in the Tularosa Closed basin: in the White Mountain wilderness Indian creek, Nogal Arroyo, Three Rivers.</p> <p>(h) The wetlands designated are identified on the maps and list of wetlands within United States forest service wilderness areas designated as outstanding national resource waters published at the New Mexico state library and available on the department's website.</p>
CAR05000I	Hualapai Tribe Tier 3	
		<p>Spencer, Meriwhitica, Willow Spring, Upper Milkweed Spring, Bridge Canyon, Travertine Spring, Travertine Falls, Diamond Creek, Diamond Creek Spring, Blue Mountain, Metuck, Peach Springs Spring, Westwater, Clay Tank, Hockey Puck, Pocamote Spring, Mohawk Spring, Granite Spring, Three Spring, Warm Spring, Honga Spring, National Canyon Spring, National Canyon, Moss Spring</p>
	White Mountain Apache Tribe of the Fort Apache Indian Reservation	
	Tier 2/2.5	<p>East Fork White River, above R52 Road, East Fork White River below R52 Road, above Rock Cr., Paradise Creek, above Wohlenberg, Ord Creek, Smith Cienega, Bull Cienega, Smith Creek, Big Bonito , Tonto Creek, below Y47 Crossing, Crooked Creek, Boggy Creek, Lofer Cienego Creek, Little Bonito Creek, above Y55 Crossing, Flash Creek, Squaw Creek, Hurricane Lake, Hurricane Creek, Hughey Creek, Bonito Cienega, West Fork Black River, Hall Cienega, Purcell Cienega, Thompson Creek, Carrizo Creek below Corduroy, Carrizo Creek above Corduroy, Cedar Creek, Big Canyon (E. Cedar Creek), Middle Cedar Creek, West Cedar Creek, Cibecue Creek in Box Canyon to Salt river, Cibecue Creek, Box CallYon up to confluence with Salt Creek, Spring Creek, Salt Creek, Cibecue Creek, from confluence w/Salt Cr, to Big Springs, Cibecue Creek, above Big Springs, Rock Springs Creek, Salt Draw, Canyon Creek S. of Chediski Farms, Willow Creek (Lower Canyon Cr), Oak Creek, Canyon Creek. N. of Chedlski Fanns,</p>
	Tier 3	<p>East Fork While River, in Wilderness Area, Pumpkin Lake</p>
IDR050000	State of Idaho	
		<p>For Tier 2 and Tier 3 waters, please consult the Idaho Integrated Report, available at: http://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report.aspx and the closest regional office of the Idaho Department of Environmental Quality: http://www.deq.idaho.gov/regional-offices-issues.aspx</p>

Appendix M - Discharge Monitoring Report (DMR) Form

Part 7.1 requires you to use the electronic NetDMR system to prepare and submit your Discharge Monitoring Report (DMR) form. However, if you are given approval by the EPA Regional Office to use a paper DMR form, and you elect to use it, you must complete and submit the following form.

NPDES FORM 6100-29		UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 MSGP INDUSTRIAL DISCHARGE MONITORING REPORT (DMR) FORM	Form Approved. OMB No. 2040-0004
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A. Approval to Use Paper DMR Form

1. Have you been granted a waiver from electronic reporting from the EPA Regional Office*? ☐ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted: ☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.

☐ The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver:

Date approval obtained: / /

*** Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper DMR form. If you have not obtained a waiver, you must file this form electronically using the NetDMR at <http://www.epa.gov/netdmr/>**

B. Permit Information

1. NPDES ID:

2. Reason(s) for Submission (Check all that apply):

☐ Submitting monitoring data (Fill in all Sections).

☐ Reporting no discharge for all outfalls for this monitoring period (Fill in Sections A, B, C, D, E.1, and G).

☐ Reporting that your site status has changed to inactive and unstaffed (Fill in Sections A, B, C, D, and F and include date of status change in comment field in Section F.4).

☐ Reporting that your site status has changed to active (Fill in all Sections and include date of status change in comment field in Section F.4).

☐ Reporting that no further pollutant reductions are achievable for all outfalls and for all pollutants via Part 6.2.1.2 of the MSGP (Fill in Sections A, B, C, D, and G).

C. Facility Operator Information

1. Operator Information

Operator Name:

Mailing Address:

Street:

City: State: ZIP Code: -

Phone: - - Ext.

E-mail:

2. DMR Preparer (Complete if DMR was prepared by someone other than the certifier):

First Name, Middle Initial, Last Name:

Organization:

Phone: - - Ext.

E-mail:

D. Facility Information

1. Facility Name:

2. Facility Address:

Street/Location:

City: State: ZIP Code: -

County or Similar Government Subdivision:

E. Discharge Information

1. Identify monitoring period: ☐ Check here if proposing alternative monitoring periods due to irregular stormwater runoff. Identify alternative monitoring schedule and indicate for which alternative monitoring period you are reporting monitoring data:

☐ Quarter 1 (January 1 – March 31) ☐ Quarter 1: From / To /

☐ Quarter 2 (April 1 – June 30) ☐ Quarter 2: From / To /

☐ Quarter 3 (July 1 – September 30) ☐ Quarter 3: From / To /

☐ Quarter 4 (October 1 – December 31) ☐ Quarter 4: From / To /

2. Are you required to monitor for cadmium, copper, chromium, lead, nickel, silver, or zinc in freshwater? ☐ Yes (Skip to 3) ☐ No (Skip to 4)

3. What is the hardness level of the receiving water? (mg/L)

4. Does your facility discharge into any saltwater receiving waters? ☐ Yes ☐ No



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460
MSGP INDUSTRIAL DISCHARGE MONITORING REPORT (DMR)

Form Approved. OMB No. 2040-0004

F. Monitoring Information

Note: Make additional copies of this form as necessary.

1. Nature of Discharge: ☐ Rainfall (Complete line items 2.a., 2.b., & 2.c.) ☐ Snowmelt

2.a. Duration of the rainfall event (hours):

2.b. Rainfall amount (inches):

2.c. Time since previous measurable storm event (days):

3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
		<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> Substantially identical to outfall: _____	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> Substantially identical to outfall: _____	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> Substantially identical to outfall: _____	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> Substantially identical to outfall: _____	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> Substantially identical to outfall: _____	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> Substantially identical to outfall: _____	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> Substantially identical to outfall: _____	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

G. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

[illegible][illegible]

Signature: _____

Date:

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**Discharge Monitoring Report (DMR) for Stormwater Discharges
Associated with Industrial Activity Under the NPDES Multi-Sector General Permit**

NPDES Form Date (06/15)

Form Approved OMB No. 2040-0004

Who Must Submit A Discharge Monitoring Report to EPA?

Facilities covered under the Multi-Sector General Permit (MSGP or permit) that are required to monitor pursuant to Parts 6.2 and 8 of the permit must submit Discharge Monitoring Reports (DMRs) consistent with the reporting requirements specified in Part 7.1 of the permit.

Completing the Form

Obtain and read a copy of the 2015 MSGP, viewable at <http://water.epa.gov/polwaste/npdes/stormwater/EPA-Multi-Sector-General-Permit-MSGP.cfm>. To complete this form, type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. Please submit original document with signature in ink - do not send a photocopied signature. **Photocopy your DMR form for your records before you send the completed original form to the appropriate address.**

Section A. Approval to Use Paper DMR Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper DMR form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA staff person who granted the waiver, and the date that approval was provided. See <http://water.epa.gov/polwaste/npdes/stormwater/EPA-Multi-Sector-General-Permit-MSGP.cfm> for a list of EPA Regional Office contacts.

Section B. Permit Information

Provide the NPDES ID (i.e., NOI tracking number) assigned to the facility for which this DMR is being submitted.

Indicate your reason(s) for submitting this DMR by checking all boxes that apply. The reasons for submission are defined as follows:

- *Submitting monitoring data:* For each storm sampled, submit one DMR form with data for all outfalls sampled. Select this reason even if you only have monitoring data for some of your outfalls (i.e., some outfalls did not discharge). If you select this reason you are required to complete all Sections of the form.
- *Reporting no discharge for all outfalls for this monitoring period:* Indicates that there were no discharges from all outfalls during this monitoring period. If you select this reason you are only required to complete Sections A, B, C, D, E.1, and G.
- *Reporting that your site status has changed to inactive and unstaffed:* Indicates that your facility is currently inactive and unstaffed (See Part 6.2.1.3 of the permit for more information). If you select this reason you are only required to complete Sections A, B, C, D, and F and include date of status change in comment field in Section F.4
- *Reporting that your site status has changed from inactive to active:* Indicates that your facility is currently active (See Part 6.2.1.3 of the permit for more information). If you select this reason you are required to complete all Sections of the form and include date of status change in the comment field in Section F.4.

- *Reporting that no further reductions are achievable for all outfalls and for all pollutants via Part 6.2.1.2 of the permit:* Indicates that you have determined that no further pollutant reductions are technologically and economically practicable in light of best industry practice to meet the technology-based effluent limits or are necessary to meet the water-quality-based effluent limitations in Parts 2 of the permit (See Part 6.2.1.2 of the permit for more information). If you select this reason you are required to complete Sections A, B, C, D and G. However, if you can make this finding for some outfalls and pollutants, but not for others, you cannot select this reason; you will instead be able to identify which outfalls and which pollutants you can make this finding for in Section F.

Section C. Facility Operator Information.

Provide the legal name of the person, firm, public organization, or any other entity that operates the facility for which this DMR is being submitted. An operator of a facility is the legal entity that controls the operation of the facility. Refer to Appendix A of the permit for the definition of "operator". Provide the operator's mailing address, phone number, and e-mail. The operator information in this Section should match the operator information provided on your NOI form.

Provide the name, organization, phone number, an email address for the person who prepared this DMR form.

Section D. Facility Information

Enter the official or legal name and complete street address, including city, state, ZIP code, and county or similar government subdivision of the facility. If the facility lacks a street address, indicate the general location of the facility (e.g., Intersection of State Highways 61 and 34). Complete facility information must be provided for permit coverage to be granted. The facility information in this Section should match the facility information provided on your NOI form.

Section E. Discharge Information.

Indicate the appropriate monitoring period (Quarter 1, 2, 3, or 4) covered by the DMR. "Alternative" monitoring periods can apply to facilities located in arid and semi-arid climates, or in areas subject to snow or prolonged freezing. To use alternative monitoring periods, you must provide a revised monitoring schedule here. If using alternative monitoring periods, identify the first day of the monitoring period through the last day of the monitoring period for each of the four periods. The dates should be displayed as month (Mo) / day (Day). See Parts 6.1.6 and 6.1.7 of the permit for more information.

If you are submitting benchmark monitoring data, identify if your facility is required to collect benchmark samples for one or more hardness-dependent metals (i.e., cadmium, copper, lead, nickel, silver, and zinc). If you select "yes" to this question provide the hardness level of the receiving water (in mg/L). If you select "no" to this question, you must identify if your facility discharges into any saltwater receiving waters.

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F. Monitoring Information

For the reported monitoring event indicate whether the discharge was from a rainfall or snowmelt event. If you select "rainfall" then indicate the duration (in hours) of the rainfall event, rainfall total (in inches) for that rainfall event, and time (in days) since the previous measurable storm event in line items 2.a-c. For both rainfall and snowmelt monitoring, you must identify the date of collection for the monitoring event in column 3.i. of the table. If the discharge occurs during a period of both rainfall and snowmelt, check both the rainfall and snowmelt boxes and report the appropriate rainfall information in item 2.a-c. To report multiple monitoring events in the same reporting period, copy this form and enter each monitoring event separately with data for all outfalls sampled.

Identify all the outfalls from your facility that discharge stormwater. Each outfall must be assigned a unique 3-digit number (e.g., 001, 002, 003), and should match the outfalls identified on your NOI form.

If any outfalls are substantially identical, check the box in 3.b and identify the outfall that the outfall in 3.a is substantially identical to. In 3.d – k, you only need to provide benchmark monitoring data for one of the outfalls.

For any outfall for which there was no discharge during the monitoring period, check the box in 3.

In 3.d, identify the type of monitoring using the specified codes, in parentheses, below:

- (QBM) – Quarterly benchmark monitoring
- (ELG) – Annual effluent limitations guidelines monitoring;
- (S/T) – State- or Tribal-specific monitoring;
- (I) – Impaired waters monitoring; or
- (O) – Other monitoring as required by EPA.

In 3.e, enter each "parameter" (or "pollutant") monitored. For QBM and ELG monitoring, use the same parameter name as in Part 8 of the permit.

In 3.f., enter a sample measurement value for each parameter analyzed and required to be reported. Enter "ND" (i.e., not detected) for any sample results below the method detection limit or "BQL" (i.e., below quantitation limit) for sample results above the detection limit but below the quantitation limit.

In 3.g., enter the units for sample measurement values (i.e., "mg/L" for milligrams per liter) for each parameter analyzed and required to be reported. For monitoring results reported as ND or BQL this space will be left blank and the units will be reported in Column 3.f.

3.h. must be completed for any monitoring results reported as ND or BQL in the "Quality or Concentration" column. For ND, report the laboratory detection level and units in this column. For BQL, report the laboratory quantitation limit and units in this column.

In 3.i. identify the sampling date for each parameter monitoring result reported on this form.

3.h. *Exceedance due to natural background pollutant levels:* Check box if following the first 4 quarters of benchmark monitoring (or sooner if the exceedance is triggered by less than 4 quarters of data) you have determined that the exceedance of the

benchmark is attributable solely to the presence of that pollutant in the natural background for that outfall and any substantially identical outfalls, or for impaired waters monitoring, the presence of the pollutant is caused solely by natural background. See Part 6.2.1.2 and 6.2.4.1 of the permit for more information.

In 3.j. check the box if after collection of 4 quarterly samples (or sooner if the exceedance is triggered by less than 4 quarters of data), the average of the 4 monitoring values for any parameter exceeds the benchmark and you have made the determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology-based effluent limits or are necessary to meet the water-quality-based effluent

Where violations of the permit requirements are reported, include a brief explanation to describe the cause and corrective actions taken, and reference each violation by date. Also, this section should include any additional comments such as are required when changing site status from inactive and unstaffed to active or vice versa. Attach additional pages if you need more space.

Attach additional copies of Section F as necessary to address all outfalls and parameters.

Section G. Certification Information

DMRs must be signed by a person described below, or by a duly authorized representative of that person.

For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing.

**Discharge Monitoring Report (DMR) for Stormwater Discharges
Associated with Industrial Activity Under the NPDES Multi-Sector General Permit**

NPDES Form Date (06/15)

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A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above;
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and
3. The written authorization is submitted to the Director.

An unsigned or undated DMR form be considered incomplete.

Paperwork Reduction Act Notice

Public reporting burden for this form is estimated to average 7.25 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number of this form on any correspondence. Do not send the completed DMR form to this address.

Submitting Your Form

If you have been granted a waiver from your Regional Office to submit a paper DMR form, you must send your DMR form by mail to one of the following addresses:

Region 1

MSGP Discharge Monitoring Reports (OES4-SMR)
EPA New England, Region 1
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Region 2

MSGP Discharge Monitoring Reports
290 Broadway
DECA/CAPBS/DMT
21st Floor
New York, NY, 10007-1866

Region 3

Nancy Ford
U.S. EPA Region 3
1650 Arch Street
Mail Code #3WP60
Philadelphia, PA 19103

Region 5

U.S. Environmental Protection Agency Region 5
77 West Jackson Boulevard (WN-16J)
Chicago, Illinois 60604
Attn: Brian Bell - Storm Water Coordinator

Region 6

U.S. EPA, Region 6 MSGP DMRs
Water Enforcement Branch (6EN-WC)
1445 Ross Avenue
Dallas, TX 75202

Region 7

Neal Gilbert
U.S. Environmental Protection Agency, Region 7
Enforcement Coordination Office
11201 Renner Blvd
Lenexa, KS 66219

Region 8

U.S. EPA, Region 8 (ENF-PJ)
Attention: DMR Coordinator
1595 Wynkoop Street
Denver, CO 80202-1129

Region 9

Sandra Chew
U.S. EPA Region 9
Information Management Section, ENF-4-1
75 Hawthorne Street
San Francisco, CA 94105

Region 10

U.S. EPA Region 10
Attn: NPDES Data Manager, OCE-101
1200 Sixth Avenue, Suite 900
Seattle, WA 98101

Visit this website for instructions on how to submit electronically:
<http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm>

Appendix N - List of SIC and NAICS Codes

Sector A. Timber Products					
Sub-sector	SIC Codes		NAICS Codes		Notes
A3	2411	Logging (log storage and handling activities only; wet deck storage areas only authorized if no chemical additives are used in the spray water or applied to the logs.)	113310	Logging	
A1	2421	General Sawmills and Planing Mills (sawmills)	321113	Sawmills	
		(lumber manufacturing from purchased lumber, softwood cut stock, wood lath, fence pickets, and planing mill products)	321912	Cut Stock, Resawing Lumber, and Planing	
		(softwood flooring)	321918	Other Millwork (including Flooring)	
		(box lumber made from purchased lumber)	321920	Wood Container and Pallet Manufacturing	
		(kiln drying)	321999	All Other Miscellaneous Wood Product Manufacturing	
A4	2426	Hardwood Dimension and Flooring Mills (hardwood dimension lumber made from logs or bolts)	321113	Sawmills	
		(hardwood cut stock, resawing hardwood lumber, and planing purchased hardwood lumber except flooring)	321912	Cut Stock, Resawing Lumber, and Planing	
		(hardwood flooring)	321918	Other Millwork (including Flooring)	
		(wood furniture frames and finished furniture parts)	337215	Showcase, Partition, Shelving, and Locker Manufacturing	
	2429	Special Product Sawmills, Not Elsewhere Classified (shingle mills, shakes)	321113	Sawmills	
		(stave manufacturing from purchased lumber)	321912	Cut Stock, Resawing Lumber, and Planing	
		(cooperage stock)	321920	Wood Container and Pallet Manufacturing	
		(excelsior)	321999	All Other Miscellaneous Wood Product Manufacturing	

	2431	Millwork (wood windows and doors)	321911	Wood Window and Door Manufacturing	
		(except wood windows and doors)	321918	Other Millwork (including Flooring)	
	2435	Hardwood Veneer and Plywood	321211	Hardwood Veneer and Plywood Manufacturing	
	2436	Softwood Veneer and Plywood	321212	Softwood Veneer and Plywood Manufacturing	
	2439	Structural Wood Members, Not Elsewhere Classified (except trusses)	321213	Engineered Wood Member (except Truss) Manufacturing	
		(trusses)	321214	Truss Manufacturing	
A5	2441	Nailed and Lock Corner Wood Boxes and Shook	321920	Wood Container and Pallet Manufacturing	
A4	2448	Wood Pallets and Skids	321920	Wood Container and Pallet Manufacturing	
	2449	Wood Containers, Not Elsewhere Classified	321920	Wood Container and Pallet Manufacturing	
	2451	Mobil Homes	321991	Manufactured Home (Mobil Home) Manufacturing	
	2452	Prefabricated Wood Buildings and Components	321992	Prefabricated Wood Building Manufacturing	
A2	2491	Wood Preserving	321114	Wood Preservation	
A4	2493	Reconstituted Wood Products	321219	Reconstituted Wood Product Manufacturing	
	2499	Wood Products, Not Elsewhere Classified (wood containers, such as noncoopered vats and reed or straw baskets)	321920	Wood Container and Pallet Manufacturing	
		(except wood containers, wood cooling towers, cork life preservers, mirror or picture frames, and laundry hampers of reed, rattan, and willow)	321999	All Other Miscellaneous Wood Product Manufacturing	
		(wood cooling towers)	333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	
		(laundry hampers of reed, rattan, and willow)	337125	Household Furniture (except Wood and Metal) Manufacturing	
		(cork life preservers)	339113	Surgical Appliance and Supplies Manufacturing	
		(mirror and picture frames)	339999	All Other Miscellaneous Manufacturing	

Sector B. Paper and Allied Products Manufacturing					
Sub-sector	SIC Codes		NAICS Codes		Notes
B2	2611	Pulp Mills (pulp producing mills only)	322110	Pulp Mills	
		(producing paper except newsprint)	322121	Paper (except Newsprint) Mills	
		(producing newsprint)	322122	Newsprint Mills	
		(producing paperboard)	322130	Paperboard Mills	
	2621	Paper Mills (except newsprint mills)	322121	Paper (except Newsprint) Mills	
		(newsprint mills)	322122	Newsprint Mills	
B1	2631	Paperboard Mills	322130	Paperboard Mills	
B2	2652	Setup Paperboard Boxes	322213	Setup Paperboard Box Manufacturing	
	2653	Corrugated and Solid Fiber Boxes	322211	Corrugated and Solid Fiber Boxes Manufacturing	
	2655	Fiber Cans, Tubes, Drums, and Similar Products	322214	Fiber Can, Tube, Drum, and Similar Products Manufacturing	
	2656	Sanitary Food Containers, Except Folding	322215	Nonfolding Sanitary Food Container Manufacturing	
	2657	Folding Paperwork Boxes	322212	Folding Paperboard Box Manufacturing	
	2671	Packaging Paper and Plastics Film, Coated and Laminated			
		(except single-web and multi-web plastics packaging film and sheets)	322221	Coated and Laminated Packaging Paper and Plastics Film Manufacturing	
		(single-web and multi-web plastics packaging film and sheets)	326112	Plastics Packaging Film and Sheet (including Laminated) Manufacturing	Any facility whose primary activity is manufacturing single-web and multi-web plastics packaging film and sheets (SIC 2671 / NAICS 326112) should be regulated under Sector Y, but may continue to be regulated under Sector B, or alternatively, under Sector AD. Sectors Y, B, and AD do not have specific requirements for facilities manufacturing single-web and multi-web plastics packaging film and sheets. However, under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements. Regulatory burden would not differ between Sectors B and Y.
	2672	Coated and Laminated Paper, NEC	322222	Coated and Laminated Paper Manufacturing	

	2673	Plastics, Foil, and Coated Paper Bags (except single-web or multi-web plastics bags)	322223	Plastics, Foil, and Coated Paper Bags Manufacturing	
		(single-web and multi-web plastics bags)	326111	Plastics Bag Manufacturing	Any facility whose primary activity is manufacturing single-web and multi- web plastics bags (SIC 2673 / NAICS 326111) should be regulated under Sector Y, but may continue to be regulated under Sector B, or alternatively, under Sector AD. Sectors Y, B, and AD do not have specific requirements for facilities manufacturing single-web and multi- web plastics bags. However, under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements. Regulatory burden would not differ between Sectors B and Y.
	2674	Uncoated Paper and Multiwall Bags	322224	Uncoated Paper and Multiwall Bags Manufacturing	
	2675	Die Cut Paper and Paperboard and Cardboard (pasted, lined, laminated, or surface- coated paperboard)	322226	Surface-Coated Paperboard Manufacturing	
		(die cut paper and paperboard office supplies, such as file folders, tabulating cards, and report covers)	322231	Die Cut Paper and Paperboard Office Supplies Manufacturing	
		(except pasted, lined, laminated, or surface-coated paperboard and die- cut paper and paperboard office supplies)	322299	All Other Converted Paper Product Manufacturing	
	2676	Sanitary Paper Products	322291	Sanitary Paper Product Manufacturing	
	2677	Envelopes	322232	Envelope Manufacturing	
	2678	Stationery, Tablets, and Related Products	322233	Stationery, Tablets, and Related Product Manufacturing	
	2679	Converted Paper and Paperboard Products, NEC (corrugated paper)	322211	Corrugated and Solid Fiber Box Manufacturing	
		(wallpaper and gift wrap paper)	322222	Coated and Laminated Paper Manufacturing	
		(paper supplies for business machines, such as adding machine tape, and other paper office supplies)	322231	Die Cut Paper and Paperboard Office Supplies Manufacturing	

		(except corrugated paper, wall paper, gift wrap paper, paper supplies for business machines, and other paper office supplies)	322299	All Other Converted Paper Product Manufacturing	
Sector C. Chemical and Allied Products Manufacturing					
Sub-sector	SIC Codes		NAICS Codes		Notes
C2	2812	Alkalies and Chlorine	325181	Alkalies and Chlorine Manufacturing	
	2813	Industrial Gases	325120	Industrial Gas Manufacturing	
	2816	Inorganic Pigments (except bone and lamp black)	325131	Inorganic Dye and Pigment Manufacturing	
		(bone and lamp black)	325182	Carbon Black Manufacturing	
	2819	Industrial Inorganic Chemicals, Not Elsewhere Classified (recovering sulfur from natural gas)	211112	Natural Gas Liquid Extraction	
		(inorganic dyes)	325131	Inorganic Dye and Pigment Manufacturing	
		(other)	325131	All Other Basic Inorganic Chemical Manufacturing	
		(activated carbon and charcoal)	325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	
		(alumina)	331311	Alumina Refining	Any facility whose primary activity is alumina refining (NAICS 331311) should be regulated under Sector F, but may continue to be regulated under Sector C. Sector C requires sector/subsector specific benchmark monitoring for total aluminum, total iron, and nitrate plus nitrite nitrogen. Sector F applies additional technology-based effluent limits comprised of good housekeeping measures; additional SWPPP requirements; and additional inspection requirements. Regulatory burdens differ between Sectors C and F but determining which sector would be more burdensome would depend on the regulated facility.
C4	2821	Plastics Materials, Synthetic Resins, and Nonvulcanizable Elastomers	325211	Plastics Material and Resin Manufacturing	
	2822	Synthetic Rubber	325212	Synthetic Rubber Manufacturing	

	2823	Cellulosic Manmade Fibers	325221	Cellulosic Organic Fiber Manufacturing	
	2824	Manmade Organic Fibers, Except Cellulosic	325222	Noncellulosic Organic Fiber Manufacturing	
C5	2833	Medicinal Chemicals and Botanical Products	325411	Medicinal and Botanical Manufacturing	
	2834	Pharmaceutical Preparations	325412	Pharmaceutical Preparation Manufacturing	
	2835	In Vitro and In Vivo Diagnostic Substances			
		(except in vitro diagnostic substances)	325412	Pharmaceutical Preparation Manufacturing	
		(in vitro diagnostic substances)	325413	In Vitro Diagnostic Substance Manufacturing	
	2836	Biological Products, Except Diagnostic Substances	325414	Biological Product (except Diagnostic) Manufacturing	
C3	2841	Soaps and Other Detergents, Except Specialty Cleaners	325611	Soap and Other Detergent Manufacturing	
	2842	Specialty Cleaning, Polishing, and Sanitation Preparations	325612	Polish and Other Sanitation Good Manufacturing	
	2843	Surface Active Agents, Finishing Agents, Sulfonated Oils, and Assistants	325613	Surface Active Agent Manufacturing	
	2844	Perfumes, Cosmetics, and Other Toilet Preparations			
		(toothpaste, gel and dentifrice powders)	325611	Soap and Other Detergent Manufacturing	
		(except toothpaste, gel and dentifrice powders)	325620	Toilet Preparation Manufacturing	
C5	2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products	325510	Paint and Coating Manufacturing	
	2861	Gum and Wood Chemicals	325191	Gum and Wood Chemical Manufacturing	
	2865	Cyclic Organic Crudes and Intermediates, and Organic Dyes and Pigments			
		(aromatics)	325110	Petrochemical Manufacturing	
		(organic dyes and pigments)	325132	Synthetic Organic Dye and Pigment Manufacturing	
		(except aromatics and organic dyes and pigments)	325192	Cyclic Crude and Intermediate Manufacturing	
	2869	Industrial Organic Chemicals, Not Elsewhere Classified			
		(aliphatics)	325110	Petrochemical Manufacturing	
		(fluorocarbon gases)	325120	Industrial Gas Manufacturing	
		(carbon bisulfide)	325188	All Other Basic Inorganic Chemical Manufacturing	

		(cyclopropane, diethylcyclohexane, naphthalene sulfonic acid)	325192	Cyclic Crude and Intermediate Manufacturing	
		(ethyl alcohol)	325193	Ethyl Alcohol Manufacturing	
		(except aliphatics, carbon bisulfide, ethyl alcohol, cyclopropane, diethylcyclohexane, naphthalene sulfonic acid, synthetic hydraulic fluids, and fluorocarbon gases)	325199	All Other Basic Organic Chemical Manufacturing	
		(synthetic hydraulic fluids)	325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	
C1	2873	Nitrogenous Fertilizers	325311	Nitrogenous Fertilizer Manufacturing	
	2874	Phosphatic Fertilizers	325312	Phosphatic Fertilizer Manufacturing	
	2875	Fertilizers, Mixing Only	325314	Fertilizers (Mixing Only) Manufacturing	
	2879	Pesticides and Agricultural Chemicals, NEC	325320	Pesticides and Other Agricultural Chemical Manufacturing	
C5	2891	Adhesives and Sealants	325520	Adhesive Manufacturing	
	2892	Explosives	325920	Explosives Manufacturing	
	2893	Printing Ink	325910	Printing Ink Manufacturing	
	2895	Carbon Black	325182	Carbon Black Manufacturing	
	2899	Chemicals and Chemical Preparations, NEC			
		(table salt)	311942	Spice and Extract Manufacturing (table salt only)	
		(fatty acids)	325199	All Other Basic Organic Chemical Manufacturing	
		(frit and plastic wood fillers)	325510	Paint and Coating Manufacturing	
		(except frit, plastic wood fillers, fatty acids, and table salt)	325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	
	2911	Petroleum Refining	324110	Petroleum Refineries	
	3952	Lead Pencils, Crayons, and Artists' Materials (limited to inks and paints, including china painting enamels)			
		(drawing inks and india ink)	325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	
		(china painting enamels, platinum paint for burnt wood or leather work, paints for china painting, artist's paints, and artist's watercolors)	339942	Lead Pencil and Art Good Manufacturing	

Sector D. Asphalt Paving and Roofing Materials Manufacturers and Lubricant Manufacturers					
Sub-sector	SIC Codes		NAICS Codes		Notes
D1	2951	Asphalt Paving Mixtures and Blocks	324121	Asphalt Paving Mixture and Block Manufacturing	
	2952	Asphalt Felt and Coatings	324122	Asphalt Shingle and Coating Materials Manufacturing	
D2	2992	Lubricating Oils and Greases	324191	Petroleum Lubricating Oil and Grease Manufacturing	
	2999	Products of Petroleum and Coal, Not Elsewhere Classified	324199	All Other Petroleum and Coal Products Manufacturing	
Sector E. Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing					
Sub-sector	SIC Codes		NAICS Codes		Notes
E3	3211	Flat Glass	327211	Flat Glass Manufacturing	
	3221	Glass Containers	327213	Glass Container Manufacturing	
	3229	Pressed and Blown Glass and Glassware, Not Elsewhere Classified	327212	Other Pressed and Blown Glass and Glassware Manufacturing	
	3231	Glass Product Manufacturing Made of Purchased Glass	327215	Glass Product Manufacturing Made of Purchased Glass	
	3241	Hydraulic Cement	327310	Cement Manufacturing	
E1	3251	Brick and Structural Clay Tile (except slumped brick)	327121	Brick and Structural Clay Tile Manufacturing	
		(slumped brick)	327331	Concrete Block and Brick Manufacturing	
	3253	Ceramic Wall and Floor Tile	327122	Ceramic Wall and Floor Tile Manufacturing	
	3255	Clay Refractories	327124	Clay Refractory Manufacturing	
	3259	Structural Clay Products, Not Elsewhere Classified	327123	Other Structural Clay Product Manufacturing	
	3261	Vitreous China Plumbing Fixtures and China and Earthenware Fittings and Bathroom Accessories	327111	Vitreous China Plumbing Fixture and China and Earthenware Bathroom Accessories Manufacturing	
	3262	Vitreous China Table and Kitchen Articles	327112	Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing	
	3263	Fine Earthenware (Whiteware) Table and Kitchen Articles	327112	Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing	
	3264	Porcelain Electrical Supplies	327113	Porcelain Electrical Supply Manufacturing	
	3269	Pottery Products, Not Elsewhere Classified	327112	Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing	

E2	3271	Concrete Block and Brick	327331	Concrete Block and Brick Manufacturing	
	3272	Concrete Products, Except Block and Brick			
		(concrete pipe)	327332	Concrete Pipe Manufacturing	
		(concrete products, except dry mix concrete and pipe)	327390	Other Concrete Product Manufacturing	
		(dry mixture concrete)	327999	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing	
	3273	Ready-Mixed Concrete	327320	Ready-Mix Concrete Manufacturing	
	3274	Lime Manufacturing			
		Calcium hydroxide (i.e., hydrated lime) manufacturing	327410	Lime Manufacturing	
		Calcium oxide (i.e., quicklime) manufacturing	327410	Lime Manufacturing	
		Dolomite, dead-burned, manufacturing	327410	Lime Manufacturing	
		Hydrated lime (i.e., calcium hydroxide) manufacturing	327410	Lime Manufacturing	
		Quicklime (i.e., calcium oxide) manufacturing	327410	Lime Manufacturing	
		Agricultural lime manufacturing	327410	Lime Manufacturing	
		Dolomitic lime manufacturing	327410	Lime Manufacturing	
	3275	Gypsum Products	327420	Gypsum Product Manufacturing	
E3	3281	Cut Stone and Stone Products	327991	Cut Stone and Stone Product Manufacturing	
	3291	Abrasive Products (except steel wool manufacturing)	327910	Abrasive Product Manufacturing	
		(steel wool manufacturing)	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	Any facility whose primary activity is steel wool manufacturing (NAICS 332999) should be regulated under Sector AA, but may continue to be regulated under Sector E. Sector AA applies additional technology-based effluent limits comprised of good housekeeping measures, spill prevention and response procedures, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector E applies additional technology-based effluent limits comprised of good housekeeping measures, and additional SWPPP requirements.

					Regulatory burden would likely be greater under Sector AA.
	3292	Asbestos Products (except brake pads and linings)	327999	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing	
		(asbestos brake linings and pads)	336340	Motor Vehicle Brake System Manufacturing	
		(asbestos clutch facings, motor vehicle)	336350	Motor Vehicle Transmission and Power Train Parts Manufacturing	
	3295	Minerals and Earths, Ground or Otherwise Treated (grinding, washing, separating, etc. of kaolin and ball clay)	212324	Kaolin and Ball Clay Mining	
		(grinding, washing, separating, etc. of clay, ceramic, and refractory minerals not elsewhere classified)	212325	Clay and Ceramic and Refractory Minerals Mining	
		(grinding, washing, separating, etc. of chemical and fertilizer minerals, not elsewhere classified)	212393	Other Chemical and Fertilizer Mineral Mining	
		(grinding, washing, separating, etc. of nonmetallic minerals, not elsewhere classified)	212399	All Other Nonmetallic Mineral Mining	
		(except grinding, washing, separating, etc. of nonmetallic minerals)	327992	Ground or Treated Mineral and Earth Manufacturing	
	3296	Mineral Wool	327993	Mineral Wool Manufacturing	
	3297	Nonclay Refractories	327125	Nonclay Refractory Manufacturing	
	3299	Nonmetallic Mineral Products, Not Elsewhere Classified			
		(clay statuary)	327112	Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing	
		(moldings, ornamental and architectural plaster work, and gypsum statuary)	327420	Gypsum Product Manufacturing	
		(except moldings, ornamental and architectural plaster work, clay statuary, and gypsum statuary)	327999	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing	
Sector F. Primary Metals					
Sub-sector	SIC Codes		NAICS Codes		Notes
F1	3312	Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills			

		(coke oven products [e.g., coke, gases, tars] made in coke oven establishments)	324199	All Other Petroleum and Coal Products Manufacturing	Any facility whose primary activity is manufacturing coke oven products (e.g., coke, gases, tars) made in coke oven establishments should be regulated under Sector D, but may continue to be regulated under Sector F. Sector F requires sector-specific benchmark monitoring requirements for total aluminum and total zinc, Sector D does not require benchmark monitoring from these facilities. Regulatory burden would be greater under Sector F.
		(except coke ovens not integrated with steel mills and hot-rolling purchased steel)	331111	Iron and Steel Mills	
		(hot-rolling purchased steel)	331221	Rolled Steel Shape Manufacturing	
	3313	Electrometallurgical Products, Except Steel	331112	Electrometallurgical Ferroalloy Product Manufacturing	
	3315	Steel Wiredrawing and Steel Nails and Spikes (steel wire drawing)	331222	Steel Wire Drawing	
	3316	Cold-Rolled Steel Sheet, Strip, and Bars	331221	Rolled Steel Shape Manufacturing	
	3317	Steel Pipe and Tubes	331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	
F2	3321	Gray and Ductile Iron Foundries	331511	Iron Foundries	
	3322	Malleable Iron Foundries	331511	Iron Foundries	
	3324	Steel Investment Foundries	331512	Steel Investment Foundries	
	3325	Steel Foundries, NEC	331513	Steel Foundries (except Investment)	
F5	3331	Primary Smelting and Refining of Copper	331411	Primary Smelting and Refining of Copper	
	3334	Primary Production of Aluminum	331312	Primary Aluminum Production	
	3339	Primary Smelting and Refining of Nonferrous Metals, Except Copper and Aluminum	331419	Primary Smelting and Refining of Nonferrous Metal (except Copper and Aluminum)	
	3341	Secondary Smelting and Refining of Nonferrous Metals (aluminum)	331314	Secondary Smelting and Alloying of Aluminum	
		(copper)	331423	Secondary Smelting, Refining and Alloying of Copper	

		(except copper and aluminum)	331492	Secondary Smelting, Refining and Alloying of Nonferrous Metal (except Copper and Aluminum)	
F3	3351	Rolling, Drawing, and Extruding of Copper	331421	Copper Rolling, Drawing, and Extruding	
	3353	Aluminum Sheet, Plate, and Foil	331315	Aluminum Sheet, Plate, and Foil Manufacturing	
	3354	Aluminum Extruded Products	331316	Aluminum Extruded Product Manufacturing	
	3355	Aluminum Rolling and Drawing, Not Elsewhere Classified	331319	Other Aluminum Rolling and Drawing	
	3356	Rolling, Drawing, and Extruding of Nonferrous Metals, Except Copper and Aluminum	331491	Nonferrous Metal (Except Copper and Aluminum) Rolling, Drawing, and Extruding	
	3357	Drawing and Insulating of Nonferrous Wire			
		(aluminum wire drawing)	331319	Other Aluminum Rolling and Drawing	
		(copper wire drawing)	331422	Copper Wire (except Mechanical) Drawing	
		(wire drawing except copper or aluminum)	331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding	
		(fiber optic cable-insulating only)	335921	Fiber Optic Cable Manufacturing	
		(communication and energy wire, except fiber optic-insulating only)	335929	Other Communication and Energy Wire Manufacturing	
F4	3363	Aluminum Die Castings	331521	Aluminum Die Casting Foundries	
	3364	Nonferrous Die Castings, Except Aluminum	331522	Nonferrous (Except Aluminum) Die Casting Foundries	
	3365	Aluminum Foundries	331524	Aluminum Foundries (Except Die-Casting)	
	3366	Copper Foundries	331525	Copper Foundries (Except Die-Casting)	
	3369	Nonferrous Foundries, Except Copper and Aluminum	331528	Other Nonferrous Foundries (Except Die-Casting)	
F5	3398	Metal Heat Treating	332811	Metal Heat Treating	
	3399	Primary Metal Products, Not Elsewhere Classified			
		(iron ore recovery from open hearth slag)	331111	Iron and Steel Mills	
		(ferrous powder, paste, flakes, etc.)	331221	Rolled Steel Shape Manufacturing	
		(aluminum powder, paste, flakes, etc.)	331314	Secondary Smelting and Alloying of Aluminum	
		(copper powder, paste, flakes, etc.)	331423	Secondary Smelting, Refining, and Alloying of Copper	
		(nonferrous powder, paste, flakes, etc. except copper and aluminum)	331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)	
		(nonferrous nails, brads, staples, tacks, etc. made from purchased nonferrous wire)	332618	Other Fabricated Wire Product Manufacturing	

Sector G. Metal Mining (Ore Mining and Dressing)					
Sub-sector	SIC Codes		NAICS Codes		Notes
G1	1021	Copper Ores	212234	Copper Ore and Nickel Ore Mining	
G2	1011	Iron Ores	212210	Iron Ore Mining	
	1021	Copper Ores	212234	Copper Ore and Nickel Ore Mining	
	1031	Lead and Zinc Ores	212231	Lead Ore and Zinc Ore Mining	
	1041	Gold Ores	212221	Gold Ore Mining	
	1044	Silver Ores	212222	Silver Ore Mining	
	1061	Ferroalloy Ores, Except Vanadium (nickel)	212234	Copper Ore and Nickel Ore Mining	
		(other ferroalloys except nickel)	212299	All Other Metal Ore Mining	
	1081	Metal Mining Services (except site preparation and related activities performed on a contract or fee basis and geophysical surveying and mapping)	213114	Support Activities for Metal Mining	
		(site preparation and related construction activities on a contract basis)	238910	Site Preparation Contractors	
	1094	Uranium-Radium-Vanadium Ores	212291	Uranium-Radium-Vanadium Ore Mining	
	1099	Miscellaneous Metal Ores, Not Elsewhere Classified	212299	All Other Metal Ore Mining	
Sector H. Coal Mines and Coal Mining-Related Facilities					
Sub-sector	SIC Codes		NAICS Codes		Notes
H1	1221	Bituminous Coal and Lignite Surface Mining	212111	Bituminous Coal and Lignite Surface Mining	
	1222	Bituminous Coal Underground Mining	212112	Bituminous Coal Underground Mining	
	1231	Anthracite Mining	212113	Anthracite Mining	
	1241	Coal Mining Services (except site preparation and related construction activities on a contract basis)	213113	Support Activities for Coal Mining	
		(site preparation and related construction activities on a contract basis)	238910	Site Preparation Contractors	

Sector I. Oil and Gas Extraction					
Sub-sector	SIC Codes		NAICS Codes		Notes
I1	1311	Crude Petroleum and Natural Gas	211111	Crude Petroleum and Natural Gas Extraction	
	1321	Natural Gas Liquids	211112	Natural Gas Liquid Extraction	
	1381	Drilling Oil and Gas Wells	213111	Drilling Oil and Gas Wells	
	1382	Oil and Gas Field Exploration Services	213112	Support Activities for Oil and Gas Operations	
	1389	Oil and Gas Field Services, Not Elsewhere Classified (except construction of field gathering lines, site preparation and related construction activities performed on a contract or fee basis)	213112	Support Activities for Oil and Gas Operations	
		(construction of field gathering lines on a contract or fee basis)	237120	Oil and Gas Pipeline and Related Structures Construction	
		(site preparation and related construction activities on a contract basis)	238910	Site Preparation Contractors	
Sector J. Mineral Mining and Dressing					
Sub-sector	SIC Codes		NAICS Codes		Notes
J2	1411	Dimension Stone	212311	Dimension Stone Mining and Quarrying	
	1422	Crushed and Broken Limestone	212312	Crushed and Broken Limestone Mining and Quarrying	
	1423	Crushed and Broken Granite	212313	Crushed and Broken Granite Mining and Quarrying	
	1429	Crushed and Broken Stone, Not Elsewhere Classified	212319	Other Crushed and Broken Stone Mining and Quarrying	
J1	1442	Construction Sand and Gravel	212321	Construction Sand and Gravel Mining	
	1446	Industrial Sand	212322	Industrial Sand Mining	
J3	1455	Kaolin and Ball Clay	212324	Kaolin and Ball Clay Mining	
	1459	Clay, Ceramic, and Refractory Minerals, Not Elsewhere Classified	212325	Clay, Ceramic, and Refractory Minerals Mining	
	1474	Potash, Soda, and Borate Minerals	212391	Potash, Soda, and Borate Mineral Mining	
	1475	Phosphate Rock	212392	Phosphate Rock Mining	
	1479	Chemical and Fertilizer Mineral Mining, Not Elsewhere Classified	212393	Other Chemical and Fertilizer Mineral Mining	
J2	1481	Nonmetallic Minerals Services, Except Fuels			

		(except geophysical surveying and mapping and site preparation and related construction activities performed on a contract or fee basis)	213115	Support Activities for Nonmetallic Minerals (except Fuels)	
		(site preparation and related construction activities on a contract basis)	238910	Site Preparation Contractors	
	1499	Miscellaneous Nonmetallic Minerals, Except Fuels			
		(except bituminous limestone and bituminous sandstone)	212399	All Other Nonmetallic Mineral Mining	
Sector K. Hazardous Waste Treatment, Storage or Disposal Facilities					
Sub-Sector	Activity Code	Narrative Description		Notes	
K1	HZ	<ul style="list-style-type: none">Hazardous waste treatmentHazardous waste storageHazardous waste disposalHazardous waste facilities operating under interim statusHazardous waste facilities operating under a permit under Subtitle C of RCRA		HZ is the Activity Code (i.e., non-SIC / non-NAICS designation) for this Sector. It potentially applies to any facility regardless of SIC / NAICS Code, in addition to these specifically related to hazardous waste: <ul style="list-style-type: none">SIC 4953 Refuse Systems (hazardous waste treatment and disposal);NAICS 562211 Hazardous Waste Treatment and Disposal;NAICS 562112 Hazardous Waste Collection (hazardous waste transfer stations).	
Sector L. Landfills and Land Application Sites					
Sub-Sector	Activity Code	Narrative Description		Notes	
L1	LF	<ul style="list-style-type: none">All Landfill, Land Application Sites and Open Dumps		LF is the Activity Code (i.e., non-SIC and non-NAICS designation) for this Sector. It may apply to any facility / SIC Code / NAICS Code, in addition to these specifically related to landfills and landfill application sites: <ul style="list-style-type: none">SIC 4953 Refuse Systems (solid waste landfills);NAICS 562212 Solid Waste Landfill. Industrial waste is waste from any of the facilities covered by the MSGP (also described in 40 CFR 122.26(b)(14)).	
L2	LF	All Landfill, Land Application Sites and Open Dumps, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.			
Sector M. Automobile Salvage Yards					
Sub-sector	SIC Codes		NAICS Codes		Notes
M1	5015	Motor Vehicle Parts, Used (merchant wholesalers except those selling via retail method)	423140	Motor Vehicle Parts (Used) Merchant Wholesalers	

Sector N. Scrap Recycling Facilities

Sub-sector	SIC Codes		NAICS Codes		Notes
N1	5093	Scrap and Waste Materials (merchant wholesalers except Source-Separated Recycling)	423930	Recyclable Material Merchant Wholesalers	
N2	5093	Scrap and Waste Materials (Source-Separated Recycling)	423930	Recyclable Material Merchant Wholesalers	

Sector O. Steam Electric Generating Facilities

Sub-Sector	Activity Code	Narrative Description	Notes
O1	SE	<ul style="list-style-type: none"> steam electric power generation using coal, including coal handling areas steam electric power generation using natural gas steam electric power generation using oil steam electric power generation using nuclear energy steam electric power generation using any other fuel to produce a steam source coal pile runoff (includes effluent limitations established by 40 CFR 423) dual fuel co-generation (i.e., steam generation using fossil fuel to augment a heat-capture generation system) 	<p>SE is the Activity Code (i.e., non-SIC and non-NAICS designation) for this Sector. It may apply to any facility / SIC Code / NAICS Code, in addition to these specifically related to steam electric generation:</p> <ul style="list-style-type: none"> SIC 4911 Electric Services (fossil fuel power generation, nuclear electric power generation & other electric power generation) NAICS 221112 Fossil Fuel Electric Power Generation NAICS 221113 Nuclear Electric Power Generation

Sector P. Land Transportation

Sub-sector	SIC Codes		NAICS Codes		Notes
P1	4011	Railroads, Line-Haul Operating	482111	Line-Haul Railroads	
	4013	Railroad Switching and Terminal Establishments			
		(short line railroads)	482112	Short Line Railroads	
		(except short line railroads)	488210	Support Activities for Rail Transportation	
	4111	Local and Suburban Transit			
		(mixed mode)	485111	Mixed Mode Transit Systems	
		(commuter rail)	485112	Commuter Rail Systems	
		(bus and motor vehicle)	485113	Bus and Other Motor Vehicle Transit Systems	
		(except mixed mode, commuter rail, airport transportation service, and bus and motor vehicle)	485119	Other Urban Transit Systems	
		(airport transportation service)	485999	All Other Transit and Ground Passenger Transportation	
	4119	Local Passenger Transportation, Not Elsewhere Classified			

	(limousine rental with driver and automobile rental with driver)	485320	Limousine Service	
	(employee transportation)	485410	School and Employee Bus Transportation	
	(special needs transportation)	485991	Special Needs Transportation	
	(hearse rental with driver and carpool and vanpool operation)	485999	All Other Transit and Ground Passenger Transportation	
	(sightseeing buses and cable and cog railways, except scenic)	487110	Scenic and Sightseeing Transportation, Land	
	(land ambulance)	621910	Ambulance Services	
4121	Taxicabs	485310	Taxi Service	
4131	Intercity and Rural Bus Transportation	485210	Interurban and Rural Bus Transportation	
4141	Local Bus Charter Service	485510	Charter Bus Industry	
4142	Bus Charter Service, Except Local	485510	Charter Bus Industry	
4151	School Buses	485410	School and Employee Bus Transportation	
4173	Terminal and Service Facilities for Motor Vehicle Passenger Transportation	488490	Other Support Activities for Road Transportation	
4212	Local Trucking Without Storage			
	(general freight)	484110	General Freight Trucking, Local	
	(household goods moving)	484210	Used Household and Office Goods Moving	
	(specialized freight)	484220	Specialized Freight (except Used Goods) Trucking, Local	
	(solid waste collection without disposal)	562111	Solid Waste Collection	
	(hazardous waste collection without disposal)	562112	Hazardous Waste Collection	
	(other waste collection without disposal)	562119	Other Waste Collection	
4213	Trucking, Except Local			
	(general freight, truckload)	484121	General Freight Trucking, Long-Distance, Truckload	
	(general freight, less than truckload)	484122	General Freight Trucking, Long-Distance, Less Than Truckload	
	(household goods moving)	484210	Used Household and Office Goods Moving	
	(specialized freight)	484230	Specialized Freight (except Used Goods) Trucking, Long-Distance	
4214	Local Trucking With Storage			
	(general freight)	484110	General Freight Trucking, Local	
	(household goods moving)	484210	Used Household and Office Goods Moving	
	(specialized freight)	484220	Specialized Freight (except Used Goods) Trucking, Local	

	4215	Courier Services, Except by Air (hub and spoke intercity delivery) (local delivery)	492110 492210	Couriers Local Messengers and local Delivery	
	4226	Special Warehousing and Storage, Not Elsewhere Classified (warehousing in foreign trade zones) (fur storage)	493110 493120	General Warehousing and Storage Refrigerated Warehousing and Storage	
		(except fur storage and warehousing in foreign trade zones)	493190	Other Warehousing and Storage	
	4231	Terminal and Joint Terminal Maintenance Facilities for Motor Freight Transportation	488490	Other Support Activities for Road Transportation	
	4311	United States Postal Service	491110	Postal Service	
	5171	Petroleum Bulk Stations and Terminals (except petroleum sold via retail method)	424710	Petroleum Bulk Stations and Terminals	
		(heating oil sold to final consumer)	454311	Heating Oil Dealers	
		(LP gas sold to final consumer)	454312	Liquefied Petroleum Gas (Bottled Gas) Dealers	
	Sector Q. Water Transportation				
	Sub-sector	SIC Codes	NAICS Codes		Notes
Q1	4412	Deep Sea Foreign Transportation of Freight	483111	Deep Sea Freight Transportation	
	4424	Deep Sea Domestic Transportation of Freight	483113	Coastal and Great Lakes Freight Transportation	
	4432	Freight Transportation on the Great Lakes - St. Lawrence Seaway	483113	Coastal and Great Lakes Freight Transportation	
	4449	Water Transportation of Freight, Not Elsewhere Classified	483211	Inland Water Freight Transportation	
	4481	Deep Sea Transportation of Passengers, Except by Ferry (deep sea activities)	483112	Deep Sea Passenger Transportation	
		(coastal activities)	483114	Coastal and Great Lakes Passenger Transportation	
	4482	Ferries (coastal and Great Lakes)	483114	Coastal and Great Lakes Passenger Transportation	
		(inland)	483212	Inland Water Passenger Transportation	

	4489	Water Transportation of Passengers, Not Elsewhere Classified (water taxis)	483212	Inland Water Passenger Transportation	
		(airboats, excursion boats, and sightseeing boats)	487210	Scenic and Sightseeing Transportation, Water	
	4491	Marine Cargo Handling (dock and pier operations)	488310	Port and Harbor Operations	
		(all but dock and pier operations)	488320	Marine Cargo Handling	
	4492	Towing and Tugboat Services	488330	Navigational Services to Shipping	
	4493	Marinas	713930	Marinas	
	4499	Water Transportation Services, Not Elsewhere Classified (lighterage)	483211	Inland Water Freight Transportation	
		(lighthouse and canal operations)	488310	Port and Harbor Operations	
		(piloting vessels in and out of harbors and marine salvage)	488330	Navigational Services to Shipping	
		(all but lighthouse operations, piloting vessels in and out of harbors, boat and ship rental, marine salvage, lighterage, marine surveyor services, and canal operations)	488390	Other Support Activities for Water Transportation	
		(boat and ship rental, commercial)	532411	Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing	
	Sector R. Ship and Boat Building and Repair Yards				
Sub- sector	SIC Codes		NAICS Codes		Notes
R1	3731	Ship Building and Repairing (except repairs in floating drydocks)	336611	Ship Building and Repairing	
		(repair services provided by floating drydocks)	488390	Other Support Activities for Water Transportation (includes ship scaling facilities)	
	3732	Boat Building and Repairing (boat building)	336612	Boat Building	
		(pleasure boat repair and maintenance services without retailing new boats)	811490	Other Personal and Household Goods Repair and Maintenance	
		(ship scaling)	488390	Other Support Activities for Water Transportation (drydocks, floating [i.e., routine repair and maintenance of ships]; other support activities for water transportation; ship dismantling at floating drydock; ship scaling services not done at a shipyard)	
	(motorboat [i.e., inboard and outboard] repair and maintenance	811490	Other Personal and Household Goods Repair and Maintenance		

		services; outboard motor repair shops)			
Sector S. Air Transportation Facilities					
Sub-sector	SIC Codes		NAICS Codes		Notes
S1	4512	Air Transportation, Scheduled (passenger)	481111	Scheduled Passenger Air Transportation	
		(freight)	481112	Scheduled Freight Air Transportation	
	4513	Air Courier Services	492110	Couriers	
	4522	Air Transportation, Nonscheduled (passenger)	481211	Nonscheduled Chartered Passenger Air Transportation	
		(freight)	481212	Nonscheduled Chartered Freight Air Transportation	
		(using general purpose aircraft for a variety of passenger, freight, courier, and other uses)	481219	Other Nonscheduled Air Transportation	
		(sightseeing planes)	487990	Scenic and Sightseeing Transportation, Other	
		(air ambulance)	621910	Ambulance Services	
	4581	Airports, Flying Fields, and Airport Terminal Services (air freight handling at airports, hangar operations, airport terminal services, aircraft storage, airports, and flying fields)	488119	Other Airport Operations	
		(aircraft servicing and repairing)	488190	Other Support Activities for Air Transportation	

Sector T. Treatment Works					
Sub-sector	Activity Code	Narrative Description		Notes	
T1	TW	<ul style="list-style-type: none">treatment works with a design flow of 1.0 MGD or more treating domestic sewage or any other sewage sludge;wastewater treatment devices or system used by the treatment works for the storage, treatment, recycling and reclamation of municipal or domestic sewage;land located within the confines of the treatment works that is dedicated to the disposal of sewage sludge;treatment works required to have an approved pretreatment program under 40 CFR Part 403		TW is the Activity Code (i.e., non-SIC and non-NAICS designation) for this Sector. It may apply to any facility / SIC Code / NAICS Code, in addition to these specifically related to treatment works: <ul style="list-style-type: none">SIC 4952 Sewerage SystemsNAICS 221320 Sewage Treatment Facilities	

Sector U. Food and Kindred Products					
Sub-sector	SIC Codes		NAICS Codes		Notes
U3	2011	Meat Packing Plants	311611	Animal (except Poultry) Slaughtering	
	2013	Sausages and Other Prepared Meat Products	311612	Meat Processed from Carcasses	
		(except lard made from purchased materials)			
	(lard made from purchased materials)	311613	Rendering and Meat Byproduct Processing		
	2015	Poultry Slaughtering and Processing	311615	Poultry Processing	
		(poultry slaughtering and processing)			
	(egg processing)	311999	All Other Miscellaneous Food Manufacturing		
	2021	Creamery Butter	311512	Creamery Butter Manufacturing	
	2022	Natural, Processed, and Imitation Cheese	311513	Cheese Manufacturing	
	2023	Dry, Condensed and Evaporated Dairy Products	311511	Fluid Milk Manufacturing	
		(liquid non-dairy creamer)			
	(except liquid non-dairy creamer)	311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing		
	2024	Ice Cream and Frozen Deserts	311520	Ice Cream and Frozen Desert Manufacturing	
	2026	Fluid Milk	311511	Fluid Milk Manufacturing	
		(except ultra-high temperature)			
(ultra-high temperature)	311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing			
2032	Canned Specialties	311422	Specialty Canning		
	(except canned puddings)				
(canned puddings)	311999	All Other Miscellaneous Food Manufacturing			
2033	Canned Fruits, Vegetables, Preserves, Jams, and Jellies	311421	Fruit and Vegetable Canning		

	2034	Dried and Dehydrated Fruits, Vegetables and Soup Mixes (vegetable flour)	311211	Flour Milling	
		(except vegetable flour and soup mixes made from purchased dried and dehydrated ingredients)	311423	Dried and Dehydrated Food Manufacturing	
		(soup mixes made from purchased dehydrated ingredients)	311999	All Other Miscellaneous Food Manufacturing	
	2035	Pickled Fruits and Vegetables, Vegetable Sauces and Seasonings, and Salad Dressings (pickled fruits and vegetables)	311421	Fruit and Vegetable Canning	
		(sauces and salad dressings)	311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	
	2037	Frozen Fruits, Fruit Juices, and Vegetables	311411	Frozen Fruit, Juice, and Vegetable Manufacturing	
	2038	Frozen Specialties, Not Elsewhere Classified	311412	Frozen Specialty Food Manufacturing	
	U1	2041 Flour and Other Grain Mill Products	311211	Flour Milling	
		2043 Cereal Breakfast Foods (cereal breakfast foods and related preparations except grain based coffee substitutes)	311230	Breakfast Cereal Manufacturing	
			311920	Coffee and Tea Manufacturing	
		2044 Rice Milling	311212	Rice Milling	
		2045 Prepared Flour Mixes and Doughs	311822	Flour Mixes and Dough Manufacturing from Purchased Flour	
		2046 Wet Corn Milling (except refining purchased corn oil)	311221	Wet Corn Milling	
			311225	Fats and Oils Refining and Blending	
		2047 Dog and Cat Food	311111	Dog and Cat Food Manufacturing	
		2048 Prepared Feeds and Feed Ingredients for Animals and Fowls, Except Dogs and Cats (except slaughtering animals for pet food)	311119	Other Animal Food Manufacturing	
			311611	Animal (except Poultry) Slaughtering	
U3	2051	Bread and Other Bakery Products, Except Cookies and Crackers	311812	Commercial Bakeries	
	2052	Cookies and Crackers (unleavened bread and soft pretzels)	311812	Commercial Bakeries	
		(except unleavened bread and pretzels)	311821	Cookie and Cracker Manufacturing	

		(hard pretzels and snack pretzels, except soft)	311919	Other Snack Food Manufacturing (pretzels, except soft)	
	2053	Frozen Bakery Products, Except Bread	311813	Frozen Cakes, Pies, and Other Pastries Manufacturing	
	2061	Cane Sugar, Except Refining	311311	Sugarcane Mills	
	2062	Cane Sugar Refining	311312	Cane Sugar Refining	
	2063	Beet Sugar	311313	Beet Sugar Manufacturing	
	2064	Candy and Other Confectionery Products			
		(chocolate confectionery)	311330	Confectionery Manufacturing from Purchased Chocolate	
		(nonchocolate confectionery)	311340	Nonchocolate Confectionery Manufacturing	
	2066	Chocolate and Cocoa Products (except chocolate products, made from purchased chocolate)	311320	Chocolate and Confectionery Manufacturing from Cacao Beans	
		(chocolate products made from purchased chocolate)	311330	Confectionery Manufacturing from Purchased Chocolate	
	2067	Chewing Gum	311340	Nonchocolate Confectionery Manufacturing	
	2068	Salted and Roasted Nuts and Seeds	311911	Roasted Nuts and Peanut Butter Manufacturing	
U2	2074	Cottonseed Oil Mills (cottonseed processing)	311223	Other Oilseed Processing	
		(processing purchased cottonseed oil)	311225	Fats and Oils Refining and Blending	
	2075	Soybean Oil Mills (soybean processing, except edible soybean oil)	311222	Soybean Processing	
		(processing purchased soybean oil)	311225	Fats and Oils Refining and Blending	
	2076	Vegetable Oil Mills, Except Corn, Cottonseed, and Soybean (oilseed processing)	311223	Other Oilseed Processing	
		(processing purchased vegetable and oilseed oils)	311225	Fats and Oils Refining and Blending	
	2077	Animal and Marine Fats and Oils (animal fats and oils)	311613	Rendering and Meat Byproduct Processing	
		(canned marine fats and oils)	311711	Seafood Canning	
		(fresh and frozen marine fats and oils)	311712	Fresh and Frozen Seafood Processing	
	2079	Shortening, Table Oils, Margarine, and Other Edible Fats and Oils, Not Elsewhere Classified (processing soybean oil into edible cooking oils from soybeans crushed in the same establishment)	311222	Soybean Processing	

		(processing vegetable oils, except soybean, into edible cooking oils from oilseeds and vegetables crushed in the same establishment)	311223	Other Oilseed Processing	
		(except processing vegetable and soybean oils into edible oils from oilseeds and vegetables crushed in the same establishment)	311225	Fats and Oils Refining and Blending	
U3	2082	Malt Beverages			
		(malt extract)	311942	Spice and Extract Manufacturing	
		(except malt extract)	312120	Breweries	
	2083	Malt	311213	Malt Manufacturing	
	2084	Wines, Brandy and Brandy Spirits	312130	Wineries	
	2085	Distilled and Blended Liquors			
		(apple jack)	312130	Wineries	
		(except apple jack)	312140	Distilleries	
	2086	Bottled and Canned Soft Drinks and Carbonated Water			
		(except bottled water)	312111	Soft Drink Manufacturing	
		(bottled water)	312112	Bottled Water Manufacturing	
	2087	Flavoring Extracts and Flavoring Syrups, Not Elsewhere Classified			
		(coffee flavoring and syrups)	311920	Coffee and Tea Manufacturing	
		(flavoring syrups and concentrates except coffee)	311930	Flavoring Syrup and Concentrate Manufacturing	
		(flavoring extracts and natural food colorings)	311942	Spice and Extract Manufacturing	
		(powered drink mix)	311999	All Other Miscellaneous Food Manufacturing	
	2091	Canned and Cured Fish and Seafoods	311711	Seafood Canning	
	2092	Prepared Fresh or Frozen Fish and Seafoods	311712	Fresh and Frozen Seafood Processing	
	2095	Roasted Coffee	311920	Coffee and Tea Manufacturing	
	2096	Potato Chips, Corn Chips, and Similar Snacks	311919	Other Snack Food Manufacturing	
	2097	Manufactured Ice	312113	Ice manufacturing	
	2098	Macaroni, Spaghetti, Vermicelli, and Noodles	311823	Dry Pasta Manufacturing	
	2099	Food Preparations, Not Elsewhere Classified			
		(rice, uncooked and packaged with other ingredients made in rice mills)	311212	Rice Milling	
		(marshmallow creme)	311340	Nonchocolate Confectionery Manufacturing	

		(bouillon and potatoes dried and packaged with other ingredients produced in dehydrating plants)	311423	Dried and Dehydrated Food Manufacturing	
		(dry pasta packaged with other ingredients made in dry pasta plants)	311823	Dry Pasta Manufacturing	
		(tortillas)	311830	Tortilla Manufacturing	
		(peanut butter)	311911	Roasted Nuts and Peanut Butter Manufacturing	
		(tea)	311920	Coffee and Tea Manufacturing	
		(vinegar, prepared dip)	311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	
		(spices, dry dip mix, dry salad dressing mix, and seasoning mix)	311942	Spice and Extract Manufacturing	
		(perishable prepared food)	311991	Perishable Prepared Food Manufacturing	
		(except bouillon, marshmallow creme, spices, peanut butter, perishable prepared foods, tortillas, tea and tea extracts, dry dip mix, prepared dips, dry salad dressing mix, seasoning mix, dried potatoes, pasta, and rice mixed with other ingredients in mills or dehydrating plants, reducing maple sap to maple syrup, wool grease, and vinegar)	311999	All Other Miscellaneous Food Manufacturing	
	2111	Cigarettes	312221	Cigarette Manufacturing	
	2121	Cigars	312229	Other Tobacco Product Manufacturing	
	2131	Chewing and Smoking Tobacco and Snuff	312229	Other Tobacco Product Manufacturing	
	2141	Tobacco Stemming and Redrying (stemming and redrying tobacco)	312210	Tobacco Stemming and Redrying	
		(reconstituted tobacco)	312229	Other Tobacco Product Manufacturing	
Sector V. Textile Mills, Apparel, and Other Fabric Product Manufacturing					
Sub-sector	SIC Codes		NAICS Codes		Notes
V1	2211	Broadwoven Fabric Mills, Cotton	313210	Broadwoven Fabric Mills	
	2221	Broadwoven Fabric Mills, Manmade Fiber and Silk	313210	Broadwoven Fabric Mills	
	2231	Broadwoven Fabric Mills, Wool (Including Dyeing and Finishing) (except finishing wool fabric without weaving wool fabric)	313210	Broadwoven Fabric Mills 2231	
		(wool broadwoven fabric finishing without weaving fabric)	313311	Broadwoven Fabric Finishing Mills	

		(wool fabric, except broadwoven, finishing without weaving fabric)	313312	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
2241		Narrow Fabric and Other Smallwares Mills: Cotton, Wool, Silk and Manmade Fiber	313221	Narrow Fabric Mills	
2251		Women's Full-Length and Knee-Length Hosiery, Except Socks (dyeing and finishing sheer hosiery without knitting sheer hosiery)	313312	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
		(except dyeing and finishing sheer hosiery without knitting sheer hosiery)	315111	Sheer Hosiery Mills	
2252		Hosiery, Not Elsewhere Classified (dyeing and finishing hosiery , except sheer, without knitting hosiery)	313312	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
		(girls' full length and knee length sheer hosiery)	315111	Sheer Hosiery Mills	
		(except girls' full-length and knee-length sheer hosiery and dyeing and finishing hosiery without knitting hosiery)	315119	Other Hosiery and Sock Mills	
2253		Knit Outerwear Mills (dyeing and finishing knit outerwear without knitting outerwear)	313312	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
		(except bath and lounging robes and dyeing and finish without knitting garments)	315191	Outerwear Knitting Mills	
		(knitting bath or lounging robes)	315192	Underwear and Nightwear Knitting Mills	
2254		Knit Underwear and Nightwear Mills (dyeing and finishing underwear and nightwear without knitting garments)	313312	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
		(except dyeing and finishing underwear and nightwear without knitting garments)	315192	Underwear and Nightwear Knitting Mills	
2257		Weft Knit Fabric Mills (except finishing without knitting weft fabric)	313241	Weft Knit Fabric Mills	
		(finishing weft fabric without knitting weft fabric)	313312	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
2258		Weft Knit Fabric Mills (except finishing without knitting weft fabric)	313241	Weft Knit Fabric Mills	
		(finishing weft fabric without knitting weft fabric)	313312	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	

	2259	Knitting Mills, Not Elsewhere Classified (knitting weft fabric and fabricating textile products, such as bedspreads, curtains, or towels)	313241	Weft Knit Fabric Mills	
		(knitting lace or warp fabric and fabricating textile products, such as bedspreads, curtains, or towels)	313249	Other Knit Fabric and Lace Mills	
		(dyeing and finishing knit gloves and mittens without knitting gloves or mittens)	313312	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
		(knitting gloves and mittens)	315191	Outerwear Knitting Mills	
		(knitting girdles and allied foundation garments)	315192	Underwear and Nightwear Knitting Mills	
	2261	Finishers of Broadwoven Fabrics of Cotton	313311	Broadwoven Fabric Finishing Mills	
	2262	Finishers of Broadwoven Fabrics of Manmade Fibers and Silk	313311	Broadwoven Fabric Finishing Mills	
	2269	Finishers of Textiles, Not Elsewhere Classified (linen fabric finishing)	313311	Broadwoven Fabric Finishing Mills	
		(except linen fabric finishing)	313312	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
	2273	Carpets and Rugs	314110	Carpet and Rug Mills	
	2281	Yarn Spinning Mills	313111	Yarn Spinning Mills	
	2282	Yarn Texturizing, Throwing, Twisting and Spinning Mills	313112	Yarn Texturizing, Throwing, Twisting Mills	
	2284	Thread Mills (except finishing thread without manufacturing thread)	313113	Thread Mills	
		(finishing thread without manufacturing thread)	313312	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
	2295	Coated Fabrics, Not Rubberized	313320	Fabric Coating Mills	
	2296	Tire Cord and Fabrics	314992	Tire Cord and Tire fabric Mills	
	2297	Nonwoven Fabrics	313230	Nonwoven Fabric Mills	
	2298	Cordage and Twine (hemp rope made in spinning mills)	313111	Yarn Spinning Mills	
		(except hemp rope made in spinning mills)	314991	Rope, Cordage, and Twine Mills	
	2299	Textile Goods, Not Elsewhere Classified			

	(hemp bags made in spinning mills, & spinning yarn of flax, hemp, jute, and ramie)	313111	Yarn Spinning Mills	
	(manufacturing thread of hemp, linen, and ramie)	313113	Thread Mills	
	(broadwoven fabrics of jute, linen, hemp, and ramie and hand woven fabrics)	313210	Broadwoven Fabric Mills	
	(narrow woven fabric of jute, linen, hemp, and ramie)	313221	Narrow Fabric Mills	
	(nonwoven felt)	313230	Nonwoven Fabric Mills	
	(finishing hard fiber thread and yarn without manufacturing thread or yarn)	313312	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
	(manufacturing other textile products)	314999	All Other Miscellaneous Textile Product Mills	
2311	Men's and Boys' Suits, Coats, and Overcoats			
	(contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
	(except contractors)	315222	Men's and Boys' Cut and Sew Suit, Coat and Overcoat Manufacturing	
2321	Men's and Boys' Shirts, Except Work Shirts			
	(contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
	(except contractors)	315223	Men's and Boys' Cut and Sew Shirt (except Work Shirt) Manufacturing	
2322	Men's and Boys' Underwear and Nightwear			
	(contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
	(except contractors)	315221	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing	
2323	Men's and Boys' Neckwear			
	(contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
	(except contractors)	315993	Men's and Boys' Neckwear Manufacturing	
2325	Men's and Boys' Separate Trousers and Slacks			
	(contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
	(except contractors)	315224	Men's and Boys' Cut and Sew Trouser, Slack and Jean Manufacturing	

	2326	Men's and Boys' Work Clothing (contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
		(except contractors)	315225	Men's and Boys' Cut and Sew Work Clothing Manufacturing	
	2329	Men's and Boys' Clothing, Not Elsewhere Classified (contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
		(except team athletic uniforms and contractors)	315228	Men's and Boys' Cut and Sew Other Outerwear Manufacturing	
		(team athletic uniforms except contractors)	315299	All Other Cut and Sew Apparel Manufacturing	
	2331	Women's, Misses', and Juniors' Blouses and Shirts (contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	315232	Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing	
	2335	Women's, Misses', and Juniors' Dresses (contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	315233	Women's and Girls' Cut and Sew Dress Manufacturing	
	2337	Women's, Misses', and Juniors' Suits, Skirts, and Coats (contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	315234	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing	
	2339	Women's, Misses', and Juniors' Outerwear, Not Elsewhere Classified (contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except team athletic uniforms, scarves, and contractors)	315239	Women's and Girls' Cut and Sew Other Outerwear Manufacturing	
		(team athletic uniforms except contractors)	315299	All Other Cut and Sew Apparel Manufacturing	
		(scarves except contractors)	315999	Other Apparel Accessories and Other Apparel Manufacturing	

	2341	Women's, Misses', Children's, and Infants' Underwear and Nightwear (boys' contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(boys' except contractors)	315221	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing	
		(women and girls' except contractors)	315231	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing	
		(infants' except contractors)	315291	Infants' Cut and Sew Apparel Manufacturing	
	2342	Brassieres, Girdles, and Allied Garments (contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	315231	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing	
	2353	Hats, Caps, and Millinery (men's and boys' contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	315991	Hat, Cap, and Millinery Manufacturing	
	2361	Girls', Children's, and Infants' Dresses, Blouses, and Shirts (boys' contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
		(girls' and infants' contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(boys' shirts except contractors)	315223	Men's and Boys' Cut and Sew Shirt (except Work Shirt) Manufacturing	
		(girls' blouses and shirts except contractors)	315232	Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing	
		(girls' dresses except contractors)	315233	Women's and Girls' Cut and Sew Dress Manufacturing	
		(infants' except contractors)	315291	Infants' Cut and Sew Apparel Manufacturing	
	2369	Girls', Children's, and Infants' Outerwear, Not Elsewhere Classified (boys' contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
		(girls' and infants' contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(boys' robes except contractors)	315221	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing	

	(boys' suits and coats except contractors)	315222	Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing	
	(boys' trousers, slacks, and jeans except contractors)	315224	Men's and Boys' Cut and Sew Trouser, Slack and Jean Manufacturing	
	(boys' other outerwear except contractors)	315228	Men's and Boys' Cut and Sew Other Outerwear Manufacturing	
	(girls' robes except contractors)	315231	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing	
	(girls' suits, coats, jackets, and skirts except contractors)	315234	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing	
	(girls' other outerwear except contractors)	315239	Women's and Girls' Cut and Sew Other Outerwear Manufacturing	
	(infants' except contractors)	315291	Infants' Cut and Sew Apparel Manufacturing	
2371	Fur Goods			
	(men's and boys' contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
	(women's, girls', and infants' contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
	(except contractors)	315292	Fur and Leather Apparel Manufacturing	
2381	Dress and Work Gloves, Except Knit and All-Leather			
	(men's and boys' contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
	(women's, girls', and infants' contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
	(except contractors)	315992	Glove and Mitten Manufacturing	
2384	Robes and Dressing Gowns			
	(men's and boys' contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
	(women's, girls', and infants' contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
	(men's except contractors)	315221	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing	
	(women's except contractors)	315231	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing	
2385	Waterproof Outerwear			
	(men's and boys' contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
	(women's, girls', and infants' contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
	(men's and boys' water resistant or water repellent tailored overcoats, except made from rubberized fabric, plastics, etc. and contractors)	315222	Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing	

		(men's and boys' water resistant or water repellent nontailored outerwear, except made from rubberized fabric, plastics, etc. and contractors)	315228	Men's and Boys' Cut and Sew Other Outerwear Manufacturing	
		(women's and girls' water resistant or water repellent tailored coats, except made from rubberized fabric, plastics, etc. and contractors)	315234	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing"	
		(other women's and girls' water resistant or water repellent nontailored outerwear, except made from rubberized fabric, plastics, etc. and contractors)	315239	Women's and Girls' Cut and Sew Other Outerwear Manufacturing	
		(infants' waterproof outerwear made from rubberized fabric, plastics, etc. except contractors)	315291	Infants' Cut and Sew Apparel Manufacturing	
		(men's, boys', women's, and girls' waterproof outerwear made from rubberized fabric, plastics, etc. except contractors)	315299	All Other Cut and Sew Apparel Manufacturing	
		(accessories, such as aprons, bibs, and other miscellaneous waterproof items, made from rubberized fabric, plastics, etc. except contractors)	315999	Other Apparel Accessories and Other Apparel Manufacturing	
	2386	Leather and Sheep-Lined Clothing			
		(men's and boys' contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	315292	Fur and Leather Apparel Manufacturing	
	2387	Apparel Belts			
		(men's and boys' contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	315999	Other Apparel Accessories and Other Apparel Manufacturing	
	2389	Apparel and Accessories, Not Elsewhere Classified			
		(men's and boys' contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	

	(garters and garter belts except contractors)	315231	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing	
	(apparel, such as academic gowns, clerical outerwear, and band uniforms, except contractors)	315299	All Other Cut and Sew Apparel Manufacturing	
	(accessories such as, handkerchiefs, arm bands, cummerbunds, suspenders, etc., except contractors)	315999	Other Apparel Accessories and Other Apparel Manufacturing	
2391	Curtains and Draperies	314121	Curtain and Drapery Mills	
2392	Housefurnishings, Except Curtains and Draperies (except mops, dust rags, and bags)	314129	Other Household Textile Product Mills	
	(blanket, laundry, and wardrobe bags)	314911	Textile Bag Mills	
	(dust rags)	314999	All Other Miscellaneous Textile Product Mills	
	(floor and dust mops)	339994	Broom, Brush, and Mop Manufacturing	
2393	Textile Bags	314911	Textile Bag Mills	
2394	Canvas and Related Products	314912	Canvas and Related Product Mills	
2395	Pleating, Decorative and Novelty Stitching, and Tucking for the Trade (except apparel contractors)	314999	All Other Miscellaneous Textile Product Mills	
	(men's and boy's apparel contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
	(women's, girls', and infants' apparel contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
2396	Automotive Trimmings, Apparel Findings, and Related Products (textile products except automotive and apparel trimmings and findings, printing or embossing on apparel, and contractors)	314999	All Other Miscellaneous Textile Product Mills	
	(men's and boys' contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
	(women's, girls', and infants' contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
	(apparel findings and trimmings, except contractors)	315999	Other Apparel Accessories and Other Apparel Manufacturing	
	(printing and embossing on fabric articles)	323113	Commercial Screen Printing	
	(textile motor vehicle trimming except contractors)	336360	Motor Vehicle Seating and Interior Trim Manufacturing	
2397	Schiffli Machine Embroideries	313222	Schiffli Machine Embroidery	

	2399	Fabricated Textile Products, Not Elsewhere Classified (except apparel and accessories, automotive seat belts, seat and tire covers, and contractors)	314999	All Other Miscellaneous Textile Product Mills	
		(men's and boys' contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(apparel and apparel accessories, except contractors)	315999	Other Apparel Accessories and Other Apparel Manufacturing	
		(seat belts, and seat and tire covers)	336360	Motor Vehicle Seating and Interior Trim Manufacturing	
	3131	Boot and Shoe Cut Stock and Findings (except wood heels and metal buckles)	316999	All Other Leather Good Manufacturing	
		(heels, boot and shoe, finished wood, manufacturing)	321999	All Other Miscellaneous Wood Product Manufacturing	A facility with the primary activity of NAICS 321999 "heels, boot and shoe, finished wood, manufacturing" can be regulated under Sector A or Sector V. Sector A requires additional technology-based effluent limits comprising good housekeeping; additional SWPPP requirements; additional inspection requirements; and benchmark monitoring for COD and TSS. Sector V requires additional technology-based effluent limits comprised of good housekeeping measures and employee training; additional SWPPP requirements; and additional inspection requirements.
		(metal buckles)	339993	Fastener, Button, Needle, and Pin Manufacturing	Regulatory burden would likely be greater under Sector A. Any facility whose primary activity is manufacturing metal buckles (SIC 3131 / NAICS 339993) should be regulated under Sector Y, but may continue to be regulated under Sector V, or alternatively, under Sector AD. Sector Y does not apply additional sector-specific requirements to metal

					buckle manufacturers. Sector V applies additional technology-based limitations comprised of good housekeeping measures for material storage areas and employee training. Under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements. Regulatory burden would likely be greater under Sector V.
3142	House Slippers	316212	House Slipper Manufacturing		
3143	Men's Footwear, Except Athletic	316213	Men's Footwear (except Athletic) Manufacturing		
3144	Women's Footwear, Except Athletic	316214	Women's Footwear (except Athletic) Manufacturing		
3149	Footwear, Except Rubber, Not Elsewhere Classified	316219	Other Footwear Manufacturing		
3151	Leather Gloves and Mittens (men's and boys' contractors)	315211	Men's and Boys' Cut and Sew Apparel Contractors		
	(women's, girls', and infants' contractors)	315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors		
	(except contractors)	315992	Glove and Mitten Manufacturing		
3161	Luggage	316991	Luggage Manufacturing		
3171	Women's Handbags and Purses	316992	Women's Handbag and Purse Manufacturing		
3172	Personal Leather Goods, Except Women's Handbags and Purses (except nonprecious metal personal goods, such as card cases, cigar cases, and comb cases)	316993	Personal Leather Good (except Women's Handbag and Purse) Manufacturing		
	(nonprecious metal personal goods, such as card cases, cigar cases, and comb cases)	339914	Costume Jewelry and Novelty Manufacturing		Any facility whose primary activity is manufacturing nonprecious metal personal goods, such as card cases, cigar cases, and comb cases (SIC 3172 / NAICS 339914) should be regulated under Sector Y, but may continue to be regulated under Sector V, or alternatively, under Sector AD. Sector Y does not apply additional sector-specific requirements to metal buckle manufacturers. Sector V applies additional technology-based limitations comprised of good

					housekeeping measures for material storage areas and employee training. Under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements. Regulatory burden would likely be greater under Sector V.
	3199	Leather Goods, Not Elsewhere Classified	316999	All Other Leather Good Manufacturing	
Sector W. Furniture and Fixtures					
Sub-sector	SIC Codes		NAICS Codes		Notes
W1	2434	Wood Kitchen Cabinets	337110	Wood Kitchen Cabinet and Countertop Manufacturing	
	2511	Wood Household Furniture, Except Upholstered (except wood box spring frames)	337122	Nonupholstered Wood Household Furniture Manufacturing	
		(wood box spring frames (parts))	337215	Showcase, Partition, Shelving, and Locker Manufacturing	
	2512	Wood Household Furniture, Upholstered	337121	Upholstered Household Furniture Manufacturing	
	2514	Metal Household Furniture (upholstered)	337121	Upholstered Household Furniture Manufacturing	
		(except upholstered metal furniture and metal box spring frames)	337124	Metal Household Furniture Manufacturing	
		(metal box spring frames)	337215	Showcase, Partition, Shelving, and Locker Manufacturing	
	2515	Mattresses, Foundations, and Convertible Beds (convertible beds)	337121	Upholstered Household Furniture Manufacturing	
		(mattresses and foundations)	337910	Mattress Manufacturing	
	2517	Wood, Television, Radio, Phonograph, and Sewing Machine Cabinets	337129	Wood, Television, Radio, Phonograph, and Sewing Machine Cabinet Manufacturing	
	2519	Household Furniture, Not Elsewhere Classified	337125	Household Furniture (except Wood and Metal) Manufacturing	
	2521	Wood Office Furniture	337211	Wood Office Furniture Manufacturing	
	2522	Office Furniture, Except Wood	337214	Office Furniture (Except Wood) Manufacturing	

	2531	Public Building and Related Furniture (seats for motor vehicles)	336360	Motor Vehicle Seating and Interior Trim Manufacturing	
		(except motor vehicle seats and blackboards)	337127	Institutional Furniture Manufacturing	
		(blackboards)	339942	Lead Pencil and Art Good Manufacturing	
	2541	Wood Office and Store Fixtures, Partitions, Shelving, and Lockers (counter tops)	337110	Wood Kitchen Cabinet and Countertop Manufacturing	
		(wood lunchroom tables and chairs)	337127	Institutional Furniture Manufacturing	
		(custom architectural millwork)	337212	Custom Architectural Woodwork and Millwork Manufacturing	
		(except custom architectural millwork, counter tops, and lunchroom tables and chairs)	337215	Showcase, Partition, Shelving, and Locker Manufacturing	
	2542	Office and Store Fixtures, Partitions, Shelving, and Lockers, Except Wood (lunchroom tables and chairs)	337127	Institutional Furniture Manufacturing	
		(except lunchroom tables and chairs)	337215	Showcase, Partition, Shelving, and Locker Manufacturing	
	2591	Drapery Hardware and Window Blinds and Shades	337920	Blind and Shade Manufacturing	
	2599	Furniture and Fixtures, Not Elsewhere Classified (except hospital beds)	337127	Institutional Furniture Manufacturing	
		(hospital beds)	339111	Laboratory Apparatus and Furniture Manufacturing	
Sector X. Printing and Publishing					
Sub-sector	SIC Codes		NAICS Codes		Notes
X1	2711	Newspapers: Publishing, or Publishing and Printing (except Internet newspaper publishing)	511110	Newspaper Publishers	
	2721	Periodicals: Publishing, or Publishing and Printing (except Internet periodical publishing)	511120	Periodical Publishers	
	2731	Books: Publishing, or Publishing and Printing (except Internet book publishing)			
		(except music books)	511130	Book Publishers	
	(music books)	512230	Music Publishers		

2732	Book Printing	323117	Book Printing	
2741	Miscellaneous Publishing (except Internet publishers) (shopping news and advertising periodical publishing or publishing and printing except Internet)	511120	Periodical Publishers	
	(technical manuals and books publishing or publishing and printing, except Internet)	511130	Book Publishers	
	(directory publishers, except Internet publishers)	511140	Directory and Mailing List Publishers	
	(except database, advertising periodicals, shopping news, technical manuals and books, and sheet music publishing or publishing and printing)	511199	All Other Publishers	
	(sheet music publishing or publishing and printing)	512230	Music Publishers	
2752	Commercial Printing, Lithographic (except quick printing)	323110	Commercial Lithographic Printing	
	(quick printing)	323114	Quick Printing	
2754	Commercial Printing, Gravure	323111	Commercial Gravure Printing	
2759	Commercial Printing, NEC (flexographic printing)	323112	Commercial Flexographic Printing	
	(screen printing)	323113	Commercial Screen Printing	
	(digital printing, except quick printing)	323115	Digital Printing	
	(other commercial printing except flexographic, screen, digital, and quick printing)	323119	Other Commercial Printing	
2771	Greeting Cards (except Internet greeting card publishers) (lithographic printing of greeting cards)	323110	Commercial Lithographic Printing	
	(gravure printing of greeting cards)	323111	Commercial Gravure Printing	
	(flexographic printing of greeting cards)	323112	Commercial Flexographic Printing	
	(screen printing of greeting cards)	323113	Commercial Screen Printing	
	(other printing of greeting cards)	323119	Other Commercial Printing	
	(publishing greeting cards)	511191	Greeting Card Publishers	
2782	Blankbooks, Looseleaf Binders and Devices (checkbooks)	323116	Manifold Business Form Printing	
	(except checkbooks)	323118	Blankbook, Loose-leaf Binder, and Device Manufacturing	

	2789	Bookbinding and Related Work	323121	Tradebinding and Related Work		
	2791	Typesetting	323122	Prepress Services		
	2796	Platemaking and Related Services	323122	Prepress Services		
Sector Y. Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries						
Sub-sector	SIC Codes		NAICS Codes		Notes	
Y1	3011	Tires and Inner Tubes	326211	Tire Manufacturing (except Retreading)		
	3021	Rubber and Plastics Footwear	316211	Rubber and Plastics Footwear Manufacturing		
	3052	Rubber and Plastics Hose and Belting	326220	Rubber and Plastics Hoses and Belting Manufacturing		
	3053	Gaskets, Packing, and Sealing Devices	339991	Gaskets, Packing, and Sealing Device Manufacturing		
	3061	Molded, Extruded, and Lathe-Cut Mechanical Rubber Goods	326291	Rubber Product Manufacturing for Mechanical Use		
	3069	Fabricated Rubber Products, Not Elsewhere Classified (rubberizing fabric or purchased textile products)	313320	Fabric Coating Mills		
		(bags made from rubberized fabric)	314911	Textile Bag Mills		
		(rubber cut and sew outerwear)	315299	All Other Cut and Sew Apparel Manufacturing		
		(bibs, bathing caps, related rubber accessories)	315999	Other Apparel Accessories and Other Apparel Manufacturing		
		(rubber resilient floor coverings)	326192	Resilient Floor Covering Manufacturing		
		(except rubberized fabric and garments, gloves, life vests, wet suits, accessories, such as bibs and bathing caps, rubber toys, bags made from rubberized fabric, rubber diaper covers, and rubber resilient floor coverings)	326299	All Other Rubber Product Manufacturing		
		(rubber gloves, inflatable rubber life jackets)	339113	Surgical and Appliance and Supplies Manufacturing		
		(wet suits)	339920	Sporting and Athletic Goods Manufacturing		
		(rubber toys, except dolls)	339932	Game, Toy, and Children's Vehicle Manufacturing		
	Y2	3081	Unsupported Plastics Film and Sheet	326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	
		3082	Unsupported Plastics Profile Shapes	326121	Unlaminated Plastics Profile Shape Manufacturing	

3083	Laminated Plastics Plate, Sheet, and Profile Shapes	326130	Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing	
3084	Plastics Pipe	326122	Plastics Pipe and Pipe Fitting Manufacturing	
3085	Plastics Bottles	326160	Plastics Bottle Manufacturing	
3086	Plastics Foam Products (polystyrene foam products)	326140	Polystyrene Foam Product Manufacturing	
	(except polystyrene foam products)	326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing	
3087	Custom Compounding of Purchased Plastics Resins	325991	Custom Compounding of Purchased Resins	
3088	Plastics Plumbing Fixtures	326191	Plastics Plumbing Fixture Manufacturing	
3089	Plastics Products, Not Elsewhere Classified			
	(plastics sausage casings)	326121	Unlaminated Plastics Profile Shape Manufacturing	
	(pipe fittings)	326122	Plastics Pipe and Pipe Fitting Manufacturing	
	(except plastics pipe fittings, inflatable plastics life jackets, plastics furniture parts, and plastics sausage casings)	326199	All Other Plastics Product Manufacturing	
	(finished plastic furniture parts)	337215	Showcase, Partition, Shelving, and Locker Manufacturing	
	(inflatable plastic life jackets)	339113	Surgical Appliance and Supplies Manufacturing	
3931	Musical Instruments	339992	Musical Instrument Manufacturing	
3942	Dolls and Stuffed Toys	339931	Doll and Stuffed Toy Manufacturing	
3944	Games, Toys, and Children's Vehicles, Except Dolls and Bicycles			<p>Any facility whose primary activity is manufacturing metal tricycles (SIC 3944 / NAICS 336991) should be regulated under Sector AB, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector AB applies additional SWPPP requirements. Sector Y does not apply additional sector-specific requirements to metal tricycle manufacturers and under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements.</p> <p>Regulatory burden would be greater under Sector AB.</p>
	(metal tricycles)	336991	Motorcycle, Bicycle, and Parts Manufacturing	

	(except metal tricycles)	339932	Game, Toy, and Children's Vehicle Manufacturing	
3949	Sporting and Athletic Goods, Not Elsewhere Classified	339920	Sporting and Athletic Goods Manufacturing	
3951	Pens, Mechanical Pencils, and Parts	339941	Pens, Mechanical Pencil Manufacturing	
3953	Marking Devices	339943	Marking Device Manufacturing	
3955	Carbon Paper and Inked Ribbons	339944	Carbon Paper and Inked Ribbon Manufacturing	
3961	Costume Jewelry and Costume Novelties, Except Precious Metal (except cuff links)	339914	Costume Jewelry and Novelty Manufacturing	
	(nonprecious cuff links)	339993	Fastener, Button, Needle, and Pin Manufacturing	
3965	Fasteners, Buttons, Needles, and Pins	339993	Fastener, Button, Needle, and Pin Manufacturing	
3991	Brooms and Brushes	339994	Broom, Brush, and Mop Manufacturing	
3993	Signs and Advertising Specialties			<p>Any facility whose primary activity is screen printing purchased advertising specialties (SIC 3993 / NAICS 323113) should be regulated under Sector X, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector X applies additional technology-based effluent limits comprised of good housekeeping measures for material storage areas, and additional SWPPP requirements. Sector Y does not apply additional requirements to these facilities and under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements.</p> <p>Regulatory burden would be greater under Sector X.</p>
	(screen printing purchased advertising specialties ³⁴)	323113	Commercial Screen Printing	
	(signs)	339950	Sign Manufacturing	
3995	Burial Caskets	339995	Burial Casket Manufacturing	
3996	Linoleum, Asphalted-Felt-Base, and Other Hard Surface Floor Coverings, Not Elsewhere Classified	326192	Resilient Floor Covering Manufacturing	

	3999	Manufacturing Industries, Not Elsewhere Classified			Any facility whose primary activity is fur dressing and finishing (SIC 3999 / NAICS 316110) should be regulated under Sector Z, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector Z applies additional technology-based effluent limits comprised of good housekeeping measures for material storage areas and handling areas, and additional SWPPP requirements. Sector Y does not apply additional requirements to these facilities and under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements.
		(fur dressing and finishing)	316110	Leather and Hide Tanning and Finishing	Regulatory burden would be greater under Sector Z.
		(burnt wood articles)	321999	All Other Miscellaneous Wood Product Manufacturing	Any facility whose primary activity is burnt wood articles (SIC 3999 / NAICS 321999) should be regulated under Sector A, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector A applies additional technology-based effluent limits comprised of good housekeeping measures, additional SWPPP requirements, and benchmark monitoring for COD and TSS. Sector Y does not apply additional requirements to these facilities and under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements.
		(matches and match books manufacturing)	325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	Regulatory burden would be greater under Sector A. Any facility whose primary activity is matches and match books manufacturing (SIC 3999 / NAICS

					<p>325998) should be regulated under Sector C, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sectors C and Y do not require additional sector-specific requirements. EPA could establish additional facility-specific monitoring and reporting requirements under Sector AD.</p> <p>Regulatory burden is not expected to differ between Sectors C and Y.</p>
		(plastics products such as combs, hair curlers, etc.)	326199	All Other Plastics Product Manufacturing	
		(hand operated hair clippers for humans)	332211	Cutlery and Flatware (except Precious) Manufacturing	<p>Any facility whose primary activity is manufacturing hand operated hair clippers for humans (SIC 3999 / NAICS 332211) should be regulated under Sector AA, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector AA applies additional technology-based effluent limits comprised of good housekeeping measures, spill prevention and response procedures, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector Y does not require additional sector-specific requirements. EPA could establish additional facility-specific monitoring and reporting requirements under Sector AD.</p> <p>Regulatory burden would be greater under Sector AA.</p>
		(tape measures)	332212	Hand and Edge Tool Manufacturing	<p>Any facility whose primary activity is manufacturing tape measures (SIC 3999 / NAICS 332212) should be regulated under Sector AA, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector AA applies additional</p>

					<p>technology-based effluent limits comprised of good housekeeping measures, spill prevention and response procedures, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector Y does not require additional sector-specific requirements. EPA could establish additional facility-specific monitoring and reporting requirements under Sector AD.</p> <p>Regulatory burden would be greater under Sector AA.</p>
		(flocking metal products for the trade)	332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	<p>Any facility whose primary activity is manufacturing flocking metal products for the trade (SIC 3999 / NAICS 332812) should be regulated under Sector AA, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector AA applies additional technology-based effluent limits comprised of good housekeeping measures, spill prevention and response procedures, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector Y does not require additional sector-specific requirements. EPA could establish additional facility-specific monitoring and reporting requirements under Sector AD.</p> <p>Regulatory burden would be greater under Sector AA.</p>
		(other miscellaneous metal products, such as combs, hair curlers, etc.)	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	<p>Any facility whose primary activity is manufacturing other miscellaneous metal products, such as combs, hair curlers, etc. (SIC 3999 / NAICS 332999) should be regulated under Sector AA, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector</p>

					<p>AA applies additional technology-based effluent limits comprised of good housekeeping measures, spill prevention and response procedures, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector Y does not require additional sector-specific requirements. EPA could establish additional facility-specific monitoring and reporting requirements under Sector AD.</p> <p>Regulatory burden would be greater under Sector AA.</p>
		(beauty and barber shop equipment, except chairs)	333319	Other Commercial and Service Industry Machinery Manufacturing	
		(lamp shades of paper or textile)	335121	Residential Electric Lighting Fixture Manufacturing	
		(electric hair clippers for humans)	335211	Electric Housewares and Household Fan Manufacturing	<p>Any facility whose primary activity is manufacturing electric hair clippers for humans (SIC 3999 / NAICS 335211) should be regulated under Sector AC, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sectors Y and AC do not apply sector-specific requirements to facilities manufacturing electric hair clippers for humans. EPA may establish facility-specific monitoring and reporting requirements under Sector AD.</p> <p>Regulatory burden is not expected to differ between Sectors Y and AC.</p>
		(beauty and barber chairs)	337127	Institutional Furniture Manufacturing	<p>Any facility whose primary activity is manufacturing beauty and barber chairs (SIC 3999 / NAICS 337127) should be regulated under Sector W, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector W applies additional SWPPP requirements to facilities manufacturing beauty and</p>

					barber chairs. Sector Y applies no additional requirements and under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements.
					Regulatory burden would be greater under Sector W.
		(embroidery kits)	339932	Game, Toy, and Children's Vehicle Manufacturing	
		(other miscellaneous products not specially provided for previously)	339999	All Other Miscellaneous Manufacturing	
Sector Z. Leather Tanning and Finishing					
Sub-sector	SIC Codes		NAICS Codes		Notes
Z1	3111	Leather Tanning and Finishing	316110	Leather and Hide Tanning and Finishing	
Sector AA. Fabricated Metal Products					
Sub-sector	SIC Codes		NAICS Codes		Notes
AA1	3411	Metal Cans	332431	Metal Can Manufacturing	
	3412	Metal Shipping Barrels, Drums, Kegs, and Pails	332439	Other Metal Container Manufacturing	
	3421	Cutlery (except hedge shears and trimmers, tinnerns' snips, and similar nonelectric hand tools)	332211	Cutlery and Flatware (except Precious) Manufacturing	
		(hedge shears and trimmers, tinnerns' snips, and similar nonelectric hand tools)	332212	Hand and Edge Tool Manufacturing	
	3423	Hand and Edge Tools, Except Machine Tools and Handsaws	332212	Hand and Edge Tool Manufacturing	
	3425	Saw Blades and Handsaws	332213	Saw Blade and Handsaw Manufacturing	
	3429	Hardware, Not Elsewhere Classified (vacuum and insulated bottles, jugs, and chests)	332439	Other Metal Container Manufacturing	
		(except fire hose nozzles, hose couplings, vacuum and insulated bottles, jugs and chests, fireplace fixtures, time locks, turnbuckles, pulleys, tackle blocks, luggage and utility racks, sleep sofa mechanisms and chair glides, traps, handcuffs and	332510	Hardware Manufacturing	

		leg irons, ladder jacks, and other like metal products)			
		(turnbuckles and hose clamps)	332722	Bolt, Nut, Screw, Rivet, and Washer Manufacturing	
		(fire hose nozzles and hose couplings)	332919	Other Metal Valve and Pipe Fitting Manufacturing	
		(fireplace fixtures, traps, handcuffs and leg irons, ladder jacks, and other like metal products)	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	
		(pulleys, tackle blocks, block and tackle assemblies)	333923	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing	
		(time locks)	334518	Watch, Clock, and Part Manufacturing	
		(luggage and utility racks)	336399	All Other Motor Vehicle Parts Manufacturing	
		(sleep sofa mechanisms and chair glides)	337215	Showcase, Partition, Shelving, and Locker Manufacturing	
	3431	Enameled Iron and Metal Sanitary Ware	332998	Enameled Iron and Metal Sanitary Ware Manufacturing	
	3432	Plumbing Fixture Fittings and Trim (except shower rods, lawn hose nozzles, and lawn sprinklers)	332913	Plumbing Fixture Fitting and Trim Manufacturing	
		(lawn hose nozzles and lawn sprinklers)	332919	Other Metal Valve and Pipe Fitting Manufacturing	
		(metal shower rods)	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	
	3443	Fabricated Plate Work (Boiler Shops) (fabricated plate work and metal weldments)	332313	Plate Work Manufacturing	
		(power boilers and heat exchangers)	332410	Power Boiler and Heat Exchanger Manufacturing	
		(heavy gauge tanks)	332420	Metal Tank (Heavy Gauge) Manufacturing	
		(metal cooling towers)	333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing (metal cooling towers)	
	3444	Sheet Metal Work (stamped metal skylights)	332321	Metal Window and Door Manufacturing	
		(except sheet metal bins and vats, skylights, and sheet metal cooling towers)	332322	Sheet Metal Work Manufacturing	
		(metal bins and vats)	332439	Other Metal Container Manufacturing	
		(cooling towers, sheet metal)	333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	

	3446	Architectural and Ornamental Ironwork	332323	Ornamental and Architectural Metal Work Manufacturing	
	3448	Prefabricated Metal Buildings and Components	332311	Prefabricated Metal Building and Component Manufacturing	
	3449	Miscellaneous Structural Metal Work (custom roll forming)	332114	Custom Roll Forming	
		(fabricated bar joists and concrete reinforcing bars)	332312	Fabricated Structural Metal Manufacturing	
		(curtain wall and metal plaster bases and lath)	332323	Ornamental and Architectural Metal Work Manufacturing	
	3451	Screw Machine Products	332721	Precision Turned Product Manufacturing	
	3452	Bolts, Nuts, Screws, Rivets, and Washers	332722	Bolt, Nut, Screw, Rivet, and Washer Manufacturing	
	3462	Iron and Steel Forgings	332111	Iron and Steel Forging	
	3463	Nonferrous Forgings	332112	Nonferrous Forging	
	3465	Automotive Stampings	336370	Motor Vehicle Metal Stamping	
	3466	Crowns and Closures	332115	Crown and Closure Manufacturing	
	3469	Metal Stampings, Not Elsewhere Classified (except kitchen utensils, pots and pans for cooking, coins, and stamped metal boxes)	332116	Metal Stamping	
		(kitchen utensils, pots, and pans for cooking)	332214	Kitchen Utensil, Pot, and Pan Manufacturing	
		(stamped metal tool, cash, mail, and lunch boxes)	332439	Other Metal Container Manufacturing	
	3471	Electroplating, Plating, Polishing, Anodizing, and Coloring	332813	Electroplating, Plating, Polishing, Anodizing, and Coloring	
AA2	3479	Coating, Engraving, and Allied Services, Not Elsewhere Classified (except jewelry, silverware, and flatware engraving and etching)	332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	
		(precious metal jewelry engraving and etching)	339911	Jewelry (except Costume) Manufacturing	
		(silver and plated ware engraving and etching)	339912	Silverware and Holloware Manufacturing	
		(costume jewelry engraving and etching)	339914	Costume Jewelry and Novelty Manufacturing	
AA1	3482	Small Arms Ammunition	332992	Small Arms Ammunition Manufacturing	
	3483	Ammunition, Except for Small Arms	332993	Ammunition (except for Small Arms) Manufacturing	
	3484	Small Arms	332994	Small Arms Manufacturing	

3489	Ordinance and Accessories, Not Elsewhere Classified	332995	Other Ordinance and Accessories Manufacturing	
3491	Industrial Valves	332911	Industrial Valve Manufacturing	
3492	Fluid Power Valves and Hose Fittings	332912	Fluid Power Valve and Hose Fitting Manufacturing	
3493	Steel Springs, Except Wire	332611	Spring (Heavy Gauge) Manufacturing	
3494	Valves and Pipe Fittings, Not Elsewhere Classified (except metal pipe hangers and supports)	332919	Other Metal Valve and Pipe Fitting Manufacturing	
	(metal pipe hangers and supports)	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	
3495	Wire Springs (except watch and clock springs)	332612	Spring (Light Gauge) Manufacturing	
	(clock and watch springs)	334518	Watch, Clock, and Part Manufacturing	
3496	Miscellaneous Fabricated Wire Products (potato mashers)	332214	Kitchen Utensil, Pot, and Pan Manufacturing	
	(except shopping carts and potato mashers)	332618	Other Fabricated Wire Product Manufacturing	
	(shopping carts made from purchased wire)	333924	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	
3497	Metal Foil and Leaf (laminated aluminum foil rolls and sheets for flexible packaging uses)	322225	Laminated Aluminum Foil Manufacturing for Flexible Packaging Uses	
	(foil and foil containers)	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	
3498	Fabricated Pipe and Pipe Fittings	332996	Fabricated Pipe and Pipe Fitting Manufacturing	
3499	Fabricated Metal Products, Not Elsewhere Classified (powder metallurgy)	332117	Powder Metallurgy Part Manufacturing	
	(metal boxes)	332439	Other Metal Container Manufacturing	
	(safe and vault locks)	332510	Hardware Manufacturing	
	(metal aerosol valves)	332919	Other Metal Valve and Pipe Fitting Manufacturing	
	(other metal products)	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	
	(metal automobile seat frames)	336360	Motor Vehicle Seating and Interior Trim Manufacturing	
	(metal furniture frames)	337215	Showcase, Partition, Shelving, and Locker Manufacturing	
3911	Jewelry, Precious Metal	339911	Jewelry (except Costume) Manufacturing	

	3914	Silverware, Plated Ware, and Stainless Steel Ware (cutlery and flatware, nonprecious and precious plated)	332211	Cutlery and Flatware (except Precious) Manufacturing	
		(precious metal plated hollowware)	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	
		(except nonprecious and precious plated metal cutlery, flatware, and hollowware)	339912	Silverware and Holloware Manufacturing	
	3915	Jewelers Findings and Materials and Lapidary Work			Any facility whose primary activity is manufacturing watch jewels (SIC 3915 / NAICS 334518) should be regulated under Sector AC, but may continue to be regulated under Sector AA, or alternatively, under Sector AD. Sector AA applies additional technology-based effluent limits comprising good housekeeping measures, spill prevention and response, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector AC does not apply additional sector-specific requirements and EPA may establish facility-specific monitoring and reporting requirements under Sector AD. Regulatory burden would be greater under Sector AA.
		(watch jewels)	334518	Watch, Clock, and Part Manufacturing	
		(except watch jewels)	339913	Jewelers' Material and Lapidary Work Manufacturing	
Sector AB. Transportation Equipment, Industrial or Commercial Machinery					
Sub-sector	SIC Codes		NAICS Codes		Notes
AB1	3511	Steam, Gas, and Hydraulic Turbines, and Turbine Generator Set Units	333611	Turbine and Turbine Generator Set Units Manufacturing	
	3519	Internal Combustion Engines, Not Elsewhere Classified			
		(except stationary engine radiators)	333618	Other Engine Equipment Manufacturing	
		(stationary engine radiators)	336399	All Other Motor Vehicle Parts Manufacturing	

	3523	Farm Machinery and Equipment (hand hair clippers for animals)	332212	Hand and Edge Tool Manufacturing	
		(corrals, stalls, and holding gates)	332323	Ornamental and Architectural Metal Work Manufacturing	
		(except corrals, stalls, holding gates, hand clippers for animals, and farm conveyors/elevators)	333111	Farm Machinery and Equipment Manufacturing	
		(farm conveyors and elevators)	333922	Conveyor and Conveying Equipment Manufacturing	
	3524	Lawn and Garden Tractors and Home Lawn and Garden Equipment (nonpowered lawnmowers)	332212	Hand and Edge Tool Manufacturing	
		(except nonpowered lawnmowers)	333112	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing	
	3531	Construction Machinery and Equipment (except railway track maintenance equipment; winches, aerial work platforms; and automotive wrecker hoists)	333120	Construction Machinery Manufacturing	
		(winches, aerial work platforms, automobile wrecker hoists, locomotive cranes, and ship cranes)	333923	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing	
		(railway track maintenance equipment)	336510	Railroad Rolling Stock Manufacturing	
	3532	Mining Machinery and Equipment, Except Oil and Gas Field Machinery and Equipment	333131	Mining Machinery and Equipment Manufacturing	
	3533	Oil and Gas Field Machinery and Equipment	333132	Oil and Gas Field Machinery and Equipment Manufacturing	
	3534	Elevators and Moving Stairways	333921	Elevators and Moving Stairway Manufacturing	
	3535	Conveyors and Conveying Equipment	333922	Conveyors and Conveying Equipment Manufacturing	
	3536	Overhead Traveling Cranes, Hoists, and Monorail Systems	333923	Overhead Traveling Cranes, Hoists, and Monorail System Manufacturing	
	3537	Industrial Trucks, Tractors, Trailers, and Stackers (metal air cargo containers)	332439	Other Metal Container Manufacturing	
		(metal pallets)	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	

		(except metal pallets and metal air cargo containers)	333924	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	
	3541	Machine Tools, Metal Cutting Types	333512	Machine Tool (Metal Cutting Types) Manufacturing	
	3542	Machine Tools, Metal Forming Types	333513	Machine Tool (Metal Forming Types) Manufacturing	
	3543	Industrial Patterns	332997	Industrial Pattern Manufacturing	
	3544	Special Dies and Tools, Die Sets, Jigs and Fixtures, and Industrial Molds (industrial molds)	333511	Industrial Mold Manufacturing	
		(except molds)	333514	Special Die and Tool, Die Set, Jig, and Fixture Manufacturing	
	3545	Cutting Tools, Machine Tool Accessories, and Machinist Precision Measuring Devices (precision measuring devices)	332212	Hand and Edge Tool Manufacturing	
		(except precision measuring devices)	333515	Cutting Tool and Machine Tool Accessory Manufacturing	
	3546	Power-Driven Handtools	333991	Power-Driven Handtool Manufacturing	
	3547	Rolling Mill Machinery and Equipment	333516	Rolling Mill Machinery and Equipment Manufacturing	
	3548	Electric and Gas Welding and Soldering Equipment (except transformers for arc-welding)	333992	Welding and Soldering Equipment Manufacturing	
		(transformers for arc-welders)	335311	Power, Distribution, and Specialty Transformer Manufacturing	
	3549	Metalworking Machinery, Not Elsewhere Classified	333518	Other Metalworking Machinery Manufacturing	
	3552	Textile Machinery	333292	Textile Machinery Manufacturing	
	3553	Woodworking Machinery	333210	Sawmill and Woodworking Machinery Manufacturing	
	3554	Paper Industries Machinery	333291	Paper Industry Machinery Manufacturing	
	3555	Printing Trades Machinery and Equipment	333293	Printing Machinery and Equipment Manufacturing	
	3556	Food Products Machinery	333294	Food Product Machinery Manufacturing	
	3559	Special Industry Machinery, Not Elsewhere Classified (nuclear control rod drive mechanisms)	332410	Power Boiler and Heat Exchanger Manufacturing	
		(cotton ginning machinery)	333111	Farm Machinery and Equipment Manufacturing	
		(rubber and plastics manufacturing machinery)	333220	Plastics and Rubber Industry Machinery Manufacturing	

	(semiconductor machinery manufacturing)	333295	Semiconductor Machinery Manufacturing	
	(except rubber and plastics manufacturing machinery, semiconductor manufacturing machinery, and automotive maintenance equipment)	333298	All Other Industrial Machinery Manufacturing	
	(automotive maintenance equipment)	333319	Other Commercial and Service Industry Machinery Manufacturing	
3561	Pumps and Pumping Equipment	333911	Pump and Pumping Equipment Manufacturing	
3562	Ball and Roller Bearings	332991	Ball and Roller Bearing Manufacturing	
3563	Air and Gas Compressors	333912	Air and Gas Compressor Manufacturing	
3564	Industrial and Commercial Fans and Blowers and Air Purification Equipment (air purification equipment)	333411	Air Purification Equipment Manufacturing	
	(fans and blowers)	333412	Industrial and Commercial Fan and Blower Manufacturing	
3565	Packaging Machinery	333993	Packaging Machinery Manufacturing	
3566	Speed Changers, Industrial High-Speed Drives, and Gears	333612	Speed Changer, Industrial High-Speed Drives, and Gear Manufacturing	
3567	Industrial Process Furnaces and Ovens	333994	Industrial Process Furnace and Oven Manufacturing	
3568	Mechanical Power Transmission Equipment, Not Elsewhere Classified	333613	Mechanical Power Transmission Equipment Manufacturing	
3569	General Industrial Machinery and Equipment, Not Elsewhere Classified (textile fire hose)	314999	All Other Miscellaneous Textile Product Mills	
	(electric swimming pool heaters)	333414	Heating Equipment (except Warm Air Furnaces) Manufacturing	
	(except fire hoses and electric swimming pool heaters)	333999	All Other Miscellaneous General Purpose Machinery Manufacturing	
3581	Automatic Vending Machines	333311	Automatic Vending Machine Manufacturing	
3582	Commercial Laundry, Drycleaning, and Pressing Machines	333312	Commercial Laundry, Drycleaning, and Pressing Machine Manufacturing	
3585	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment (except motor vehicle air-conditioning)	333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	
	(motor vehicle air-conditioning)	336391	Motor Vehicle Air-Conditioning Manufacturing	

3586	Measuring and Dispensing Pumps	333913	Measuring and Dispensing Pump Manufacturing	
3589	Service Industry Machinery, Not Elsewhere Classified	333319	Other Commercial and Service Industry Machinery Manufacturing	
3592	Carburetors, Pistons, Piston Rings, and Valves	336311	Carburetor, Piston, Piston Ring, and Valve Manufacturing	
3593	Fluid Power Cylinders and Actuators	333995	Fluid Power Cylinder and Actuator Manufacturing	
3594	Fluid Power Pumps and Motors	333996	Fluid Power Pumps and Motors Manufacturing	
3596	Scales and Balances, Except Laboratory	333997	Scale and Balance (except Laboratory) Manufacturing	
3599	Industrial and Commercial Machinery and Equipment, Not Elsewhere Classified			
	(machine shops)	332710	Machine Shops	
	(grinding castings for the trade)	332813	Electroplating, Plating, Polishing, Anodizing and Coloring	
	(flexible metal hose)	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	
	(carnival amusement park equipment)	333319	Other Commercial and Service Industry Machinery Manufacturing	
	(other industrial and commercial machinery and equipment)	333999	All Other Miscellaneous General Purpose Machinery Manufacturing	
	(water leak detectors)	334519	Other Measuring and Controlling Device Manufacturing	
3711	Motor Vehicles and Passenger Car Bodies			
	(automobiles)	336111	Automobile Manufacturing	
	(light trucks and utility vehicles)	336112	Light Truck and Utility Vehicle Manufacturing	
	(heavy duty trucks)	336120	Heavy Duty Truck Manufacturing	
	(kit car and other passenger car bodies)	336211	Motor Vehicle Body Manufacturing	
3713	(military armored vehicles)	336992	Military Armored Vehicle, Tank, and Tank Component Manufacturing	
	Truck and Bus Bodies	336211	Motor Vehicle Body Manufacturing	
3714	Motor Vehicle Parts and Accessories (dump truck lifting mechanisms and fifth wheels)	336211	Motor Vehicle Body Manufacturing	
	(gasoline engines and engine parts including rebuilt)	336312	Gasoline Engine and Engine Parts Manufacturing	

	(wiring harness sets, other than ignition; block heaters and battery heaters; instrument board assemblies; permanent defrosters; windshield washer-wiper mechanisms; cruise control mechanisms; and other electrical equipment for internal combustion engines)	336322	Other Motor Vehicle Electrical and Electronic Equipment Manufacturing	
	(steering and suspension parts)	336330	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing	
	(brake and brake systems, including assemblies)	336340	Motor Vehicle Brake System Manufacturing	
	(transmissions and power train parts, including rebuilding)	336350	Motor Vehicle Transmission and Power Train Parts Manufacturing	
	(except truck and bus bodies, trailers, engine and engine parts, motor vehicle electrical and electronic equipment, motor vehicle steering and suspension components, motor vehicle brake systems, and motor vehicle transmission and power train parts)	336399	All Other Motor Vehicle Parts Manufacturing	
3715	Truck Trailers	336212	Truck Trailer Manufacturing	
3716	Motor Homes	336213	Motor Home Manufacturing	
3721	Aircraft (except research and development not producing prototypes)	336411	Aircraft Manufacturing	
3724	Aircraft Engines and Engine Parts (except research and development not producing prototypes)	336412	Aircraft Engine and Engine Parts Manufacturing	
3728	Aircraft Parts and Auxiliary Equipment, Not Elsewhere Classified (fluid power aircraft subassemblies)	332912	Fluid Power Valve and Hose Fitting Manufacturing	
	(target drones)	336411	Aircraft Manufacturing	
	(except fluid power aircraft subassemblies, target drones, and research and development not producing prototypes)	336413	Other Aircraft Part and Auxiliary Equipment Manufacturing	
3743	Railroad Equipment (locomotive fuel lubricating or cooling medium pumps)	333911	Pump and Pumping Equipment Manufacturing	
	(except locomotive fuel lubricating or cooling medium pumps)	336510	Railroad Rolling Stock Manufacturing	

	3751	Motorcycles, Bicycles, and Parts	336991	Motorcycle, Bicycle, and Parts Manufacturing	
	3761	Guided Missiles and Space Vehicles (except research and development not producing prototypes)	336414	Guided Missile and Space Vehicle Manufacturing	
	3764	Guided Missile and Space Vehicle Propulsion Units and Propulsion Unit Parts (except research and development not producing prototypes)	336415	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing	
	3769	Guided Missile and Space Vehicle Parts and Auxiliary Equipment, Not Elsewhere Classified (except research and development not producing prototypes)	336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing	
	3792	Travel Trailers and Campers	336214	Travel Trailer and Camper Manufacturing	
	3795	Tanks and Tank Components	336992	Military Armored Vehicle, Tank, and Tank Component Manufacturing	
	3799	Transportation Equipment, Not Elsewhere Classified (wheelbarrows)	333924	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	
		(automobile, boat, utility and light truck trailers)	336214	Travel Trailer and Camper Manufacturing	
		(trailer hitches)	336399	All Other Motor Vehicle Parts Manufacturing	
		(except automobile, boat, utility light truck trailers, trailer hitches, and wheelbarrows)	336999	All Other Transportation Equipment Manufacturing	
Sector AC. Electronic, Electrical, Photographic and Optical Goods					
Sub- sector	SIC Codes		NAICS Codes		Notes
AC1	3571	Electronic Computers	334111	Electronic Computer Manufacturing	
	3572	Computer Storage Devices	334112	Computer Storage Device Manufacturing	
	3575	Computer Terminals	334113	Computer Terminal Manufacturing	
	3577	Computer Peripheral Equipment, Not Elsewhere Classified (except plotter controllers and magnetic tape head cleaners)	334119	Other Computer Peripheral Equipment Manufacturing	
		(plotter controllers)	334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing	
		(magnetic tape head cleaners)	334613	Magnetic and Optical Recording Media Manufacturing	

	3578	Calculating and Accounting Machinery, Except Electronic Computers (change making machines)	333311	Automatic Vending Machine Manufacturing	
		(except point of sales terminals, change making machines and funds transfer devices)	333313	Office Machinery Manufacturing	
		(point of sale terminals and fund transfer devices)	334119	Other Computer Peripheral Equipment Manufacturing	
	3579	Office Machines, Not Elsewhere Classified (except timeclocks, time stamps, pencil sharpeners, stapling machines, etc.)	333313	Office Machinery Manufacturing	
		(time clocks and other time recording devices)	334518	Watch, Clock, and Part Manufacturing	
		(pencil sharpeners, staplers and other office equipment)	339942	Lead Pencil and Art Good Manufacturing	
	3612	Power, Distribution, and Specialty Transformers	335311	Power, Distribution, and Specialty Transformer Manufacturing	
	3613	Switchgear and Switchboard Apparatus	335313	Switchgear and Switchboard Apparatus Manufacturing	
	3621	Motors and Generators	335312	Motors and Generator Manufacturing	
	3624	Carbon and Graphite Products	335991	Carbon and Graphite Product Manufacturing	
	3625	Relays and Industrial Controls	335314	Relay and Industrial Control Manufacturing	
	3629	Electrical Industrial Apparatus, Not Elsewhere Classified	335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing	
	3631	Household Cooking Equipment	335221	Household Cooking Appliance Manufacturing	
	3632	Household Refrigerators and Home and Farm Freezers	335222	Household Refrigerator and Home Freezer Manufacturing	
	3633	Household Laundry Equipment	335224	Household Laundry Equipment Manufacturing	
	3634	Electric Housewares and Fans (wall and baseboard heating units for permanent installation)	333414	Heating Equipment (except Warm Air Furnaces) Manufacturing	
		(except wall and baseboard heating units for permanent installation, electronic cigarette lighters, and wall mount restroom hand dryers)	335211	Electric Housewares and Household Fan Manufacturing	
		(electronic cigarette lighters)	339999	All Other Miscellaneous Manufacturing	
	3635	Household Vacuum Cleaners	335212	Household Vacuum Cleaner Manufacturing	
	3639	Household Appliances, Not Elsewhere Classified (household sewing machines)	333298	All Other Industrial Machinery Manufacturing	

	(floor waxing and floor polishing machines)	335212	Household Vacuum Cleaner Manufacturing	
	(except floor waxing and floor polishing machines, and household sewing machines)	335228	Other Major Household Appliance Manufacturing	
3641	Electric Lamp Bulbs and Tubes	335110	Electric Lamp Bulbs and Part Manufacturing	
3643	Current-Carrying Wiring Devices	335931	Current-Carrying Wiring Device Manufacturing	
3644	Noncurrent-Carrying Wiring Devices			<p>Any facility whose primary activity is manufacturing fish wire, electrical wiring tool (SIC 3644 / NAICS 332212) should be regulated under Sector AA, but may continue to be regulated under Sector AC, or alternatively, under Sector AD. Sector AA applies additional technology-based effluent limits comprising good housekeeping measures, spill prevention and response, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector AC does not apply additional sector-specific requirements and EPA may establish facility-specific monitoring and reporting requirements under Sector AD.</p> <p>Regulatory burden would be greater under Sector AA.</p>
	(fish wire, electrical wiring tool)	332212	Hand and Edge Tool Manufacturing	
	(except fishwire, electrical wiring tool)	335932	Noncurrent-Carrying Wiring Device Manufacturing	
3645	Residential Electric Lighting Fixtures	335121	Residential Electric Lighting Fixture Manufacturing	
3646	Commercial, Industrial, and Institutional Electric Lighting Fixtures	335122	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing	
3647	Vehicular Lighting Equipment	336321	Vehicular Lighting Equipment Manufacturing	
3648	Lighting Equipment, Not Elsewhere Classified	335129	Other Lighting Equipment Manufacturing	
3651	Household Audio and Video Equipment	334310	Audio and Video Equipment Manufacturing	

	3652	Phonograph Records and Prerecorded Audio Tapes and Disks (reproduction of all other media except video)	334612	Prerecorded Compact Disc (except Software), Tape, and Record Reproducing	
	3661	Telephone and Telegraph Apparatus (except consumer external modems)	334210	Telephone Apparatus Manufacturing	
		(consumer external modems)	334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing	
	3663	Radio and Television Broadcasting and Communications Equipment	334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	
	3669	Communications Equipment, Not Elsewhere Classified	334290	Other Communications Equipment Manufacturing	
	3671	Electron Tubes	334411	Electron Tube Manufacturing	
	3672	Printed Circuit Boards	334412	Bare Printed Circuit Board Manufacturing	
	3674	Semiconductors and Related Devices	334413	Semiconductor and Related Device Manufacturing	
	3675	Electronic Capacitors	334414	Electronic Capacitor Manufacturing	
	3676	Electronic Resistors	334415	Electronic Resistor Manufacturing	
	3677	Electronic Coils, Transformers, and Other Inductors	334416	Electronic Coil, Transformer, and Other Inductor Manufacturing	
	3678	Electronic Connectors	334417	Electronic Connector Manufacturing	
	3679	Electronic Components, Not Elsewhere Classified			
		(antennas)	334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	
		(radio headphones)	334310	Audio and Video Equipment Manufacturing	
		(printed circuit/electronic assembly manufacturing)	334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing	
		(other electronic components)	334419	Other Electronic Component Manufacturing	
	3691	Storage Batteries	335911	Storage Battery Manufacturing	
	3692	Primary Batteries, Dry and Wet	335912	Primary Battery Manufacturing	
	3694	Electrical Equipment for Internal Combustion Engines	336322	Other Motor Vehicle Electrical and Electronic Equipment Manufacturing	
	3695	Magnetic and Optical Recording Media	334613	Magnetic and Optical Recording Media Manufacturing	
	3699	Electrical Machinery, Equipment, and Supplies, Not Elsewhere Classified (electronic teaching machines and flight simulators)	333319	Other Commercial and Service Industry Machinery Manufacturing	
		(outboard electric motors)	333618	Other Engine Equipment Manufacturing	Any facility whose primary activity is manufacturing outboard electric

					<p>motors (SIC 3699 / NAICS 333618) should be regulated under Sector AB, but may continue to be regulated under Sector AC, or alternatively, under Sector AD. Sector AB applies additional sector-specific SWPPP requirements. Sector AC does not apply additional sector-specific requirements and EPA may establish facility-specific monitoring and reporting requirements under Sector AD.</p> <p>Regulatory burden would be greater under Sector AB.</p>
		(laser welding and soldering equipment)	333992	Welding and Soldering Equipment Manufacturing	
		(Christmas tree lighting sets, electric insect lamps, electric fireplace logs, and trouble lights)	335129	Other Lighting Equipment Manufacturing	
		(other electrical industrial apparatus)	335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing	
3812		Search, Detection, Navigation, Guidance, Aeronautical, and Nautical Systems and Instruments	334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	
3821		Laboratory Apparatus and Furniture	339111	Laboratory Apparatus and Furniture Manufacturing	
3822		Automatic Controls for Regulating Residential and Commercial Environments and Appliances	334512	Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use	
3823		Industrial Instruments for Measurement, Display, and Control of Process Variables; and Related Products	334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	
3824		Totalizing Fluid Meters and Counting Devices	334514	Totalizing Fluid Meter and Counting Device Manufacturing	
3825		Instruments for Measuring and Testing of Electricity and Electrical Signals			
		(automotive ammeters and voltmeters)	334514	Totalizing Fluid Meter and Counting Device Manufacturing	
		(except automotive instruments)	334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	

3826	Laboratory Analytical Instruments	334516	Analytical Laboratory Instrument Manufacturing	
3827	Optical Instruments and Lenses	333314	Optical Instruments and Lens Manufacturing	
3829	Measuring and Controlling Devices, Not Elsewhere Classified			
	(motor vehicle gauges)	334514	Totalizing Fluid Meter and Counting Device Manufacturing	
	(electronic chronometers)	334518	Watch, Clock, and Part Manufacturing	
	(except medical thermometers, electronic chronometers and motor vehicle gauges)	334519	Other Measuring and Controlling Device Manufacturing	
	(medical thermometers)	339112	Surgical and Medical Instrument Manufacturing	
3841	Surgical and Medical Instruments and Apparatus			<p>Any facility whose primary activity is manufacturing tranquilizer guns (SIC 3841 / NAICS 332994) should be regulated under Sector AA, but may continue to be regulated under Sector AC, or alternatively, under Sector AD. Sector AA applies additional technology-based effluent limits comprising good housekeeping measures, spill prevention and response, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector AC does not apply additional sector-specific requirements and EPA may establish facility-specific monitoring and reporting requirements under Sector AD.</p> <p>Regulatory burden would be greater under Sector AA.</p>
	(tranquilizer guns)	332994	Small Arms Manufacturing	
	(operating room tables)	339111	Laboratory Apparatus and Furniture Manufacturing	
	(except tranquilizer guns and operating room tables)	339112	Surgical and Medical Instrument Manufacturing	

	3842	Orthopedic, Prosthetic, and Surgical Appliances and Supplies			<p>Any facility whose primary activity is manufacturing incontinent pads and bed pads (SIC 3842 / NAICS 322291) should be regulated under Sector B, but may continue to be regulated under Sector AC, or alternatively, under Sector AD. Sectors B and AC do not apply additional sector-specific requirements. EPA may require additional facility-specific monitoring and reporting requirement under Sector AD.</p> <p>Regulatory burden is not expected to differ between Sectors B and AC.</p>
		(incontinent pads and bed pads)	322291	Sanitary Paper Product Manufacturing	
		(electronic hearing aids)	334510	Electromedical and Electrotherapeutic Apparatus Manufacturing	
		(except electronic hearing aids, incontinent pads, anatomical models, and bed pads)	339113	Surgical Appliance and Supplies Manufacturing	
		(anatomical models)	339999	All Other Miscellaneous Manufacturing	
	3843	Dental Equipment and Supplies	339114	Dental Equipment and Supplies Manufacturing	
	3844	X-Ray Apparatus and Tubes and Related Irradiation Apparatus	334517	Irradiation Apparatus Manufacturing	
	3845	Electromedical and Electrotherapeutic Apparatus			
		(except CT and CAT scanners)	334510	Electromedical and Electrotherapeutic Apparatus Manufacturing	
		(CT and CAT Scanners)	334517	Irradiation Apparatus Manufacturing	
	3851	Ophthalmic Goods (intraocular lenses, i.e., surgical implants)	339113	Surgical Appliance and Supplies Manufacturing	
		(except intraocular lenses)	339115	Ophthalmic Goods Manufacturing	
	3861	Photographic Equipment and Supplies (photographic films, paper, plates and chemicals)	325992	Photographic Film, Paper, Plate, and Chemical Manufacturing	
		(except photographic film, paper, plates, and chemicals)	333315	Photographic and Photocopying Equipment Manufacturing	
	3873	Watches, Clocks, Clockwork Operated Devices, and Parts	334518	Watch, Clock, and Part Manufacturing	

Sector AD. Non-Classified Facilities

Sub-Sector	Narrative Description	Notes
AD1	Other stormwater discharges designated by the Director as needing a permit (see 40 CFR 122.26(a)(9)(i)(C) & (D)) or any facility discharging stormwater associated with industrial activity not described by any of Sectors A-AC. NOTE: Facilities may not elect to be covered under Sector AD. Only the Director may assign a facility to Sector AD.	

Appendix O - Summary of Reports Permit Submittals

Permit Section	Report/Submittal	Frequency	Due Date(s)	Where to Submit
Part 1.1.4.5	Endangered and Threatened Species Appendix E Criterion C Eligibility Form (Applicable only for operators seeking coverage under Part 1.1.4.5 eligibility criterion C).	Once, if applicable	At least 30 days prior to submitting the NOI for permit coverage	Email to msgpesa@epa.gov
Part 1.2	New Discharger: Submittal of Notice of Intent (NOI) for Permit Coverage	Once per permit term	A minimum of 30 days prior to commencing discharge	Electronically using the NPDES eReporting Tool (NeT) for MSGP
Part 1.2	Existing Discharger: Submittal of Notice of Intent (NOI) for Permit Coverage	Once per permit term	No later than September 2, 2015. However, if you have not previously obtained coverage under an NPDES permit, you must submit your NOI immediately.	Electronically using the NPDES eReporting Tool (NeT) for MSGP
Part 1.3	Notice of Termination	Once, if applicable	Within 30 days after: <ul style="list-style-type: none"> a new operator takes over responsibility for the facility; or operations and stormwater discharges have ceased; or for Sector G, H, or J facilities, the applicable termination requirements have been met; or alternative permit coverage has been obtained 	Electronically using the NPDES eReporting Tool (NeT) for MSGP
Part 1.4	Conditional "No Exposure" Certification Form	If eligible, once every 5 years	As necessary	Electronically using the NPDES eReporting Tool (NeT) for MSGP

Permit Section	Report/Submittal	Frequency	Due Date(s)	Where to Submit
Part 3.1.2	Routine Inspection Documentation	At least quarterly	By the end of the quarter.	Reports are kept with SWPPP
Part 3.2.2	Quarterly Visual Assessment Documentation	At least quarterly	By the end of the quarter.	Reports are kept with SWPPP
Part 4.4	Corrective Action Documentation	<ul style="list-style-type: none"> Document existence of corrective action condition within 24 hours of becoming aware of the condition Document corrective actions taken or to be taken within 14 days from the time of discovery of the condition 	As necessary	Reports are kept with SWPPP
Part 5 Part 7.3	Stormwater Pollution Prevention Plan (SWPPP)	<ul style="list-style-type: none"> Provide URL for SWPPP or provide SWPPP information directly on the NOI form. Update the on-site SWPPP as site conditions indicate. At minimum, the SWPPP must be modified based on corrective actions and deadlines required under Part 4.2. 	<p>Develop initial SWPPP prior to the submittal of NOI form.</p> <p>Update the SWPPP information included on URL or on NOI form, at a minimum, no later than 45 days after conducting the final routine facility inspection for the year.</p>	Electronically using the NPDES eReporting Tool (NeT) for MSGP
Part 6 Part 7.4	Discharge Monitoring Reports (DMRs)	<ul style="list-style-type: none"> 1/quarter for benchmark monitoring 1/year for numeric effluent limitation monitoring 1/year for impaired waters monitoring 	Within 30 days of receiving your full laboratory results for all monitored outfalls during the reporting period.	Electronically using NetDMR
Part 7.5	Annual Report	1/year	By January 30th	Electronically using the NPDES eReporting Tool (NeT) for MSGP
Part 7.6	Exceedance Report for Numeric Effluent Limitations	If applicable	30 days after lab results if 30-day follow-up monitoring indicates exceedance	<p>Follow-up monitoring submitted Electronically using NetDMR</p> <p>Exceedance eports submitted directly to the EPA Regional Office listed in Part 7.9.1 of the permit</p>

Permit Section	Report/Submittal	Frequency	Due Date(s)	Where to Submit
Part 7.7	Additional Reporting (Noncompliance endangering health, reportable quantity spills, etc.)	As necessary	Varies – see Part 7.7	

Appendix P - List of Federal CERCLA Sites

Part 1.1.4.10 of the MSGP has special requirements for discharges to a federal CERCLA site.³

If your facility discharges to one of the federal CERCLA sites listed below, you are ineligible for coverage under this permit, unless you notify the EPA Regional Office in advance and the EPA Regional Office determines that you are eligible for permit coverage. In determining eligibility for coverage under Part 1.1.4.10, the EPA Regional Office may evaluate whether you have included appropriate controls and implementation procedures designed to ensure your discharge will not lead to recontamination of aquatic media at the CERCLA Site, such that it would cause or contribute to a water quality standard exceedance. If it is determined that your facility discharges to a CERCLA Site listed below after you have obtained coverage under this permit, you must contact your applicable EPA Regional Office to develop appropriate controls and/or implementation procedures, as necessary, to ensure that your discharges will not lead to recontamination of aquatic media at the CERCLA Site such that they would cause or contribute to a water quality standard exceedance.

EPA Region 10

The CERCLA Sites and the receiving waters associated with these sites to which the requirements of Part 1.1.4.10 apply are listed in the table below. The areas where the permit applies are enumerated in Appendix C of the permit. For maps of CERCLA sites in Region 10 identified within this table, please check the Region 10 Superfund list viewable at <http://yosemite.epa.gov/R10/cleanup.nsf/sites/cleanuplist>.

Operators who discharge / intend to discharge into the receiving waters listed below must first contact the EPA Regional Office before submitting an NOI. Contact information is viewable at: <http://yosemite.epa.gov/r10/water.nsf/Stormwater/industrial/>.

Similarly, if you have received notice from EPA that the facility to be covered under the MSGP is considered a potential source to a clean up site, you must first contact the Regional EPA office before submitting an NOI.

	Waterbody (HUC code/Watershed)	Superfund Sites CERCLIS ID Latitude / Longitude Major Contaminants
ID	St. Joe River; Coeur d'Alene Lake Basin	St. Maries Creosote IDSFN1002095 47.191697 / -116.343000LPAHs, HPAHs

³ "CERCLA site" means a facility as defined in Section 101(9) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9601(9), that is undergoing a remedial investigation and feasibility study, or for which a Record of Decision for remedial action has been issued in accordance with the National Contingency Plan, 40 C.F.R. Part 300.

WA	Commencement Bay, Puget Sound	Commencement Bay, Near Shore/Tide Flats WAD980726368 47.155998 / -122.245998Dioxins, furans, arsenic, copper, lead, zinc, 4-methyl-phenol, Hex-CB, HPAHs, PCBs, PCE, cadmium, mercury, LPAHs
WA	Duwamish Waterway; Elliott Bay; Puget Sound	Harbor Island (Lead) WAD980722839 47.344584 / -122.210792Lead, arsenic, copper, HPAHs, LPAHs, mercury, PCBs, zinc, TBT
WA	Clam Bay; Puget Sound	Old Navy Dump/ Manchester Lab WA8680030931 47.342798 / -122.325298 PCBs, copper, lead, zinc, silver, 2,4-dimethyl-phenol, PCBs
WA	Elliott Bay; Puget Sound	Pacific Sound Resources WAD009248287 47.345639 / -122.215998LMWPAHs, HMWPAHs, PCBs
WA	Columbia River	Upper Columbia River (T2) WASFN1002171 47.5722 / -118.5846
WA	Puget Sound	Puget Sound Naval Shipyard WA2170023418 47.333298 / -122.384999PCBs, mercury
WA	Puget Sound	Wycoff / Eagle Harbor WAD009248295 47.371798 / -122.310012Mercury, LPAHs, HPAHs,
WA	Duwamish Waterway; Elliott Bay; Puget Sound	Lower Duwamish Waterway (T2) WA0002329803 47.321608 / -122.194040PCBs, PAHs, phthalates, inorganics, mercury, semi-VOCs

ATTACHMENT D: SWPPP AMENDMENTS

Name and Number	Date of Revision	History of Revision
Stormwater Pollution Prevention Plan for TA-54 Maintenance Facility West EP-TA54-PLAN-1307, Revision 0	August 2015	New Stormwater Prevention Plan for TA54 Maintenance Facility West to 2015 MSGP and new Template. New LA-UR number was issued, LA-UR-15-26722
TA54-PLAN-1307, Stormwater Pollution Prevention Plan For TA-54 Maintenance Facility West, Revision 0	February 2016	Revise plan to incorporate annual update information. Additional information was added; organizational names and personnel, Control Values information in Section 4.7, and Attachment N, Training. Added Attachment E Quarterly Visual Assessments Templates and completed assessments. Attachment F Routine Facility Inspections added template and completed inspection. New LA-UR number was issued, LA-UR-16-20470.
TA54-PLAN-1307, Stormwater Pollution Prevention Plan For TA-54 Maintenance Facility West, Revision 1	January 2017	Revise plan to incorporate annual SWPPP updates. Revise plan to incorporate annual update information.
TA54-PLAN-1307, Stormwater Pollution Prevention Plan For TA-54 Maintenance Facility West, Revision 2	January 2018	Revise plan to incorporate annual update information. Revise plan to incorporate annual update information.

ATTACHMENT E: QUARTERLY VISUAL ASSESSMENTS



memorandum

*Environmental Protection & Compliance
Division*

To: Victoria Baca, DESHS-EWMS, J962
Thru: Terrill Lemke, EPC-CP, (E-File) *tl*
From: Holly Wheeler, EPC-CP, (E-File) *HW*
Phone: 505-667-1312
Symbol: EPC-DO: 17-462
Date:

NOV 27 2017

Subject: National Pollutant Discharge Elimination System (NPDES) Permit Tracking No. NMR053195, Multi-Sector General Permit (MSGP) Quarterly Visual Assessment (QVA) Form for April and May of 2017 for TA-54 Maintenance Facility West (MFW)

Please find attached a completed MSGP QVA Form documenting a visual assessment performed during the first quarter of monitoring at TA-54 Maintenance Facility West. Per Parts 3.2.2 and 5.5 of the 2015 MSGP, the signed certification statement and associated QVA form shall be incorporated into your MSGP Stormwater Pollution Prevention Plan (SWPPP).

Part 3.2.1 of the 2015 MSGP requires the visual assessment of stormwater discharge samples collected from each outfall once each quarter for the entire permit term. Part 3.2.3 allows facilities that are located in an area with a semi-arid climate and/or in an area where freezing conditions exist for an extended period to distribute the quarterly visual assessments during seasons when precipitation runoff occurs. Accordingly, Los Alamos National Security, LLC (LANS) has designated the following MSGP monitoring quarters.

Quarter 1:	April – May	Quarter 2:	June – July
Quarter 3:	August – September	Quarter 4:	October - November

The attached QVA form documents the following information as required by Part 3.2.2 of the 2015 MSGP and was completed by Environmental Compliance Programs (EPC-CP) personnel.

- Sample location;
- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing the visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Results of observations of the stormwater discharge;
- Probable sources of any observed stormwater contamination (if applicable);
- If applicable, why it was not possible to take a sample within the first 30 minutes of the storm event.

EPC-DO: 17-462
Victoria Baca

The EPC-CP Group Leader has signed the certification statement to meet the duly authorized signatory requirements for the QVA completed by an EPC-CP representative contained in Enclosure 1.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Taunia S. Van Valkenburg, EPC-CP Group Leader
Los Alamos National Laboratory



Manager Signature

11/21/17

Date

Part 3.2.3 of the 2015 MSGP allows the facility to take a substitute sample during the next qualifying storm event when adverse weather conditions prevent the collection of samples during a specific quarter. Adverse weather conditions are those that are dangerous or create inaccessibility for personnel, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions. Documentation of the rationale for no visual assessment for the quarter must be included in the facility-specific SWPPP.

Please contact Holly Wheeler at 667-1312 (hbenson@lanl.gov) if you have questions regarding the QVA documentation. Thank you for your assistance in meeting the requirements of the Laboratory's NPDES 2015 MSGP Permit.

EPC-DO: 17-462

Victoria Baca

Facility Name	Sampling Station	Work Order #
TA-54 MFW	MSGP04901	MSGP-59597

TWL/HLW: am

Enclosure(s):

1) Quarterly Visual Assessment Form, First Quarter, 2017 Monitoring Year

Copy: Robert Stokes, DESHS-EWMS (E-File)

Adesh-records@lanl.gov, (E-File)

lasomailbox@nnsa.doe.gov, (E-File)

locatesteam@lanl.gov, (E-File)

epc-correspondence@lanl.gov, (E-File)

ENCLOSURE 1

**Quarterly Visual Assessment Form
First Quarter, 2017 Monitoring Year**

EPC-DO: 17-462

Date: NOV 27 2017

Maintenance Details

Requested: 3/9/2017 11:58:00 AM



Target: 5/31/2017

 MSGP ProgramProcedure: MSGP Quarterly Visual
Assessment (EPC Sig)
(EPC-CP-Form-1021.02 2)

Priority/Type: Normal / Inspection

 RG245.5

Last PM: 3/20/2017

Department: Environmental and Waste
Management Facility
Operat TA-54 MFWProject: VISUAL ASSESSMENTS 4-
1-17 (P-MSGP-5156) Monitored Outfall (049) MSGP04901

Reason: MSGP Quarterly Visual Assessment (EPC Sig)

Contact:

Phone:

Special Instructions: NMR053195

Tasks

#	Description	Meas.	No	N/A	Yes
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.					
Sample information					
30	Document the monitoring Period by using the Monitoring Period lookup table.	MP1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	4/29/17 at 13:11	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	4/29/17 at 13:11	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	5/2/17 at 1025	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	rain 0.37	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parameters					
110	Is sample colorless? If "Failed", describe.	Brown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	Slightly Cloudy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	Fine	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line. (Range: 0 - 0)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line. (Range: 0 - 0)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line. (Range: 0 - 0)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Labor Report

Completed: 5/2/2017 10:25:00 AM

Report: Marwin Shendo

MPSLL

Signature / Name

5/2/2017

Date

Signature / Name

Date

I confirm the information as recorded is true, accurate and complete.

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg. FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: (See signature on file) Date: _____



memorandum

*Environmental Protection & Compliance
Division*

To: Victoria Baca, DESHS-EWMS, J962
Thru: Terrill Lemke, EPC-CP, (E-File) *TL*
From: Holly Wheeler, EPC-CP, (E-File) *HW*
Phone: 505-667-1312
Symbol: EPC-DO: 17-463
Date: **NOV 27 2017**

Subject: National Pollutant Discharge Elimination System (NPDES) Permit Tracking No. NMR053195, Multi-Sector General Permit (MSGP) Quarterly Visual Assessment (QVA) Form for June and July of 2017 for TA-54 Maintenance Facility West (MFW)

Please find attached a completed MSGP QVA Form documenting a visual assessment performed during the second quarter of monitoring at TA-54 Maintenance Facility West. Per Parts 3.2.2 and 5.5 of the 2015 MSGP, the signed certification statement and associated QVA form shall be incorporated into your MSGP Stormwater Pollution Prevention Plan (SWPPP).

Part 3.2.1 of the 2015 MSGP requires the visual assessment of stormwater discharge samples collected from each outfall once each quarter for the entire permit term. Part 3.2.3 allows facilities that are located in an area with a semi-arid climate and/or in an area where freezing conditions exist for an extended period to distribute the quarterly visual assessments during seasons when precipitation runoff occurs. Accordingly, Los Alamos National Security, LLC (LANS) has designated the following MSGP monitoring quarters.

Quarter 1:	April – May	Quarter 2:	June – July
Quarter 3:	August – September	Quarter 4:	October - November

The attached QVA form documents the following information as required by Part 3.2.2 of the 2015 MSGP and was completed by Environmental Compliance Programs (EPC-CP) personnel.


- Sample location;
- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing the visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Results of observations of the stormwater discharge;
- Probable sources of any observed stormwater contamination (if applicable);
- If applicable, why it was not possible to take a sample within the first 30 minutes of the storm event.

EPC-DO: 17-463
Victoria Baca

The EPC-CP Group Leader has signed the certification statement to meet the duly authorized signatory requirements for the QVA completed by an EPC-CP representative contained in Enclosure 1.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Taunia S. Van Valkenburg, EPC-CP Group Leader
Los Alamos National Laboratory



Manager Signature

11/22/17

Date

Part 3.2.3 of the 2015 MSGP allows the facility to take a substitute sample during the next qualifying storm event when adverse weather conditions prevent the collection of samples during a specific quarter. Adverse weather conditions are those that are dangerous or create inaccessibility for personnel, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions. Documentation of the rationale for no visual assessment for the quarter must be included in the facility-specific SWPPP.

Please contact Holly Wheeler at 667-1312 (hbenson@lanl.gov) if you have questions regarding the QVA documentation. Thank you for your assistance in meeting the requirements of the Laboratory's NPDES 2015 MSGP Permit.

EPC-DO: 17-463
Victoria Baca

Facility Name	Sampling Station	Work Order #
TA-54 MFW	MSGP04901	MSGP-60073

TWL/HLW: am

Enclosure(s):

1) Quarterly Visual Assessment Form, Second Quarter, 2017 Monitoring Year

Copy: Robert Stokes, DESHS-EWMS (E-File)

Adesh-records@lanl.gov, (E-File)

lasomailbox@nnsa.doe.gov, (E-File)

locatesteam@lanl.gov, (E-File)

epc-correspondence@lanl.gov, (E-File)

ENCLOSURE 1

Quarterly Visual Assessment Form
Second Quarter, 2017 Monitoring Year

EPC-DO: 17-463

Date: NOV 27 2017

Maintenance Details

Requested By: Banar, Alethea on
5/16/2017 2:51:00 PM
Taken By: Banar, Alethea
Procedure: MSGP Quarterly Visual
Assessment (EPC Sig)
(EPC-CP-Form-1021.02
2)
Last PM: 5/2/2017
Project: Visual Assessments 6-1-
17 (P-MSGP-5173)

Target: 7/31/2017
Priority/Type: / Inspection
Department: Environmental and Waste
Management Facility
Operat

 MSGP Program
 RG245.5
 TA-54 MFW
 Monitored Outfall (049)
 MSGP04901

Contact: Banar, Alethea
Phone: 699-5836

Reason: MSGP Quarterly Visual Assessment

Special Instructions: NMR053195

Tasks

#	Description	Meas.	No	N/A	Yes
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.					
Sample information					
30	Document the monitoring Period by using the Monitoring Period lookup table.	mp2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	7/26/17 11:26	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	7/26/17 11:26	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	7/27/17 11:28	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	Rain, 0.31	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parameters					
110	Is sample colorless? If "Failed", describe.	brown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	cloudy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	fine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line. (Range: 0 - 0)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line. (Range: 0 - 0)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line. (Range: 0 - 0)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Labor Report

Completed: 7/27/2017 11:28:00 AM

Report: Marwin Shendo

MSve.

Signature / Name

7/28/2017

Date

Signature / Name

Date

I confirm the information as recorded is true, accurate and complete.

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg. FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: (See signature on file) Date: _____



memorandum

*Environmental Protection & Compliance
Division*

To: Victoria Baca, DESHS-EWMS, J962
Thru: Terrill Lemke, EPC-CP, (E-File) *TL*
From: Holly Wheeler, EPC-CP, (E-File) *HW*
Phone: 505-667-1312
Symbol: EPC-DO: 17-464
Date: **NOV 27 2017**

Subject: National Pollutant Discharge Elimination System (NPDES) Permit Tracking No. NMR053195, Multi-Sector General Permit (MSGP) Quarterly Visual Assessment (QVA) Form for August and September of 2017 for TA-54 Maintenance Facility West (MFW)

Please find attached a completed MSGP QVA Form documenting a visual assessment performed during the third quarter of monitoring at TA-54 Maintenance Facility West. Per Parts 3.2.2 and 5.5 of the 2015 MSGP, the signed certification statement and associated QVA form shall be incorporated into your MSGP Stormwater Pollution Prevention Plan (SWPPP).

Part 3.2.1 of the 2015 MSGP requires the visual assessment of stormwater discharge samples collected from each outfall once each quarter for the entire permit term. Part 3.2.3 allows facilities that are located in an area with a semi-arid climate and/or in an area where freezing conditions exist for an extended period to distribute the quarterly visual assessments during seasons when precipitation runoff occurs. Accordingly, Los Alamos National Security, LLC (LANS) has designated the following MSGP monitoring quarters.

Quarter 1:	April – May	Quarter 2:	June – July
Quarter 3:	August – September	Quarter 4:	October - November

The attached QVA form documents the following information as required by Part 3.2.2 of the 2015 MSGP and was completed by Environmental Compliance Programs (EPC-CP) personnel.

- Sample location;
- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing the visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Results of observations of the stormwater discharge;
- Probable sources of any observed stormwater contamination (if applicable);
- If applicable, why it was not possible to take a sample within the first 30 minutes of the storm event.

EPC-DO: 17-464
Victoria Baca

The EPC-CP Group Leader has signed the certification statement to meet the duly authorized signatory requirements for the QVA completed by an EPC-CP representative contained in Enclosure 1.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Taunia S. Van Valkenburg, EPC-CP Group Leader
Los Alamos National Laboratory



Manager Signature

4/22/17

Date

Part 3.2.3 of the 2015 MSGP allows the facility to take a substitute sample during the next qualifying storm event when adverse weather conditions prevent the collection of samples during a specific quarter. Adverse weather conditions are those that are dangerous or create inaccessibility for personnel, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions. Documentation of the rationale for no visual assessment for the quarter must be included in the facility-specific SWPPP.

Please contact Holly Wheeler at 667-1312 (hbenson@lanl.gov) if you have questions regarding the QVA documentation. Thank you for your assistance in meeting the requirements of the Laboratory's NPDES 2015 MSGP Permit.

EPC-DO: 17-464
Victoria Baca

Facility Name	Sampling Station	Work Order #
TA-54 MFW	MSGP04901	MSGP-61138

TWL/HLW: am

Enclosure(s):

1) Quarterly Visual Assessment Form, Third Quarter, 2017 Monitoring Year

Copy: Robert Stokes, DESHS-EWMS (E-File)

Adesh-records@lanl.gov, (E-File)

lasomailbox@nnsa.doe.gov, (E-File)

locatesteam@lanl.gov, (E-File)

epc-correspondence@lanl.gov, (E-File)



ENCLOSURE 1

Quarterly Visual Assessment Form
Third Quarter, 2017 Monitoring Year

EPC-DO: 17-464

Date: NOV 27 2017

Maintenance Details

Requested By: Banar, Alethea on
8/10/2017 1:16:00 PM**Taken By:** Banar, Alethea**Procedure:** MSGP Quarterly Visual
Assessment (EPC Sig)
(EPC-CP-Form-1021.2
3)**Last PM:** 8/9/2017**Project:** Visual Assessments
8/1/17 (P-MSGP-5208)**Target:** 9/30/2017**Priority/Type:** / Inspection**Department:** Environmental and Waste
Management Facility
Operat MSGP Program RG245.5 TA-54 MFW Monitored Outfall (049) MSGP04901**Contact:** Banar, Alethea**Phone:** 699-5836**Reason:** MSGP Quarterly Visual Assessment (EPC Sig)**Special Instructions:** NMR053195

Tasks

#	Description	Meas.	No	N/A	Yes
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.					
Sample information					
30	Document the monitoring Period (e.g., Apr-May)	aug-sept	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	8/7/17 11:59	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	8/7/17 11:59	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	8/9/17 11:10	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge (e.g., rain, snowmelt). Document the TOTAL amount (in) in the "Reading" field of this line.	rain .52	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide a reason.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parameters					
110	Is sample colorless? If "Failed", describe.	brown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", provide description (e.g. musty, sewage, sulfur, sour, solvent, petroleum/gas)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", provide description (e.g., slightly cloudy, cloudy, opaque).	cloudy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", provide description (e.g., fine, course).	fine	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160	Is sample free of suspended solids? If "Failed", provide description (e.g., fine, course).		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location (e.g., 'on the surface' or 'in the sample').		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs).		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Labor Report

Completed: 8/9/2017 11:10:00 AM**Report:** Marwin Shendo

8/10/2017

MSLP

Signature / Name

Date

Signature / Name

Date

I confirm the information as recorded is true, accurate and complete.

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg. FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: (See signature on file) Date: _____



memorandum

*Environmental Protection & Compliance
Division*

To: Victoria Baca, DESHS-EWMS, J962
Thru: Terrill Lemke, EPC-CP, (E-File) *TL*
From: Holly Wheeler, EPC-CP, (E-File) *HW*
Phone: 505-667-1312
Symbol: EPC-DO: 17-538
Date: **JAN 10 2018**

Subject: National Pollutant Discharge Elimination System (NPDES) Permit Tracking No. NMR053195, Multi-Sector General Permit (MSGP) Quarterly Visual Assessment (QVA) Form for October and November of 2017 for TA-54 Maintenance Facility West (MFW)

Please find attached a completed MSGP QVA Form documenting a visual assessment performed during the fourth quarter of monitoring at TA-54 Maintenance Facility West. Per Parts 3.2.2 and 5.5 of the 2015 MSGP, the signed certification statement and associated QVA form shall be incorporated into your MSGP Stormwater Pollution Prevention Plan (SWPPP).

Part 3.2.1 of the 2015 MSGP requires the visual assessment of stormwater discharge samples collected from each outfall once each quarter for the entire permit term. Part 3.2.3 allows facilities that are located in an area with a semi-arid climate and/or in an area where freezing conditions exist for an extended period to distribute the quarterly visual assessments during seasons when precipitation runoff occurs. Accordingly, Los Alamos National Security, LLC (LANS) has designated the following MSGP monitoring quarters.

Quarter 1:	April – May	Quarter 2:	June – July
Quarter 3:	August – September	Quarter 4:	October - November

The attached QVA form documents the following information required by Part 3.2.2 of the 2015 MSGP and was completed by Environmental Compliance Programs (EPC-CP) personnel.

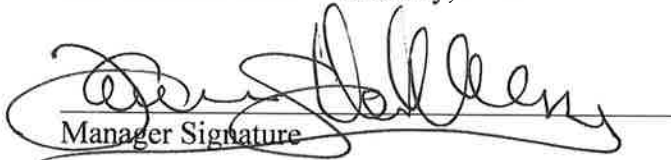
- Sample location;
- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing the visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Results of observations of the stormwater discharge;
- Probable sources of any observed stormwater contamination (if applicable);
- If applicable, why it was not possible to take a sample within the first 30 minutes of the storm event.

The EPC-CP Group Leader has signed the certification statement to meet the duly authorized signatory requirements for the QVA completed by an EPC-CP representative contained in Enclosure 1.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Taunia S. Van Valkenburg, EPC-CP Group Leader

Los Alamos National Security, LLC


Manager Signature

1/10/2018
Date

Part 3.2.3 of the 2015 MSGP allows the facility to take a substitute sample during the next qualifying storm event when adverse weather conditions prevent the collection of samples during a specific quarter. Adverse weather conditions are those that are dangerous or create inaccessibility for personnel, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions. Documentation of the rationale for no visual assessment for the quarter must be included in the facility-specific SWPPP.

Please contact Holly Wheeler at 667-1312 (hbenson@lanl.gov) if you have questions regarding the QVA documentation. Thank you for your assistance in meeting the requirements of the Laboratory's NPDES 2015 MSGP Permit.

Facility Name	Sampling Station	Work Order #
TA-54 MFW	MSGP04901	MSGP-61664

TWL/HLW: am

Enclosure(s): 1) Quarterly Visual Assessment Form, Fourth Quarter, 2017 Monitoring Year

Copy: Robert Stokes, DESHS-EWMS (E-File)
Adesh-records@lanl.gov, (E-File)
lasomailbox@nnsa.doe.gov, (E-File)
locateteam@lanl.gov, (E-File)
epc-correspondence@lanl.gov, (E-File)


ENCLOSURE 1

Quarterly Visual Assessment Form
Fourth Quarter, 2017 Monitoring Year

EPC-DO: 17-538

Date: JAN 10 2018

Maintenance Details

Requested: 10/4/2017 4:25:00 PM**Target:** 11/30/2017**Procedure:** MSGP Quarterly Visual
Assessment (EPC Sig)
(EPC-CP-Form-1021.2 3)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste
Management Facility
Operat MSGP Program RG245.5 TA-54 MFW Monitored Outfall (049) MSGP04901**Last PM:** 10/5/2017**Project:** Visual Assessments 10/1/17
(P-MSGP-5229)**Reason:** MSGP Quarterly Visual Assessment (EPC Sig)**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Meas.	No	N/A	Yes
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.					
Sample information					
30	Document the monitoring Period (e.g., Apr-May)	oct-nov	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	10/4/17 21:29	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	10/4/17 21:29	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	10/5/17 11:05	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge (e.g., rain, snowmelt). Document the TOTAL amount (in) in the "Reading" field of this line.	rain .78	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide a reason.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parameters					
110	Is sample colorless? If "Failed", describe.	brown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", provide description (e.g. musty, sewage, sulfur, sour, solvent, petroleum/gas)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", provide description (e.g., slightly cloudy, cloudy, opaque).	cloudy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", provide description (e.g., fine, course).		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
160	Is sample free of suspended solids? If "Failed", provide description (e.g., fine, course).		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location (e.g., 'on the surface' or 'in the sample').		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs).		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Labor Report

Completed: 10/5/2017 11:05:00 AM**Report:** Marwin Shendo

MPSK

10/6/2017

Signature / Name

Date

Signature / Name

Date

I confirm the information as recorded is true, accurate and complete.

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg. FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Taunia Van Valkenburg, EPC-CP Group Leader

Signature: (See signature on file) Date: _____

MSGP Quarterly Visual Assessment Form			
Complete a separate form for each outfall you assess. When adverse weather conditions prevent the collection of a sample during the quarter, a substitute sample must be taken during the next qualifying storm event. Maintain this document in your SWPPP.			
Name/Location of Facility:		Permit Number: NMR05GB21	Inspection Quarter: <input type="checkbox"/> Apr-May <input type="checkbox"/> Jun-Jul <input type="checkbox"/> Aug-Sep <input type="checkbox"/> Oct-Nov
Outfall ID:	*Substantially Identical Outfall? <input type="checkbox"/> Yes <input type="checkbox"/> No		If YES identify other Outfalls in the Group:
Person(s) collecting sample (PRINT): PPT Member? <input type="checkbox"/> Yes <input type="checkbox"/> No		Signature:	
Person(s) examining sample (PRINT): PPT Member? <input type="checkbox"/> Yes <input type="checkbox"/> No		Signature:	
Date & Time Discharge Began:		Date & Time Sample Collected:	Date & Time Sample Examined:
Substitute Sample? <input type="checkbox"/> Yes <input type="checkbox"/> No		If YES, identify quarter/year when sample was originally scheduled to be collected:	
Was the sample collected in the first 30 minutes? <input type="checkbox"/> Yes <input type="checkbox"/> No If No, explain why not:			
Nature of Discharge: <input type="checkbox"/> Rainfall. Amount _____ inches <input type="checkbox"/> Snowmelt. Amount _____ inches			
Previous Storm Ended > 72 hours Before Start of This Storm? <input type="checkbox"/> Yes <input type="checkbox"/> No			If No, Explain: *
PARAMETERS			
Color <input type="checkbox"/> None <input type="checkbox"/> Other		If Other describe:	
Odor <input type="checkbox"/> None <input type="checkbox"/> Musty <input type="checkbox"/> Sewage <input type="checkbox"/> Sulfur <input type="checkbox"/> Sour <input type="checkbox"/> Solvents <input type="checkbox"/> Petroleum/Gas <input type="checkbox"/> Other		If Other, describe the odor:	
Clarity: <input type="checkbox"/> Clear <input type="checkbox"/> Slightly Cloudy <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque <input type="checkbox"/> Other (describe):			
Floating Solids: <input type="checkbox"/> Yes <input type="checkbox"/> No		If YES, describe if raw or waste materials(s):	
Settled Solids:** <input type="checkbox"/> Yes <input type="checkbox"/> No		If YES, are solids Fine <input type="checkbox"/> Coarse <input type="checkbox"/> If Other describe:	
Suspended Solids: <input type="checkbox"/> Yes <input type="checkbox"/> No		If YES, are solids Fine <input type="checkbox"/> Coarse <input type="checkbox"/> If Other describe:	
Foam (gently shake sample): <input type="checkbox"/> Yes <input type="checkbox"/> No		If YES, on the surface <input type="checkbox"/> or <input type="checkbox"/> in the water. Describe color:	
Oil Sheen <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Color of Sheen:		Thickness: Flecks <input type="checkbox"/> Globs <input type="checkbox"/> Describe if other:	
Other Obvious Indicators of Pollution Present in the sample? Yes <input type="checkbox"/> No <input type="checkbox"/>		If YES describe:	
SITE OBSERVATIONS			
Potential pollutants found during visual examination? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, list pollutant(s) and if possible indicate the source: If source is identified during collection of sample, please notify Tim Zimmerly @ 699-7621 or 664-0105			
Pollutant	Source	Pollutant	Source
NOTE: A clean up of the site should be conducted if the pollutant source is known. Was proper Notification made? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, indicate who was notified:			
CORRECTIVE ACTION			
If storm water contamination was identified in this sample through visual assessment, was a Corrective Action Form filled out within 24 hrs of observation? Yes <input type="checkbox"/> No <input type="checkbox"/> If No, explain why not:			
Was a Corrective Action Plan identified within 14 days of the observation? Yes <input type="checkbox"/> No <input type="checkbox"/> If No, explain why not:			
Other Relevant Information: Yes <input type="checkbox"/> No <input type="checkbox"/> Use the back of this form to list any concerns, comments, and/or descriptions of pictures taken, (attach additional sheets as necessary).			
* The 72-hour interval can be waived when the previous storm did not yield a measurable discharge or if you are able to document (attach applicable documentation) that less than a 72-hour interval is representative of local storm events during the sampling period.			
** Observe for settled solids after allowing the sample to sit for approximately one-half hour.			



memorandum

*Environmental Protection & Compliance Division
Environmental Compliance Programs (EPC-CP)*

To/MS: David Schrock, DESHS-EWMS, J962
Thru/MS: Terrill Lemke, EPC-CP, (E-File) *el*
From/MS: Holly Wheeler, EPC-CP, (E-File) *HW*
Phone/Fax: 667-1312
Symbol: EPC-DO-16-301
Date: October 13, 2016

Subject: National Pollutant Discharge Elimination System (NPDES) Permit No. NMR053195, Multi-Sector General Permit (MSGP) Quarterly Visual Assessment (QVA) Forms for April and May of 2016 for TA-54 Area G, TA-54 Area L, TA-54 Maintenance Facility West, and TA-54 RANT

Please find attached completed MSGP QVA Forms documenting visual assessments performed during the first quarter of monitoring at the TA-54 Area G, TA-54 Area L, TA-54 Maintenance Facility West and TA-54 RANT. Per Parts 3.2.2 and 5.5 of the 2015 MSGP, the QVA forms shall be incorporated into your MSGP Storm Water Pollution Prevention Plan (SWPPP).

Part 3.2.1 of the 2015 MSGP requires the visual assessment of storm water discharge samples collected from each outfall once each quarter for the entire permit term. Part 3.2.3 allows facilities that are located in an area with a semi-arid climate and/or in an area where freezing conditions exist for an extended period to distribute the quarterly visual assessments during seasons when precipitation runoff occurs. Accordingly, LANS has designated the following MSGP monitoring quarters.

Quarter 1:	April – May	Quarter 2:	June – July
Quarter 3:	August – September	Quarter 4:	October - November

The attached QVA forms document the following information as required by Part 3.2.2 of the 2015 MSGP and were completed by Deployed Environment, Safety, and Health Services (DESHS) and Environmental Compliance Programs (EPC-CP) personnel. (Please note: QVAs completed by EPC-CP personnel have been signed by a duly authorized signatory. Those completed by a DESHS representative must be signed by a duly authorized signatory such as a Facility Operations Director (FOD), Operations Manager or DESHS Group Leader prior to being placed in the MSGP SWPPP.)

- Sample location;
- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing the visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Results of observations of the stormwater discharge;
- Probable sources of any observed stormwater contamination (if applicable);
- If applicable, why it was not possible to take a sample within the first 30 minutes of the storm event.

Part 3.2.3 of the 2015 MSGP allows the facility to take a substitute sample during the next qualifying storm event when adverse weather conditions prevent the collection of samples during a specific quarter. Adverse weather conditions are those that are dangerous or create inaccessibility for personnel, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions. Documentation of the rationale for no visual assessment for the quarter must be included in the facility-specific SWPPP.

Please contact Holly Wheeler at 667-1312 (hbenson@lanl.gov) if you have questions regarding the QVA documentation. Thank you for your assistance in meeting the requirements of the Laboratory's NPDES 2015 MSGP Permit.

TWL:HLW/lm

Enclosure: 1. Quarterly Visual Assessment Forms, First Quarter, 2016 Monitoring Year

Facility Name	Sampling Station	Work Order #
TA-54 Area G	MSGP07001	MSGP-53768
TA-54 Area G	MSGP07101	MSGP-53769
TA-54 Area G	MSGP05201	MSGP-53770
TA-54 Area G	MSGP06501	MSGP-53771
TA-54 Area G	MSGP06601	MSGP-53772
TA-54 Area G	MSGP05901	MSGP-53773
TA-54 Area G	MSGP05801	MSGP-53774
TA-54 Area G	MSGP05701	MSGP-53775
TA-54 Area G	MSGP05601	MSGP-53776
TA-54 Area G	MSGP05501	MSGP-53777
TA-54 Area G	MSGP05401	MSGP-53778
TA-54 Area G	MSGP06701	MSGP-53779
TA-54 Area G	MSGP06801	MSGP-53780
TA-54 Area G	MSGP06001	MSGP-53781
TA-54 Area G	MSGP06101	MSGP-53782
TA-54 Area G	MSGP06201	MSGP-53783
TA-54 Area G	MSGP06301	MSGP-53784
TA-54 Area G	MSGP06401	MSGP-53785
TA-54 Area G	MSGP06901	MSGP-54108
TA-54 Area G	MSGP07001	MSGP-54158
TA-54 Area G	MSGP07101	MSGP-54159
TA-54 Area G	MSGP05201	MSGP-54160
TA-54 Area G	MSGP06501	MSGP-54161
TA-54 Area G	MSGP06601	MSGP-54162
TA-54 Area G	MSGP05901	MSGP-54163
TA-54 Area G	MSGP05801	MSGP-54164
TA-54 Area G	MSGP05701	MSGP-54165
TA-54 Area G	MSGP05601	MSGP-54166
TA-54 Area G	MSGP05501	MSGP-54167
TA-54 Area G	MSGP05401	MSGP-54168

TA-54 Area G	MSGP06701	MSGP-54169
TA-54 Area G	MSGP06801	MSGP-54170
TA-54 Area G	MSGP06001	MSGP-54171
TA-54 Area G	MSGP06101	MSGP-54172
TA-54 Area G	MSGP06201	MSGP-54173
TA-54 Area G	MSGP06301	MSGP-54174
TA-54 Area G	MSGP06401	MSGP-54175
TA-54 Area L	MSGP05001	MSGP-53616
TA-54 Area L	MSGP05001	MSGP-53813
TA-54 Area L	MSGP05001	MSGP-54120
TA-54 MFW	MSGP04901	MSGP-54121
TA-54 RANT	MSGP04601	MSGP-53799
TA-54 RANT	MSGP04501	MSGP-53800
TA-54 RANT	MSGP04801	MSGP-53801
TA-54 RANT	MSGP04401	MSGP-53802
TA-54 RANT	MSGP04701	MSGP-54122
TA-54 RANT	MSGP04601	MSGP-54189
TA-54 RANT	MSGP04501	MSGP-54190
TA-54 RANT	MSGP04801	MSGP-54191
TA-54 RANT	MSGP04401	MSGP-54192

Cy: Robert Stokes, DESHS-EWMS, (E-File)
locatesteam@lanl.gov, (E-File)
epc-correspondence@lanl.gov, (E-File)

Maintenance Details

Requested: 5/2/2016 11:40:40 AM
Procedure: MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)
Last PM: N/A
Project: Sio Visual Assessments 5/2/16 (P-MSGP-4731)

Target: 5/31/2016
Priority/Type: Normal / Inspection
Department: Environmental and Waste Management Facility Operat

MSGP Program
 RG-TA-54
 TA-54 Area G
 Monitored Outfall (072)
 Substantially Identical Outfall (070)
 MSGP07001

Reason: MSGP Quarterly Visual Assessment

Contact:
Phone:

Special Instructions: NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
---	-------------	--------	-------	----------	--------	-----	----------

The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.		April/May		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).		4/30/16 between 20:00-24:00	145 (estimated) - new 05/05/16	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).		4/30/16 between 20:00-24:00	145 (estimated) - new 05/05/16	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).		5/2/16 14:47		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.		RAIN 0.22"	0.36 in. total precip. 24x8 shells	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.		Jar placed prior to rain event.	Personnel were not present during non-work hours to verify exact collection time/date. Multiple storm events over weekend.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
90	Previous storm ended >72 hours before start of storm? If "Failed", provide reason in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150			fine		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.

160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Documents

ID	Document Name	Type	Location
MSGP VA signature	MSGP Visual Assessment Signature	Signature page	View

Labor Report

Completed: _____ **Failure:** _____

Report:

WO ID: MS4P - 53768

Page 3 of 3

Signature (collecting sample):

MSH

Date and Time: 5/2/16 14:54

Signature (conducting visual assessment):

MSH

Date and Time: 5/2/16 14:54

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Anthony R. Grieggs EPC-CP group leader.

Signature:

A R Grieggs

Date:

6/9/2016

Maintenance Details

Requested: 5/2/2016 11:40:45 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** N/A**Project:** Sio Visual Assessments
5/2/16 (P-MSGP-4731)

MSGP Program
 RG-TA-54
 TA-54 Area G
 Monitored Outfall (072)
 Substantially Identical Outfall (071)
 MSGP07101

Reason: MSGP Quarterly Visual Assessment**Contact:**
Phone:**Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
---	-------------	--------	-------	----------	--------	-----	----------

The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.		April/May		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).		4/30/16, 2:00 to 2:40		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).		4/30/16, 2:00 to 2:40		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).		5/2/16 14:58		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.		Rain 0.36 in. total precip. and 5/1/16		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.		Personnel were not present during non-work hours. Several rain events occurred over the weekend		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
90	Previous storm ended >72 hours before start of storm? If "Failed", provide reason in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If		Fine		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ID	Document Name	Type	Location
MSGP VA signature	MSGP Visual Assessment Signature	Signature page	View

Completed: _____ **Failure:** _____

[illegible]

WO ID: MSGP-53769

Page 3 of 3

Signature (collecting sample):

[Signature]

Date and Time: 5/2/16 15:03

Signature (conducting visual assessment):

[Signature]

Date and Time: 5/2/16 15:03

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Anthony R. Grieggs, EPC-CP Group Leader

Signature:

A R Grieggs

Date:

6/9/2016

Maintenance Details

Requested: 5/2/2016 11:40:45 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** N/A**Project:** Sio Visual Assessments
5/2/16 (P-MSGP-4731)

MSGP Program
 RG-TA-54
 TA-54 Area G
 Monitored Outfall (051)
 Substantially Identical Outfall (052)
 MSGP05201

Reason: MSGP Quarterly Visual Assessment**Contact:**
Phone:**Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.		April/May		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format)		4/30/2016 10:20:00		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).		4/30/16 20:00:00		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).		5/2/16 13:52		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.		Rain 0.36 in		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.		Personnel were not present during storm events occurred over the weekend.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
90	Previous storm ended >72 hours before start of storm? If "Failed", provide reason in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If		Fine		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

"other" is chosen from the lookup table, provide description in comments of this line.

160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	Fine	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	UW 5/2/16
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	Rainbow Colored Sheen See Comments Section in Laker Report.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	UW 5/2/16
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Documents

ID	Document Name	Type	Location
MSGP VA signature	MSGP Visual Assessment Signature	Signature page	View

Labor Report

Completed: _____ Failure: _____

Report:

South of Dome 153 oil staining in channel off roadway. Gravel bags need to be replaced as they are oil stained. Slight sheen in 3rd panel from the top roadway. Facility operation conducted for EWSIP noted at 1435 on 5/2/2016. Source was identified as black/dark brown oily substance in channel identified above. CAR # 902 entered into Oracle Corrective Action Reporting database. Estimated completion date is May 03, 2016, UW 05/05/16

WO ID: MS6P-53770

Page 3 of 3

Signature (collecting sample): Holly Whith Date and Time: 5/2/16 1405

Signature (conducting visual assessment): Holly Whith Date and Time: 5/2/16 1405

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: A R Grieggs Date: 6/9/2016

Maintenance Details

Requested: 5/2/2016 11:40:46 AM
Procedure: MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)
Last PM: N/A
Project: Sio Visual Assessments 5/2/16 (P-MSGP-4731)

Target: 5/31/2016
Priority/Type: Normal / Inspection
Department: Environmental and Waste Management Facility Operat

MSGP Program
 RG-TA-54
 TA-54 Area G
 Monitored Outfall (053)
 Substantially Identical Outfall (065)
 MSGP06501

Reason: MSGP Quarterly Visual Assessment

Special Instructions: NMR053195

Contact: Holly Wheeler
Phone: 667-1312

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
90	Previous storm ended >72 hours before start of storm? If "Failed", provide reason in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

"other" is chosen from the lookup table, provide description in comments of this line.

160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Documents

ID	Document Name	Type	Location
MSGP VA signature	MSGP Visual Assessment Signature	Signature page	View

Labor Report

Completed: _____ Failure: _____

Report:

No flow. No sample collected. No visual assessment performed.

WO ID: MSCP-53771Page 3 of 3

Signature (collecting sample):

Holly WheelDate and Time: 05/02/16 03:26 pm

Signature (conducting visual assessment):

N/A

Date and Time: _____

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Anthony R. Grieggs, EPC-CP Group leader

Signature:

A R Grieggs







Date:

6/9/2016

Maintenance Details

Requested: 5/2/2016 11:40:46 AM
Procedure: MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)
Last PM: N/A
Project: Sio Visual Assessments 5/2/16 (P-MSGP-4731)

Target: 5/31/2016
Priority/Type: Normal / Inspection
Department: Environmental and Waste Management Facility Operat

 MSGP Program
 RG-TA-54
 TA-54 Area G
 Monitored Outfall (053)
 Substantially Identical Outfall (066)
 MSGP06601

Reason: MSGP Quarterly Visual Assessment

Special Instructions: NMR053195

Contact:
Phone:

Holly Wheeler
667-1312

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
90	Previous storm ended >72 hours before start of storm? If "Failed", provide reason in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

"other" is chosen from the lookup table, provide description in comments of this line.

160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Documents

ID	Document Name	Type	Location
MSGP VA signature	MSGP Visual Assessment Signature	Signature page	View

Labor Report

Completed: _____ Failure: _____

Report:

No Flow. No sample collected. No visual assessment performed.

WO ID: MogP-53772 Page 3 of 3

Signature (collecting sample): [Signature] Date and Time: 05/02/16 03:32 pm

Signature (conducting visual assessment): N/A Date and Time: _____

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP group leader

Signature: [Signature] Date: 6/9/2016

Maintenance Details

Requested: 5/2/2016 11:40:48 AM
Procedure: MSGP Quarterly Visual Assessment (EPC-CP-Form-1021 2)
Last PM: N/A
Project: Sio Visual Assessments 5/2/16 (P-MSGP-4731)

Target: 5/31/2016
Priority/Type: Normal / Inspection
Department: Environmental and Waste Management Facility Operat

MSGP Program
 RG-TA-54
 TA-54 Area G
 Monitored Outfall (069)
 Substantially Identical Outfall (058)
 MSGP05801

Reason: MSGP Quarterly Visual Assessment

Contact:
Phone:

Special Instructions: NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).			4/30/16 20:00 to 21:00	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).			4/30/16 20:00 to 21:00	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).			5/2/16 15:19	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.			Rain 0.36in. no strike	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.			Personnel were not present during non-work hours, several storm events occurred over the weekend.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
90	Previous storm ended >72 hours before start of storm? If "Failed", provide reason in comments of this line.			Previous storm event occurred 4/28/16, 0.2in. total precip. no strike	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If			Coarse	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

"other" is chosen from the lookup table, provide description in comments of this line.

160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Documents

ID	Document Name	Type	Location
MSGP VA signature	MSGP Visual Assessment Signature	Signature page	View

Labor Report

Completed: _____ Failure: _____

Report:

WO ID: MSGP-53774Page 3 of 3

Signature (collecting sample):

Bobby Wheeler

Date and Time:

5/2/16 15:02

Signature (conducting visual assessment):

Bobby Wheeler

Date and Time:

5/2/16 15:02**CERTIFICATION STATEMENT**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Anthony R. Grieggs, EPC-CP Group Leader

Signature:

A R Grieggs

Date:

6/9/2016

Maintenance Details

Requested: 5/2/2016 11:40:48 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** N/A**Project:** Sio Visual Assessments
5/2/16 (P-MSGP-4731)

MSGP Program

RG-TA-54

TA-54 Area G

Monitored Outfall (069)

Substantially Identical Outfall (057)

MSGP05701

Reason: MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.		April May		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
----	--	--	--	--	--------------------------	--------------------------	-------------------------------------

40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).		4/30/16 20:00 to 21:00		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
----	---	--	------------------------	--	--------------------------	--------------------------	-------------------------------------

50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).		4/30/16 20:00 to 21:00		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
----	--	--	------------------------	--	--------------------------	--------------------------	-------------------------------------

60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).		5/2/16 15:15		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
----	--	--	--------------	--	--------------------------	--------------------------	-------------------------------------

70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.		Rain 0.36 in over 24 hrs		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
----	---	--	--------------------------	--	--------------------------	--------------------------	-------------------------------------

80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.		Personnel were not present during non-work hours. Several rain events occurred.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
----	---	--	---	--	--------------------------	--------------------------	-------------------------------------

90	Previous storm ended >72 hours before start of storm? If "Failed", provide reason in comments of this line.		Recent storm event occurred 4/28/16, 0.2 in total precip. no skid.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
----	---	--	--	--	--------------------------	--------------------------	-------------------------------------

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-----	---	--	--	--	--------------------------	--------------------------	-------------------------------------

120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-----	--	--	--	--	--------------------------	--------------------------	-------------------------------------

130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-----	--	--	--	--	--------------------------	--------------------------	-------------------------------------

140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-----	--	--	--	--	--------------------------	--------------------------	-------------------------------------

150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If		Fine		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----	---	--	------	--	-------------------------------------	--------------------------	--------------------------

160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> ?

ID	Document Name	Type	Location
MSGP VA signature	MSGP Visual Assessment Signature	Signature page	View

Completed: _____ **Failure:** _____

[illegible]

WO ID: MSGP-53775 Page 3 of 3

Signature (collecting sample): Bobby White Date and Time: 5/2/16 15:17

Signature (conducting visual assessment): Bobby White Date and Time: 5/2/16 15:17

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs EPC-CP Group Leader

Signature: A R Grieggs Date: 6/9/2016

Maintenance Details

Requested: 5/2/2016 11:40:49 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** N/A**Project:** Sio Visual Assessments
5/2/16 (P-MSGP-4731)

MSGP Program

RG-TA-54

TA-54 Area G

Monitored Outfall (069)

Substantially Identical Outfall (056)

MSGP05601

Reason: MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.		April May		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).		4/30/16 20:00 to 24:00		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).		4/30/16 20:00 to 24:00		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).		5/2/16 15:09		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.		Rain 0.36 in. Available		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.		During non-work hours. Personnel were not present and several storm events occurred.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
90	Previous storm ended >72 hours before start of storm? If "Failed", provide reason in comments of this line.		Previous storm event occurred 4/28/16, 0.2 in total precipitation available		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If		Coarse		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ID	Document Name	Type	Location
MSGP VA signature	MSGP Visual Assessment Signature	Signature page	View

Completed: _____ Failure: _____

[illegible]

WO ID: h568 33776 Page 3 of 3

Signature (collecting sample): [Signature] Date and Time: 5/2/16 15:11

Signature (conducting visual assessment): [Signature] Date and Time: 5/2/16 15:11

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP group leader

Signature: [Signature] Date: 6/9/2016

Maintenance Details

Requested: 5/2/2016 11:40:50 AM
Procedure: MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)
Last PM: N/A
Project: Sio Visual Assessments 5/2/16 (P-MSGP-4731)

Target: 5/31/2016
Priority/Type: Normal / Inspection
Department: Environmental and Waste Management Facility Operat

MSGP Program
 RG-TA-54
 TA-54 Area G
 Monitored Outfall (069)
 Substantially Identical Outfall (054)
 MSGP05401

Reason: MSGP Quarterly Visual Assessment

Contact:
Phone:

Special Instructions: NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.		April / May		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).		4/30/16 2000 to 2400	145 (estimated) 4/30/16	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).		4/30/16 2000 to 2400	145 (estimated) 4/30/16	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).		5/2/16 15:05		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.		Rain 0.36 in. total precip		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.		Personnel were not present during non-work hours. Multiple storm events occurred over the weekend.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
90	Previous storm ended >72 hours before start of storm? If "Failed", provide reason in comments of this line.		Previous storm event ended 4/28/16, 0.2 in total precip.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If		Fine		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

"other" is chosen from the lookup table, provide description in comments of this line.

160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Documents

ID	Document Name	Type	Location
MSGP VA signature	MSGP Visual Assessment Signature	Signature page	View

Labor Report

Completed: _____ Failure: _____

Report:

WO ID: MSGP-53778 Page 3 of 3

Signature (collecting sample): Holly White Date and Time: 5/2/16 15:07

Signature (conducting visual assessment): Holly White Date and Time: 5/2/16 15:07

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: A R Grieggs Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 9:37:00 AM
Procedure: MSGP Quarterly Visual Assessment (EPC-CP-Form-1021 2)

Last PM: 5/2/2016
Project: Visual Assessments wk 5-16-16 (P-MSGP-4766)

Reason: MSGP Quarterly Visual Assessment

Special Instructions: NMR053195

Target: 5/31/2016
Priority/Type: Normal / Inspection
Department: Environmental and Waste Management Facility Operat

 MSGP Program
 RG-TA-54
 TA-54 Area G
 Monitored Outfall (069)
 MSGP06901

Contact:
Phone:

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.		MP1		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).		05/15/16 @ 15:11		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).		05/15/16 @ 15:11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).		05/15/16 @ 12:30		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.		PRC 0.15 in.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.		C2		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.		Settled 2		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<i>clear / on surface</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Labor Report

Completed: _____ Failure: _____ Meter 1: _____ Meter 2: _____

Report:

Y

WO ID:

54108

Page

3

of

3

Signature (collecting sample):



Date and Time:

5/10/16 1230

Signature (conducting visual assessment):



Date and Time:

5/10/16 1220

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Anthony R. Grieggs, EPC-CP Group Leader

Signature:





Date:

6/9/2016

32

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021 2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat MSGP Program RG-TA-54 TA-54 Area G Monitored Outfall (072) Substantially Identical Outfall (071) MSGP07101**Last PM:** 5/2/2016**Project:** SIO Visual Assessments 5-16-16 (P-MSGP-4768)**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.	Apr / May			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16 15:30	9pp/04		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16 15:30	9pp/04		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/16/16 15:04			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	RAIN 0.03"	0.02" 05/12/16		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.	sample was collected over the weekend	personnel were not present 5/15/16		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	cause			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Completed: _____ **Failure:** _____

[illegible]

WO ID: ⁵⁴¹⁵⁹MSGP-541059-18 Page 3 of 3
_{5/19/16}

Signature (collecting sample): *n/SLH* Date and Time: 05/19/16 09:48 hrs

Signature (conducting visual assessment): *n/SLH* Date and Time: 05/19/16 09:48 hrs

CERTIFICATION STATEMENT



"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: *AR Grieggs* Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021 2)**Last PM:** 5/2/2016**Project:** SIO Visual Assessments
5-16-16 (P-MSGP-4768)**Target:** 5/31/2016**Priority/Type:** Normal / Inspection**Department:** Environmental and
Waste Management
Facility Operat MSGP Program RG-TA-54 TA-54 Area G Monitored Outfall (051) Substantially Identical Outfall (052) MSGP05201**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.	Apr/May			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16 15:30	15:30	(.02)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16 15:30	15:30		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/16/16 15:58	15:58		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	Rain 0.03"	0.03"		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.	no personnel were present. Sample was collected over the weekend.			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	fine			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Completed: _____ **Failure:** _____

[illegible]

WO ID: MSCP - 54160 Page 3 of 3

Signature (collecting sample): MSLH Date and Time: 5/19/16 09:20 hrs

Signature (conducting visual assessment): MSLH Date and Time: 5/14/16 09:20 hrs

CERTIFICATION STATEMENT



"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CD Group Leader

Signature: AR Grieggs Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Last PM:** 5/2/2016**Project:** SIO Visual Assessments
5-16-16 (P-MSGP-4768)**Target:** 5/31/2016**Priority/Type:** Normal / Inspection**Department:** Environmental and
Waste Management
Facility Operat MSGP Program RG-TA-54 TA-54 Area G Monitored Outfall (053) Substantially Identical Outfall (065) MSGP06501**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.	Apr/May			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16 approx 15:30			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16 approx 15:30			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/16/16 15:30			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	rain 0.03" 0.02" 05/22/16			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.	no personnel were present. sample collected over the weekend			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	fine			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
160					<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ASW 05/23/16

Completed: _____ **Failure:** _____

[illegible]

WO ID: MSGP-54161Page 3 of 3

Signature (collecting sample):

MSGP

Date and Time:

05/19/16 14:53 hrs

Signature (conducting visual assessment):

MSGP

Date and Time:

05/19/16 14:53 hrs**CERTIFICATION STATEMENT**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Anthony R. Grieggs, EPC-CP Group Leader



Signature:

A R Grieggs

Date:

6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Last PM:** 5/2/2016**Project:** SIO Visual Assessments
5-16-16 (P-MSGP-4768)**Target:** 5/31/2016**Priority/Type:** Normal / Inspection**Department:** Environmental and
Waste Management
Facility Operat MSGP Program RG-TA-54 TA-54 Area G Monitored Outfall (053) Substantially Identical Outfall (066) MSGP06601**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
---	-------------	--------	-------	----------	--------	-----	----------

The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.

170 Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line. ☐ ☒ ☐

180 Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line. ☐ ☒ ☐

190 Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line. ☐ ☒ ☐

Labor Report

Completed: _____ Failure: _____

Report:

No flow. No sample collected. No visual assessment conducted.

WO ID: MSGP-54162 Page 3 of 3

Signature (collecting sample):

Date and Time:

05/19/16 15:04

Signature (conducting visual assessment):

Date and Time:

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Anthony R. Greggs, EPC-CP Group Leader



Signature:

AR Greggs

Date:

6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Last PM:** 5/2/2016**Project:** SIO Visual Assessments 5-16-16 (P-MSGP-4768)**Target:** 5/31/2016**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat MSGP Program RG-TA-54 TA-54 Area G Monitored Outfall (069) Substantially Identical Outfall (059) MSGP05901**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.

170 Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line. ☐ ☒ ☐

180 Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line. ☐ ☒ ☐

190 Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line. ☐ ☒ ☐

Labor Report

Completed: _____ Failure: _____

Report:

No Flots. No sample collected. No visual assessment conducted.

WO ID: MSCP54163 Page 3 of 3

Signature (collecting sample): [Signature] Date and Time: 05/19/16 13:53

Signature (conducting visual assessment): _____ Date and Time: _____

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: [Signature] Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM

Target: 5/31/2016

Procedure: MSGP Quarterly Visual
Assessment (EPC-CP-
Form-1021.2)

Priority/Type: Normal / Inspection

Department: Environmental and
Waste Management
Facility Operat

Last PM: 5/2/2016

Project: SIO Visual Assessments
5-16-16 (P-MSGP-4768)

MSGP Program

RG-TA-54

TA-54 Area G

Monitored Outfall (069)

Substantially Identical Outfall (058)

MSGP05801

Reason: MSGP Quarterly Visual Assessment

Contact:

Phone:

Special Instructions: NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.	Apr / May			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	approx. 11:30 05/19/16 11:00 ps			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	approx. 11:30 05/19/16 11:00 ps			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/19/2016 14:10			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	Rain 0.1"			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.	Personnel were not present overnight. ps visual inspection conducted the next business day. ps same day.			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	Fine			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Completed: _____ Failure: _____

[illegible]

WO ID: MSGP-54164

Page 3 of 3

Signature (collecting sample): MSLH Date and Time: 05/19/16 14:10

Signature (conducting visual assessment): MSLH Date and Time: 05/19/16 14:10

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: AR Grieggs Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM

Procedure: MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)

Last PM: 5/2/2016

Project: SIO Visual Assessments
5-16-16 (P-MSGP-4768)

Target: 5/31/2016

Priority/Type: Normal / Inspection

Department: Environmental and
Waste Management
Facility Operat

MSGP Program

RG-TA-54

TA-54 Area G

Monitored Outfall (069)

Substantially Identical Outfall (057)

MSGP05701

Reason: MSGP Quarterly Visual Assessment

Contact:

Phone:

Special Instructions: NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.	Apr/May			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	approx 11:30 05/19/16 11:00:05			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/19/16 11:30 11:00:05			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/19/16 14:16			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	Rain 0.1"			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.	visual inspect conducted the next business day			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Personnel were not present at the time of discharge. ~~overnight~~ ^{sameday}

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
160					<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Labor Report

Completed: _____ Failure: _____

Report:

WO ID: MSGP-54165

Page 3 of 3

Signature (collecting sample): MSPL Date and Time: 05/19/16 14:15

Signature (conducting visual assessment): MSPL Date and Time: 05/19/16 14:15

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Gregg, EPC-CP Group Leader

Signature: AR Gregg Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM

Procedure: MSGP Quarterly Visual Assessment (EPC-CP-Form-1021 2)

Last PM: 5/2/2016

Project: SIO Visual Assessments
5-16-16 (P-MSGP-4768)

Target: 5/31/2016

Priority/Type: Normal / Inspection

Department: Environmental and Waste Management Facility Operat

 MSGP Program RG-TA-54

TA-54 Area G

 Monitored Outfall (069)

 Substantially Identical Outfall (056)

MSGP05601

Reason: MSGP Quarterly Visual Assessment

Contact:

Phone:

Special Instructions: NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.	Apr/May			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16	approx 15:30		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16	approx 15:30		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/16/16	15:23		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	rain	0.03"		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.	no personnel were present. Sample collected over the weekend			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	Course			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Completed: _____ **Failure:** _____

[illegible]

WO ID: MSGP-54166

Page 3 of 3

Signature (collecting sample): MSH Date and Time: 5/19/16 14:28hrs

Signature (conducting visual assessment): MSH Date and Time: 5/19/16 14:28hrs

CERTIFICATION STATEMENT


"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: A R Grieggs Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Last PM:** 5/2/2016**Project:** SIO Visual Assessments
5-16-16 (P-MSGP-4768)**Target:** 5/31/2016**Priority/Type:** Normal / Inspection**Department:** Environmental and
Waste Management
Facility Operat MSGP Program RG-TA-54 TA-54 Area G Monitored Outfall (069) Substantially Identical Outfall (055) MSGP05501**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.	Apr / May			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16 approx 15:30			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16 approx 15:30			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/16/16 15:25			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	rain 0.03" approx 05/16/16			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.	No personnel were present. Sample collected over the weekend			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	Coarse			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
160					<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Completed: _____ **Failure:** _____

[illegible]

WO ID: MSGP-54167

Page 3 of 3

Signature (collecting sample):

MSH

Date and Time: 05/19/16 14:33 hrs

Signature (conducting visual assessment):

MSH

Date and Time: 05/19/16 14:33 hrs

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Anthony R. Greggs, EPC-CP Group Leader

Signature:

AR Greggs

Date:

6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM
Procedure: MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)
Last PM: 5/2/2016
Project: SIO Visual Assessments 5-16-16 (P-MSGP-4768)

Target: 5/31/2016
Priority/Type: Normal / Inspection
Department: Environmental and Waste Management Facility Operat

MSGP Program
 RG-TA-54
 TA-54 Area G
 Monitored Outfall (069)
 Substantially Identical Outfall (054)
 MSGP05401

Reason: MSGP Quarterly Visual Assessment

Contact:
Phone:

Special Instructions: NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.	Apr/May			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16 approx 15:30			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16 approx 15:30			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/16/16 15:27			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	rain 0.03" approx 0.02" possible			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.	no personnel were present. sample collected over the weekend			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	Course			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Completed: _____ **Failure:** _____

[illegible]

WO ID: MSGP-5468

Page 3 of 3

Signature (collecting sample):

RISH

Date and Time: 05/19/16 14:42 hrs

Signature (conducting visual assessment):

RISH

Date and Time: 05/19/16 14:42 hrs

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Anthony R. Grieggs, EPC-CP Group Leader




Signature:

A R Grieggs

Date:

6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021 2)**Last PM:** 5/2/2016**Project:** SIO Visual Assessments 5-16-16 (P-MSGP-4768)**Target:** 5/31/2016**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat MSGP Program RG-TA-54 TA-54 Area G Monitored Outfall (069) Substantially Identical Outfall (067) MSGP06701**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.

170 Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line. ☐ ☒ ☐

180 Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line. ☐ ☒ ☐

190 Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line. ☐ ☒ ☐

☐ ☒ ☐

Labor Report

Completed: _____ Failure: _____

Report:

No Flow. No sample collected. No visual assessment conducted.

WO ID: MSGP-54169 Page 3 of 3

Signature (collecting sample): [Signature] Date and Time: 05/19/16 13:47

Signature (conducting visual assessment): _____ Date and Time: _____

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R Grieggs, EPC-CP Group leader

Signature: [Signature] Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** 5/2/2016**Project:** SIO Visual Assessments
5-16-16 (P-MSGP-4768)

MSGP Program

RG-TA-54

TA-54 Area G

Monitored Outfall (069)

Substantially Identical Outfall (068)

MSGP06801

Reason: MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.	Apr/May					<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)						<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16	approx 15:30				<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16	approx 15:30				<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/16/16	15:18				<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	rain	0.03" 202" 1005/2016				<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.	No personnel were present. sample collected over the weekend.					<input checked="" type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.						<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.						<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.						<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.						<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.						<input checked="" type="checkbox"/>
160		Course					<input checked="" type="checkbox"/>

	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

05/23/16
↓

Labor Report

Completed: _____ **Failure:** _____

Report:

WO ID: MSGP-54170

Page 3 of 3

Signature (collecting sample):

MSCH

Date and Time:

05/19/16, 13:42 hrs

Signature (conducting visual assessment):

MSCH

Date and Time:

05/19/16, 13:42 hrs

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Anthony R. Grieggs, EPC-CP Group Leader



Signature:

AR Grieggs

Date:

6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** 5/2/2016**Project:** SIO Visual Assessments 5-16-16 (P-MSGP-4768) MSGP Program RG-TA-54 TA-54 Area G Monitored Outfall (069) Substantially Identical Outfall (060) MSGP06001**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.

170 Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line. ☐ ☒ ☐

180 Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line. ☐ ☒ ☐

190 Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line. ☐ ☒ ☐

Labor Report

Completed: _____ Failure: _____

Report:

No flow. No sample collected. No visual assessment conducted.

WO ID: 54171 Page 3 of 3

Signature (collecting sample): [Signature] Date and Time: 08/19/16 10:08

Signature (conducting visual assessment): _____ Date and Time: _____

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: [Signature] Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** 5/2/2016**Project:** SIO Visual Assessments 5-16-16 (P-MSGP-4768)

MSGP Program

RG-TA-54

TA-54 Area G

Monitored Outfall (069)

Substantially Identical Outfall (061)

MSGP06101

Reason: MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.	Apr / May			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16 approx 15:30			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16 approx 15:30			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/16/16 15:12			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	RAIN 0.03" approx 15:30			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.	no personnel were present sample was collected over the weekend			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	Course			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	no <i>still</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.		<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.		<input type="checkbox"/>	<input checked="" type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

Labor Report

Completed: _____ Failure: _____

Report:

WO ID: MSGP 54172 Page 3 of 3

Signature (collecting sample): [Signature] Date and Time: 05/19/16 ^{OT} 10:00 hrs
_{5/19/16}

Signature (conducting visual assessment): [Signature] Date and Time: 05/19/16 10:07 hrs

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: [Signature] Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** 5/2/2016**Project:** SIO Visual Assessments 5-16-16 (P-MSGP-4768)

MSGP Program

RG-TA-54

TA-54 Area G

Monitored Outfall (069)

Substantially Identical Outfall (062)

MSGP06201

Reason: MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.	Apr/May			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16	Approx 15:30		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16	Approx 15:30		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/16/16	15:13		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	RAIN	0.03" over 10/15/16		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.	no personnel were present. sample collected over the weekend			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	Coarse			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Completed: _____ **Failure:** _____

[illegible]

WO ID: MSGP-54173Page 3 of 3

Signature (collecting sample):

Date and Time: 05/19/16 10:17h-5

Signature (conducting visual assessment):

Date and Time: 05/19/16 10:17h-5**CERTIFICATION STATEMENT**

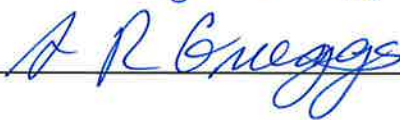
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Anthony R. Grieggs, EPC-CP Group Leader



Signature:



Date:

6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Last PM:** 5/2/2016**Project:** SIO Visual Assessments
5-16-16 (P-MSGP-4768)**Target:** 5/31/2016**Priority/Type:** Normal / Inspection**Department:** Environmental and
Waste Management
Facility Operat MSGP Program RG-TA-54 TA-54 Area G Monitored Outfall (069) Substantially Identical Outfall (063) MSGP06301**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.	Apr/May			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16	approx 15:30		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16	approx 15:30		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/16/16	15:15		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	rain	0.03"		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.	no personnel were onsite.			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	Course			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

05/22/16

Completed: _____ **Failure:** _____

[illegible]

WO ID: MSGP-54174

Page 3 of 3

Signature (collecting sample): [Signature] Date and Time: 05/19/16 10:25h/s

Signature (conducting visual assessment): [Signature] Date and Time: 05/19/16 10:25h/s

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CD Group Leader

Signature: [Signature] Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** 5/2/2016**Project:** SIO Visual Assessments 5-16-16 (P-MSGP-4768)

MSGP Program

RG-TA-54

TA-54 Area G

Monitored Outfall (069)

Substantially Identical Outfall (064)

MSGP06401

Reason: MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.	Apr / May			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16 approx 15:30			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/16 approx 15:30			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/16/16 15:16			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	rain 0.03" possible			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.	no personnel were present. sample collected over the weekend			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	Course			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Completed: _____ Failure: _____

7

WO ID: MSGP-54175

Page 3 of 3

Signature (collecting sample):

n sel

Date and Time: 05/19/16 10:32 hrs

Signature (conducting visual assessment):

n sel

Date and Time: 05/19/16 10:32 hrs

CERTIFICATION STATEMENT



"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: A R Grieggs Date: 6/9/2016

Maintenance Details

Requested: 4/18/2016 6:16:00 PM**Target:** 4/20/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Preventive**Last PM:** 4/13/2016**Project:** MSGP VISUALS- SNOW
EVENT 4-18-16 (P-MSGP-4708) MSGP Program RG245.5 TA-54 Area L Monitored Outfall (050) MSGP05001**Contact:****Phone:****Reason:** MSGP Q1 Visual Assessment**Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
Outfall Information							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.	MPI			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	4/12/2016	1902		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	4/12/2016	1902		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	4/19/12-1432			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	PR	0.02 in.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If no or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
90	Previous storm ended >72 hours before start of storm? If no, provide reason in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parameters							
110	Is sample colorless? If no, describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If no, document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If no, document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If no, describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If no, document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
160					<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

170	Is sample foamless after gently shaking? If no describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	ON SURFACE	clean	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
180	Is sample devoid of an oil sheen? If no, describe color and thickness (e.g. flecks, globs) in the comments of this line.			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If no, describe in the comments of this line.			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ID	Document Name	Type	Location
MSGP VA signature	MSGP Visual Assessment Signature	Signature page	View

Completed: _____ **Failure:** _____ **Meter 1:** _____ **Meter 2:** _____

Report:

WO ID:

535886

Page

3

of 3

Signature (collecting sample):

W. R. H. J.

Date and Time:

4/19/12 1432

Signature (conducting visual assessment):

W. R. H. J.

4/19/12

Date and

Time:

1432

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., EPC Group Leader or designee)

Print name and title:

Anthony R. Grieggs, EPC-CP Group Leader



Signature:

A R Grieggs

Date:

6/9/2016

Maintenance Details

Requested: 5/2/2016 12:19:35 PM**Target:** 5/31/2016 MSGP Program**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection RG245.5**Last PM:** 4/19/2016**Department:** Environmental and Waste Management Facility Operat TA-54 Area L**Project:** 2016 Q1 Visual Assessments 5/2/16 (P-MSGP-4732) Monitored Outfall (050) MSGP05001**Contact:**
Phone:**Reason:** MSGP Quarterly Visual Assessment**Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.		MPI		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).		5/6/16 @ 0409		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).		5/6/16 @ 1015		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).		05/12/16 08:00		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.		PR1		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
90	Previous storm ended >72 hours before start of storm? If "Failed", provide reason in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe.		Slight Green		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If		SEY90L1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	"other" is chosen from the lookup table, provide description in comments of this line.					
160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<i>no sheen</i> <i>Pollent</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Documents

ID	Document Name	Type	Location
MSGP VA signature	MSGP Visual Assessment Signature	Signature page	View

Labor Report

Completed: _____
 Failure: _____
 Meter 1: _____
 Meter 2: _____

Report:

WO ID: 53813 Page 4 of 4

Signature (collecting sample): W. R. V. J. Date and Time: 05/12/16 0800

Signature (conducting visual assessment): W. R. V. J. Date and Time: 05/12/16/0800

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)



Print name and title: ~~W. R. V. J.~~ / Anthony R. Greggs, EPC-CP Group leader

Signature: ~~W. R. V. J.~~ Date: ~~5/12/16~~ 5/12/16

A R Greggs

6/9/2016

Maintenance Details

Requested: 5/16/2016 9:37:00 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat MSGP Program RG245.5 TA-54 Area L Monitored Outfall (050) MSGP05001**Last PM:** 5/12/2016**Project:** Visual Assessments wk 5-16-16 (P-MSGP-4766)**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.	MP-1			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)	Filtered			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/15/2016/1414			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/16/16 ~1115			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/16/16 ~1115			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	PR 0.2 in.			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Completed: _____ **Failure:** _____ **Meter 1:** _____ **Meter 2:** _____

[illegible]

WO ID: 54120

Page 4 of 4

Signature (collecting sample): [Signature] Date and Time: 5/18/06 1236

Signature (conducting visual assessment): [Signature] Date and Time: 5/18/06 1236

CERTIFICATION STATEMENT



"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs EPC-CP Group Leader

Signature: [Signature] Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 9:37:00 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** 5/12/2016**Project:** Visual Assessments wk 5-16-16 (P-MSGP-4766) MSGP Program RG245.5 TA-54 MFW Monitored Outfall (049) MSGP04901**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	Apx. 05/15/16 @ 14:00			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	Apx. 05/15/16 @ 14:00			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	05/19/16 @ 13:12			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	Rain 0.2"			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line. <i>Unknown: Personnel were not present when sample was collected. Data logger was not present. Data was estimated from precipitation report.</i>				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	Fine			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids	Fine			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Completed: _____ Failure: _____

Report:

(Blank lined paper for student response)

WO ID: MS6P-54121 Page 3 of 3

Signature (collecting sample): [Signature] Date and Time: 05/23/16 13:28

Signature (conducting visual assessment): [Signature] Date and Time: 05/23/16 13:28

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Greggs, EPC-CP group Leader

Signature: AR Greggs Date: 6/9/2016

Maintenance Details

Requested: 5/2/2016 11:41:05 AM
Procedure: MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)
Last PM: N/A
Project: Sio Visual Assessments 5/2/16 (P-MSGP-4731)

Target: 5/31/2016
Priority/Type: Normal / Inspection
Department: Environmental and Waste Management Facility Operat

MSGP Program
 RG245.5
 TA-54 RANT
 Monitored Outfall (047)
 Substantially Identical Outfall (048)
 MSGP04801

Reason: MSGP Quarterly Visual Assessment

Contact:
Phone:

Special Instructions: NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.		Apr: 1 May		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).		4/30/16 between 2:00 to 2:30		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).		4/30/16 between 2:00 to 2:30		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).		05/02/16 11:37		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.		Rain 0.29		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.		Jar placed 4/30/16 in the afternoon. Multiple storm events occurred over the weekend. Personnel were not present during non-work hours to verify exact collection date/time.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
90	Previous storm ended >72 hours before start of storm? If "Failed", provide reason in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If		Coarse		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ID	Document Name	Type	Location
MSGP VA signature	MSGP Visual Assessment Signature	Signature page	View

Completed: _____ Failure: _____

[illegible]

WO ID: MSGP-53801

Page 3 of 3

Signature (collecting sample): [Signature] Date and Time: 5/02/16 1650

Signature (conducting visual assessment): [Signature] Date and Time: 5/02/16 1650

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: [Signature] Date: 6/9/2016

Maintenance Details

Requested: 5/2/2016 11:41:06 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** N/A**Project:** Sio Visual Assessments
5/2/16 (P-MSGP-4731)

MSGP Program

RG245.5

TA-54 RANT

Monitored Outfall (047)

Substantially Identical Outfall (044)

MSGP04401

Reason: MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.		April/May		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format). * 4/30/16 From 2000 to 2400 (slow drizzle)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).		4/30/16 2000 to 2400		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).		5/2/16 1159		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.		Rain		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line. Bar was placed 4/30/16 in the afternoon. Personnel were not present during non-work hours to verify exact collection date/time. Multiple storm events occurred over the weekend.		* 4/30/16 0.29		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
90	Previous storm ended >72 hours before start of storm? If "Failed", provide reason in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If		Coarse		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> ?

ID	Document Name	Type	Location
MSGP VA signature	MSGP Visual Assessment Signature	Signature page	View

Completed: _____ **Failure:** _____

[illegible]

WO ID: MSGP-53802

Page 3 of 3

Signature (collecting sample):

Holly Wheel

Date and Time: 5/2/16 1209

Signature (conducting visual assessment):

Holly Wheel

Date and Time: 5/2/16 1209

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Anthony R. Greggs, EPC-CP Group Leader

Signature:

A R Greggs

Date:

6/9/2016

Maintenance Details

Requested: 5/16/2016 9:37:00 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** 5/2/2016**Project:** Visual Assessments wk 5-16-16 (P-MSGP-4766) MSGP Program RG245.5 TA-54 RANT Monitored Outfall (047) MSGP04701**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.		MP 1		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).		05/15/2016 @ 1402		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).		05/15/2016 @ 1402		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).		05/15/2016 @ 1530		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.		PR 1 0.15 in.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.		SETTLED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Completed: _____ **Failure:** _____ **Meter 1:** _____ **Meter 2:** _____

[illegible]

WO ID: 54122

Page 3 of 4

Signature (collecting sample): [Signature] Date and Time: 5/18/16 1530

Signature (conducting visual assessment): [Signature] Date and Time: 5/18/16 1530

CERTIFICATION STATEMENT




"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: A R Grieggs Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** 5/5/2016**Project:** SIO Visual Assessments 5-16-16 (P-MSGP-4768) MSGP Program RG245.5 TA-54 RANT Monitored Outfall (047) Substantially Identical Outfall (046) MSGP04601**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.	mp1			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)	No water			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

HWS 05/23/16

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Completed: _____ **Failure:** _____

Report:
No flood. No sample collected. No visual assessment performed

WO ID: 54189

Page 2 of 4

Signature (collecting sample): *Dolly Wheel* Date and Time: 05/23/2016 11:43

Signature (conducting visual assessment): _____ Date and Time: _____

CERTIFICATION STATEMENT



"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: *AR Grieggs* Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** 5/5/2016**Project:** SIO Visual Assessments 5-16-16 (P-MSGP-4768) MSGP Program RG245.5 TA-54 RANT Monitored Outfall (047) Substantially Identical Outfall (045) MSGP04501**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
---	-------------	--------	-------	----------	--------	-----	----------

The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.	MPI			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)	no water			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

618W 05/23/16

Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Labor Report

Completed: _____ Failure: _____

Report:

No flow. No sample collected. No visual assessment conducted.

WO ID: MSGP-54498

Page 3 of 3

Signature (collecting sample):

[Handwritten Signature]

Date and Time:

05/23/16 11:45

Signature (conducting visual assessment):

Date and Time:

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Anthony R. Grieggs, EPC-CP Group Leader



Signature:

[Handwritten Signature]

Date:

6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Department:** Environmental and Waste Management Facility Operat**Last PM:** 5/2/2016**Project:** SIO Visual Assessments 5-16-16 (P-MSGP-4768) MSGP Program RG245.5 TA-54 RANT Monitored Outfall (047) Substantially Identical Outfall (048) MSGP04801**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.

170 Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line. ☐ ☒ ☐

180 Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line. ☐ ☒ ☐

190 Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line. ☐ ☒ ☐

Labor Report

Completed: _____ Failure: _____

Report:

No flow. No sample collected. No visual assessment conducted.

WO ID: MSGP-54191

Page 3 of 3

Signature (collecting sample): [Signature]

Date and Time: 05/23/16 11:47

Signature (conducting visual assessment): _____ Date and Time: _____

CERTIFICATION STATEMENT



"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: [Signature] Date: 6/9/2016

Maintenance Details

Requested: 5/16/2016 10:53:00 AM**Target:** 5/31/2016**Procedure:** MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)**Priority/Type:** Normal / Inspection**Last PM:** 5/4/2016**Department:** Environmental and Waste Management Facility Operat**Project:** SIO Visual Assessments 5-16-16 (P-MSGP-4768) MSGP Program RG245.5 TA-54 RANT Monitored Outfall (047) Substantially Identical Outfall (044) MSGP04401**Reason:** MSGP Quarterly Visual Assessment**Contact:****Phone:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
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The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

30	Document the monitoring Period by using the Monitoring Period lookup table.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Parameters

110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.

170 Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line. ☐ ☒ ☐

180 Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line. ☐ ☒ ☐

190 Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line. ☐ ☒ ☐

☐ ☒ ☐

Labor Report

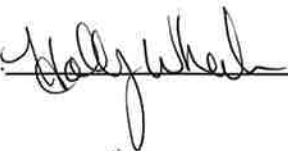
Completed: _____ Failure: _____

Report:

No flow. No sample collected. No visual assessment conducted.

WO ID: MSGP-54192Page 3 of 3

Signature (collecting sample):



Date and Time:

05/23/16 11:48

Signature (conducting visual assessment):

Date and Time:

CERTIFICATION STATEMENT

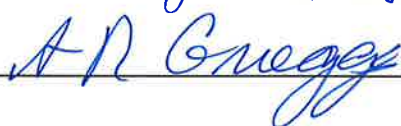
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Anthony R. Grieggs, EPC-CP Group Leader

Signature:



Date:

6/9/2016



memorandum

*Environmental Protection & Compliance Division
Environmental Compliance Programs (EPC-CP)*

To/MS: David Schrock, DESHS-EWMS, J962
Thru/MS: Terrill Lemke, EPC-CP, (E-File) *TL*
From/MS: Holly Wheeler, EPC-CP, (E-File) *HW*
Phone/Fax: 667-1312
Symbol: EPC-DO: 17-025

Date: JAN 13 2017

Subject: National Pollutant Discharge Elimination System (NPDES) Permit No. NMR053195, Multi-Sector General Permit (MSGP) Quarterly Visual Assessment (QVA) Forms for June and July of 2016 for TA-54 Maintenance Facility West

Please find attached completed MSGP QVA Forms documenting visual assessments performed during the second quarter of monitoring at TA-54 Maintenance Facility West. Per Parts 3.2.2 and 5.5 of the 2015 MSGP, the QVA form shall be incorporated into your MSGP Storm Water Pollution Prevention Plan (SWPPP).

Part 3.2.1 of the 2015 MSGP requires the visual assessment of storm water discharge samples collected from each outfall once each quarter for the entire permit term. Part 3.2.3 allows facilities that are located in an area with a semi-arid climate and/or in an area where freezing conditions exist for an extended period to distribute the quarterly visual assessments during seasons when precipitation runoff occurs. Accordingly, LANS has designated the following MSGP monitoring quarters.

Quarter 1:	April – May	Quarter 2:	June – July
Quarter 3:	August – September	Quarter 4:	October - November

The attached QVA forms document the following information as required by Part 3.2.2 of the 2015 MSGP and were completed by Environmental Compliance Programs (EPC-CP) personnel.

- Sample location;
- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing the visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Results of observations of the stormwater discharge;
- Probable sources of any observed stormwater contamination (if applicable);
- If applicable, why it was not possible to take a sample within the first 30 minutes of the storm event.

Part 3.2.3 of the 2015 MSGP allows the facility to take a substitute sample during the next qualifying storm event when adverse weather conditions prevent the collection of samples during a specific quarter. Adverse weather conditions are those that are dangerous or create inaccessibility for

David Schrock

personnel, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions. Documentation of the rationale for no visual assessment for the quarter must be included in the facility-specific SWPPP.

Please contact Holly Wheeler at 667-1312 (hbenson@lanl.gov) if you have questions regarding the QVA documentation. Thank you for your assistance in meeting the requirements of the Laboratory's NPDES 2015 MSGP Permit.

TWL:HLW/am

Enclosure: 1. Quarterly Visual Assessment Forms, Second Quarter, 2016 Monitoring Year

Facility Name	Sampling Station	Work Order #
TA-54 Maintenance Facility West	MSGP04901	MSGP-54683

Copy: Robert Stokes, DESHS-EWMS, (E-File)

Adesh-records@lanl.gov, (E-File)

lasomailbox@nnsa.doe.gov, (E-File)

locatetesteam@lanl.gov, (E-File)

epc-correspondence@lanl.gov, (E-File)

ENCLOSURE 1

Quarterly Visual Assessment Forms
Second Quarter, 2016 Monitoring Year

EPC-DO:17-025

Date: JAN 13 2017

Maintenance Details

Requested: 5/31/2016 6:06:00 PM

Target: 7/31/2016

MSGP Program

Procedure: MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)

Priority/Type: Normal / Inspection

RG245.5

Last PM: 5/23/2016

Department: Environmental and Waste Management Facility Operat

TA-54 MFW

Project: MSGP Visual Assessments wk 5/30/16 (P-MSGP-4804)

Monitored Outfall (049)

MSGP04901

Reason: MSGP 2016 Quarterly Visual Assessment

Contact:
Phone:

Special Instructions: NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.		MP2		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	7/25/16	1342		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	7/25/16	1342		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	7/26/16	9:53		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	Rain	0.38 in. no still		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe.	light Brown			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	cloudy			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	Fine			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160					<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Completed: _____ Failure: _____

Report:

[illegible]

WO ID: 54683 Page 3 of 3

Signature (collecting sample): Audrey Smith Date and Time: 7/26/16 9:53

Signature (conducting visual assessment): Audrey Smith Date and Time: 7/26/16 9:53

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony A. Gregg, EPC-CP Group Leader

Signature: A R Gregg Date: 9/14/2016



memorandum

*Environmental Protection & Compliance Division
Environmental Compliance Programs (EPC-CP)*

To/MS: David Schrock, DESHS-EWMS, J962
Thru/MS: Terrill Lemke, EPC-CP, (E-File) *WJL*
From/MS: Holly Wheeler, EPC-CP, (E-File) *WJL*
Phone/Fax: 667-1312
Symbol: EPC-DO:17-038

Date: JAN 13 2017

Subject: National Pollutant Discharge Elimination System (NPDES) Permit No. NMR053195, Multi-Sector General Permit (MSGP) Quarterly Visual Assessment (QVA) Forms for August and September of 2016 for the TA-54 Maintenance Facility West

Please find attached completed MSGP QVA Forms documenting visual assessments performed during the third quarter of monitoring at the TA-54 Maintenance Facility West. Per Parts 3.2.2 and 5.5 of the 2015 MSGP, this memorandum along with all of the attached QVA forms shall be incorporated into your MSGP Storm Water Pollution Prevention Plan (SWPPP).

Part 3.2.1 of the 2015 MSGP requires the visual assessment of storm water discharge samples collected from each outfall once each quarter for the entire permit term. Part 3.2.3 allows facilities that are located in an area with a semi-arid climate and/or in an area where freezing conditions exist for an extended period to distribute the quarterly visual assessments during seasons when precipitation runoff occurs. Accordingly, LANS has designated the following MSGP monitoring quarters.

Quarter 1:	April – May	Quarter 2:	June – July
Quarter 3:	August – September	Quarter 4:	October - November

The attached QVA forms document the following information as required by Part 3.2.2 of the 2015 MSGP and were completed by Deployed Environment, Safety, and Health Services (DESHS) and Environmental Compliance Programs (EPC-CP) personnel.

- Sample location;
- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing the visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Results of observations of the stormwater discharge;
- Probable sources of any observed stormwater contamination (if applicable);
- If applicable, why it was not possible to take a sample within the first 30 minutes of the storm event.

The signed certification statement contained in this memorandum satisfies the duly authorized signatory requirement for the QVAs completed by EPC-CP representatives contained in Enclosure 1.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Anthony R. Grieggs, EPC-CP Group Leader
(Print name and title)
Los Alamos National Laboratory


Manager Signature

1/13/17
Date

Part 3.2.3 of the 2015 MSGP allows the facility to take a substitute sample during the next qualifying storm event when adverse weather conditions prevent the collection of samples during a specific quarter. Adverse weather conditions are those that are dangerous or create inaccessibility for personnel, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions. Documentation of the rationale for no visual assessment for the quarter must be included in the facility-specific SWPPP.

Please contact Holly Wheeler at 667-1312 (hbenson@lanl.gov) if you have questions regarding the QVA documentation. Thank you for your assistance in meeting the requirements of the Laboratory's NPDES 2015 MSGP Permit.

TWL:HLW/am

Enclosure: 1. Quarterly Visual Assessment Forms Requiring a Certification Statement Signature, Third Quarter, 2016 Monitoring Year

Facility Name	Sampling Station	Work Order #
TA-54 MFW	MSGP04901	MSGP-56958
TA-54 MFW	MSGP04901	MSGP-58281

Copy: Robert Stokes, DESHS-EWMS, (E-File)
Adesh-records@lanl.gov, (E-File)
lasomailbox@nnsa.doe.gov, (E-File)
locatesteam@lanl.gov, (E-File)
epc-correspondence@lanl.gov, (E-File)

ENCLOSURE 1

**Quarterly Visual Assessment Forms Requiring a
Certification Statement Signature
Third Quarter, 2016 Monitoring Year**

EPC-DO:17-038

Date: JAN 13 2017

Maintenance Details

Requested: 8/1/2016 9:43:54 AM
Procedure: MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)
Last PM: 7/26/2016
Project: Visual Assessments wk 8/1/16 (P-MSGP-5007)

Target: 9/30/2016
Priority/Type: Normal / Inspection
Department: Environmental and Waste Management Facility Operat

 MSGP Program
 RG245.5
 TA-54 MFW
 Monitored Outfall (049)
 MSGP04901

Reason: MSGP Quarterly Visual Assessment

Contact:
Phone:

Special Instructions: NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.	MP3			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	08/03/16 18:21			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	08/03/16 18:21			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	08/05/16 0930			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	W3 Rain 0.37 in.			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.	AKB 8/1/16			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe.	light Brown			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	C2			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	SET SOLI			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.

170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line. (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed" describe color and thickness (e.g. flecks, globs) in the comments of this line. (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line. (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Labor Report

Completed: _____ Failure: _____

Report:

WO ID: 56998 Page 3 of 3

Signature (collecting sample): W. R. U. S. Date and Time: 8/5/16 / 0930

Signature (conducting visual assessment): W. R. U. S. Date and Time: 8/5/16 / 0930

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: _____

Signature: _____ Date: _____

Maintenance Details

Requested By: Banar, Alethea on
8/16/2016 3:20:00 PMTarget: 9/30/2016
Priority/Type: / InspectionMSGP Program
RG245.5

Taken By: Banar, Alethea

Department: Environmental and
Waste Management
Facility Operat

TA-54 MFW

Procedure: MSGP Quarterly Visual
Assessment (EPC-CP-
Form-1021.2)Monitored Outfall (049)
MSGP04901

Last PM: 8/5/2016

Project: Visual Assessments
8-8-16 (P-MSGP-5074)Contact: Banar, Alethea
Phone: 699-5836

Reason: MSGP Quarterly Visual Assessment

Monitoring Period:

Odor:

Clarity:

Settled Solids:

Suspended Solids:

Special Instructions: NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.							
Sample information							
30	Document the monitoring Period by using the Monitoring Period lookup table.	MP-3			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).	08/06/16/ 16:25			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).	08/06/16/ 16:25			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).	08/16/16/ 1445			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.	W3	0.33 in.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.		no 2nd 16		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parameters							
110	Is sample colorless? If "Failed", describe.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120	Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
130	Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	C2			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140					<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.

150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	SETSOL2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line. (Range: 0 - 0)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line. (Range: 0 - 0)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line. (Range: 0 - 0)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Labor

Labor	Assigned	Work Date	Reg Hrs	OT Hrs	Other Hrs
Velasquez, W.	9/30/2016 / 14				

Labor Report

Completed: _____ Failure: _____

Report:

Signature / Name

Date

Signature / Name

Date

WO ID: 58281 Page 3 of 3

Signature (collecting sample): W. P. Hall Date and Time: 8/16/14 / 1445

Signature (conducting visual assessment): W. P. Hall Date and Time: 8/16/14 / 1445

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: _____

Signature: _____ Date: _____



memorandum

*Environmental Protection & Compliance Division
Environmental Compliance Programs (EPC-CP)*

To/MS: David Schrock, DESHS-EWMS, J962
Thru/MS: Terrill Lemke, EPC-CP, (E-File) *TL*
From/MS: Holly Wheeler, EPC-CP, (E-File) *HW*
Phone/Fax: 667-1312
Symbol: EPC-DO:17-054
Date: JAN 19 2017

Subject: National Pollutant Discharge Elimination System (NPDES) Permit No. NMR053195, Multi-Sector General Permit (MSGP) Quarterly Visual Assessment (QVA) Form for October and November of 2016 for the TA-54 Maintenance Facility West

Please find attached a completed MSGP QVA Form documenting a visual assessment performed during the fourth quarter of monitoring at the TA-54 Maintenance Facility West. Pursuant to Parts 3.2.2 and 5.5 of the 2015 MSGP, the signed certification statement and associated QVA form shall be incorporated into your MSGP Storm Water Pollution Prevention Plan (SWPPP).

Part 3.2.1 of the 2015 MSGP requires the visual assessment of storm water discharge samples collected from each outfall once each quarter for the entire permit term. Part 3.2.3 allows facilities that are located in an area with a semi-arid climate and/or in an area where freezing conditions exist for an extended period to distribute the quarterly visual assessments during seasons when precipitation runoff occurs. Accordingly, Los Alamos National Laboratory LLC (LANS) has designated the following MSGP monitoring quarters.

Quarter 1:	April – May	Quarter 2:	June – July
Quarter 3:	August – September	Quarter 4:	October - November

The attached QVA form documents the following information as required by Part 3.2.2 of the 2015 MSGP.

- Sample location;
- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing the visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Results of observations of the stormwater discharge;
- Probable sources of any observed stormwater contamination (if applicable);
- If applicable, why it was not possible to take a sample within the first 30 minutes of the storm event.

The EPC-CP Group Leader has signed the certification statement to meet the duly authorized signatory requirements for the QVA form completed by an EPC-CP representative contained in Enclosure 1.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Anthony R. Grieggs, EPC-CP Group Leader

(Print name and title)

Los Alamos National Laboratory


Manager Signature

1/19/17
Date

Part 3.2.3 of the 2015 MSGP allows the facility to take a substitute sample during the next qualifying storm event when adverse weather conditions prevent the collection of samples during a specific quarter. Adverse weather conditions are those that are dangerous or create inaccessibility for personnel, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions. Documentation of the rationale for no visual assessment for the quarter must be included in the facility-specific SWPPP.

Please contact Holly Wheeler at 667-1312 (hbenson@lanl.gov) if you have questions regarding the QVA documentation. Thank you for your assistance in meeting the requirements of the Laboratory's NPDES 2015 MSGP Permit.

TWL:HLW/am

Enclosure: 1. Quarterly Visual Assessment Form Requiring a Certification Statement Signature, Fourth Quarter, 2016 Monitoring Year

<u>Facility Name</u>	<u>Sampling Station</u>	<u>Work Order #</u>
TA-54 Maintenance Facility West	MSGP04901	MSGP-58871

Copy: Robert Stokes, DESHS-EWMS, (E-File)

Adesh-records@lanl.gov, (E-File)

lasomailbox@nnsa.doe.gov, (E-File)

locatesteam@lanl.gov, (E-File)

epc-correspondence@lanl.gov, (E-File)

Holly Wheeler, EPC-CP, (E-File)

ENCLOSURE 1

**Quarterly Visual Assessment Form Requiring a
Certification Statement Signature
Fourth Quarter, 2016 Monitoring Year**

EPC-DO-17-054

Date: JAN 19 2017

Maintenance Details

Requested: 10/26/2016 9:51:00 AM
Procedure: MSGP Quarterly Visual Assessment (EPC Sig) (EPC-CP-Form-1021.2 A)

Last PM: 10/5/2016

Project: ISCO Visual Assess. Oct-Nov 2016 (P-MSGP-5135)

Reason: MSGP Quarterly Visual Assessment

Precipitation Type: PR1

Clarity:

Suspended Solids:

Special Instructions: NMR053195

Target: 11/30/2016
Priority/Type: Normal / Inspection
Department: Environmental and Waste Management Facility Operat

 MSGP Program
 RG245.5
 TA-54 MFW
 Monitored Outfall (049)
 MSGP04901

Contact:
Phone:

Odor:

Settled Solids: SETSOL1

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
---	-------------	--------	-------	----------	--------	-----	----------

The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

Document the monitoring Period by using the Monitoring Period lookup table.

30 **Comments: MP4**

WW

☐

☐

☒

35 Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)

WW

☐

☐

☒

Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).

40 **Comments: 11/04/16 @ 16:02**

11/04/16

16:02

WW

☐

☐

☒

Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).

50 **Comments: 11/04/16 @ 16:02**

11/04/16

16:02

WW

☐

☐

☒

Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).

60 **Comments: 11/10/16 @ 1330**

11/10/16

13:30

WW

☐

☐

☒

Document the nature of discharge using the Precipitation Type lookup table. Document the amount (in) in the "Reading" field of this line.

70 **Comments: PR1**

WW

☐

☐

☒

Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.

80

WW

☐

☐

☒

Parameters

110 Is sample colorless? If "Failed", describe.

WW

☐

☐

☒

Is sample odorless? If "Failed", document observation using the Odor lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.

120

WW

☐

☐

☒

130 Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen

WW

☐

☐

☒

	from the lookup table, provide description in comments of this line.				
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.	WV	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Is sample free of settled solids? If "Failed", document observation using the Settled Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line. Comments: SETSOL1	WV	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160	Is sample free of suspended solids? If "Failed", document observation using the Suspended Solids lookup table. If "other" is chosen from the lookup table, provide description in comments of this line.	WV	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample') in the comments of this line. (Range: 0 - 0)	WV	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs) in the comments of this line. (Range: 0 - 0)	WV	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line. (Range: 0 - 0)	WV	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Labor Report

Completed: 11/10/2016 1:30:00 PM Failure: _____

Report: _____



Signature / Name

11/15/2016

Date

Signature / Name

Date

WO ID: _____ Page ____ of ____

Date: _____ Time: _____

Name/Z#: _____

Signature (collecting sample & conducting visual assessment): _____

"I confirm the information as recorded is true, accurate and complete."

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Anthony R. Grieggs, EPC-CP Group Leader

Signature: (See signature on file) Date: _____

ATTACHMENT F: ROUTINE FACILITY INSPECTIONS

Los Alamos National Lab - ADESH

Work Order MSGP-RI-59472

MSGP Routine Inspection
Printed 3/22/2017 - 12:58 PM

Maintenance Details

Requested: 3/7/2017 12:11:00 PM**Target:** 3/31/2017 MSGP Program**Procedure:** MSGP Stormwater
Industrial Routine
Facility Inspection
(EPC-CP-Form-1020)**Priority/Type:** / Inspection RG245.5**Department:** Environmental and
Waste Management
Facility Operations TA-54 MFW**Last PM:** 12/20/2016**Contact:****Project:** Routine Facility
Inspections 2017 Q1
(P-MSGP-RI-5160)**Phone:****Reason:** 2017 Quarter 1 Inspections**Precipitation Type:****Odor:****Clarity:****Settled Solids:****Suspended Solids:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
Weather Information							
	Describe the weather at time of inspection in the Weather lookup table. If "Other" is chosen, provide description in task comments of this line. Document the temperature (F°) in the "Reading" field of this line.		52 F sunny clear	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20							
Within the Facility Boundary							
	Is the facility free of new discharges of pollutants that have occurred since the last inspection? If "No", describe:			DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40							
	If "No" has a CAR been previously initiated for this new discharge?			DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50							
	Is the facility free of discharge of pollutants at the time of inspection? If "No" describe.			DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60							
	Is the facility free of evidence of, or the potential for, pollutants entering the drainage system. If "No" describe.			DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70							
Outfall Inspection (needed maintenance and repairs, failed control measures that need replacement, or a description of corrective actions in relevant task comment)							
	Monitored Outfall [049] Free of Evidence of Erosion? If "No", describe.			DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
90							
	Monitored Outfall [049] Flow Dissipation Devices Operating Effectively? If "No", describe.			DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
100							
	Monitored Outfall [049] Free of Evidence of Pollutants in Discharges and/or Receiving Water? If "No", describe.			DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
110							

Control Measures (identify needed maintenance and repairs, failed control measures that need replacement, or a description of corrective actions in relevant task comments).☐ ☐

130	Earthen Berm [5400403010002] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.	DS	<input checked="" type="checkbox"/>			
140	Earthen Berm [5400403010003] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
150	Jersey Barriers [5400403170004] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
160	Vegetated Swale [5400404070001] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Area/Activity exposed to stormwater (identify needed maintenance or a description of corrective actions in relevant task comment).						
180	Material loading/unloading and storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
190	Transfer areas for substances in bulk: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
200	Product/chemical storage areas (raw material): controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
210	Liquid tank storage/secondary containment: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
220	Industrial processing and finished product storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
230	Equipment operation and maintenance areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
240	Fueling areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
250	Outdoor vehicle and equipment washing areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
260	Machinery: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
270	Waste handling and disposal areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
280	Erodible areas/construction: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
290	Locations and sources of run-on to the site: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
300	Non-stormwater/illicit connections: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
310	Salt storage piles or pile containing salt: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
320		DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

	Dust generation and vehicle tracking: controls adequate (appropriate, effective, and operating)? If "No" describe.				
330	Housekeeping (Industrial materials/residues/trash in contact with stormwater): controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
340	Leaks and spills: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
350	Sector P [54004-] Vehicle storage/maintenance areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Non-Compliance					
370	Free of incidents of observed non-compliance not already identified above? If "No" describe.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Additional Control Measures					
390	Are permit requirements satisfied with existing control measure(s)? If "No" describe additional control measures needed.	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Labor

Labor	Assigned	Work Date	Reg Hrs	OT Hrs	Other Hrs
David Schrock	1/30/2017 / 14				
Victoria Baca	1/30/2017 / 14				

Labor Report

Completed: _____ **Failure:** _____

Report:

_____ Signature / Name	_____ Date	_____ Signature / Name	_____ Date
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WO ID: MSGP-R1-59472 Page 4 of 4Name/Z#: David Schrock, CISEC # 1762, Z: 232597Signature (lead inspector):  Date and Time: 3/16/17 12:04 hrs

"I confirm the information as recorded is true, accurate and complete."

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Barry Walker Maintenance ManagerSignature:  Date: 3/23/2017

Los Alamos National Lab - ADESH

Work Order MSGP-RI-59724

MSGP Routine Inspection
Printed 1/25/2018 - 12:46 PM (Duplicate Copy)

Maintenance Details

Requested: 5/15/2017 3:47:00 PM

Procedure: MSGP Stormwater
Industrial Routine
Facility Inspection
(EPC-CP-Form-1020)

Last PM: 3/16/2017

Project: Routine Facility
Inspections 2017 Q2 (P-
MSGP-RI-5171)

Target: 6/30/2017

Priority/Type: Normal / Inspection

Department: Environmental and
Waste Management
Facility Operations

 MSGP Program

 RG245.5

 TA-54 MFW

Contact:
Phone:

Reason: 2017 Quarter 2 Inspections

Special Instructions: NMR053195

Tasks

#	Description	Meas.	No	N/A	Yes
Weather Information					
	Describe the weather at time of inspection. Document the temperature (F°) in the "Reading" field of this line.				
20	Comments: 6/5/2017, Clear, 68F		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Within the Facility Boundary					
	Is the facility free of new discharges of pollutants that have occurred since the last inspection? If "No", describe:				
40	Comments: Along the northeast fence line trash and debris was observed. Picked up trash and debris during inspection 6/5/2017. Submitted FSR to remove debris from culvert.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50	If "No" has a CAR been previously initiated for this new discharge?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the facility free of discharge of pollutants at the time of inspection? If "No" describe.				
60			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is the facility free of evidence of, or the potential for, pollutants entering the drainage system. If "No" describe.				
70	Comments: Trash and debris were observed along the north east fence line. Trash and debris were picked up during inspection.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outfall Inspection (needed maintenance and repairs, failed control measures that need replacement, or a description of corrective actions in relevant task comment)					
90	Monitored Outfall [049] Free of Evidence of Erosion? If "No", describe.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Monitored Outfall [049] Flow Dissipation Devices Operating Effectively? If "No", describe.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
100			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Monitored Outfall [049] Free of Evidence of Pollutants in Discharges and/or Receiving Water? If "No", describe.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
110			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Control Measures (identify needed maintenance and repairs, failed control measures that need replacement, or a description of corrective actions in relevant task comments).					
	Earthen Berm [5400403010002] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.				
130			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Earthen Berm [5400403010003] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.				
140			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Jersey Barriers [5400403170004] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.				
150			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

160	Vegetated Swale [5400404070001] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Area/Activity exposed to stormwater (identify needed maintenance or a description of corrective actions in relevant task comment).				
180	Material loading/unloading and storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Transfer areas for substances in bulk: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
200	Product/chemical storage areas (raw material): controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
210	Liquid tank storage/secondary containment: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
220	Industrial processing and finished product storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
230	Equipment operation and maintenance areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
240	Fueling areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
250	Outdoor vehicle and equipment washing areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
260	Machinery: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
270	Waste handling and disposal areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
280	Erodible areas/construction: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
290	Locations and sources of run-on to the site: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
300	Non-stormwater/illicit connections: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
310	Salt storage piles or pile containing salt: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
320	Dust generation and vehicle tracking: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
330	Housekeeping (Industrial materials/residues/trash in contact with stormwater): controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
340	Leaks and spills: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
350	Sector P [54004-] Vehicle storage/maintenance areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Non-Compliance				
370	Free of incidents of observed non-compliance not already identified above? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Additional Control Measures				
390	Are permit requirements satisfied with existing control measure(s)? If "No" describe additional control measures needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Labor**Labor**

Victoria Baca

Assigned

4/5/2017 / 1

Work Date

6/5/17

Reg Hrs**OT Hrs****Other Hrs****Labor Report****Completed:**

6/5/17

Report:

Signature / Name

11/28/17

Date

Signature / Name

Date

I confirm the information as recorded is true, accurate and complete.

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg. FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Gail Helm Operations Manager

Signature:



Date:

11/16/18

Los Alamos National Lab - ADESH

Work Order MSGP-RI-60717

MSGP Routine Inspection
Printed 1/16/2018 - 7:04 AM (Duplicate Copy)

Maintenance Details

Requested: 7/10/2017 8:58:00 AM

Procedure: MSGP Stormwater Industrial Routine Facility Inspection (EPC-CP-Form-1020)

Last PM: 6/5/2017

Project: Routine Facility Inspections 2017 Q3 (P-MSGP-RI-5200)

Reason: 2017 Quarter 3 Inspections

Special Instructions: NMR053195

Target: 9/30/2017

Priority/Type: Normal / Inspection

Department: Environmental and Waste Management Facility Operations

MSGP Program

RQ245.5

TA-54 MFW

Contact:

Phone:

Tasks

#	Description	Meas.	No	N/A	Yes
Weather Information					
20	Describe the weather at time of inspection. Document the temperature (F) in the "Reading" field of this line Comments: 08/30/2017 clear 76F		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Within the Facility Boundary					
40	Is the facility free of new discharges of pollutants that have occurred since the last inspection? If "No", describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	If "No" has a CAR been previously initiated for this new discharge?		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	Is the facility free of discharge of pollutants at the time of inspection? If "No" describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Is the facility free of evidence of, or the potential for, pollutants entering the drainage system? If "No" describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Outfall Inspection (needed maintenance and repairs, failed control measures that need replacement, or a description of corrective actions in relevant task comment)					
90	Monitored Outfall [049] Free of Evidence of Erosion? If "No", describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
100	Monitored Outfall [049] Flow Dissipation Devices Operating Effectively? If "No", describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
110	Monitored Outfall [049] Free of Evidence of Pollutants in Discharges and/or Receiving Water? If "No", describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Control Measures (identify needed maintenance and repairs, failed control measures that need replacement, or a description of corrective actions in relevant task comments)					
130	Earthen Berm [5400403010002] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Earthen Berm [5400403010003] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Jersey Barriers [5400403170004] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
160	Vegetated Swale [5400404070001] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Area/Activity exposed to stormwater (identify needed maintenance or a description of corrective actions in relevant task comment)					
180	Material loading/unloading and storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Transfer areas for substances in bulk: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
200	Product/chemical storage areas (raw material): controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
210	Liquid tank storage/secondary containment: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
220	Industrial processing and finished product storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
230	Equipment operation and maintenance areas: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
240	Fueling areas: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
250	Outdoor vehicle and equipment washing areas: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
260	Machinery: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
270	Waste handling and disposal areas: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
280	Erodible areas/construction: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
290	Locations and sources of run-on to the site: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
300	Non-stormwater/illicit connections: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
310	Salt storage piles or pile containing salt: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
320	Dust generation and vehicle tracking: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
330	Housekeeping (industrial materials/residues/trash in contact with stormwater): controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
340	Leaks and spills: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
350	Sector P [54004-] Vehicle storage/maintenance areas: controls adequate (appropriate, effective, and operating)? If "No" describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Non-Compliance					
370	Free of incidents of observed non-compliance not already identified above? If "No" describe		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Additional Control Measures					
390	Are permit requirements satisfied with existing control measure(s)? If "No" describe additional control measures needed		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Labor

Labor
Victoria BacaAssigned
7/10/2017 / 1Work Date
8/30/17

Reg Hrs OT Hrs Other Hrs

Labor Report

Completed: 8/30/17

Report: NA

Signature / Name

Date

Signature / Name

Date

I confirm the information as recorded is true, accurate and complete.

WO ID: _____ Page _____ of _____

Name/Z# _____

Signature (lead inspector)

Date and Time

"I confirm the information as recorded is true, accurate and complete."

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESII Group Leader, EPC Group Leader)

Print name and title:

Signature

Date

Maintenance Details

Requested: 10/2/2017 9:34:00 AM

Target: 12/31/2017

MSGP Program

Procedure: MSGP Stormwater Industrial
Routine Facility Inspection
(EPC-CP-Form-1020)

Priority/Type: Normal / Inspection

RG245.5

Department: Environmental and Waste
Management Facility
Operations

TA-54 MFW

Last PM: 8/30/2017

Project: Routine Facility Inspections
2017 Q4 (P-MSGP-RI-5228)Contact:
Phone:

Reason: 2017 Quarter 4 Inspections

Special Instructions: NMR053195

Tasks

#	Description	Meas.	No	N/A	Yes
Weather Information					
20	Describe the weather at time of inspection. Document the temperature (F°) in the "Reading" field of this line.	38 degrees F and clear.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Within the Facility Boundary					
40	Is the facility free of new discharges of pollutants that have occurred since the last inspection? If "No", describe:		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	If "No" has a CAR been previously initiated for this new discharge?		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	Is the facility free of discharge of pollutants at the time of inspection? If "No" describe.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
70	Is the facility free of evidence of, or the potential for, pollutants entering the drainage system. If "No" describe.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Outfall Inspection (needed maintenance and repairs, failed control measures that need replacement, or a description of corrective actions in relevant task comment)					
90	Monitored Outfall [049] Free of Evidence of Erosion? If "No", describe.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
100	Monitored Outfall [049] Flow Dissipation Devices Operating Effectively? If "No", describe.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
110	Monitored Outfall [049] Free of Evidence of Pollutants in Discharges and/or Receiving Water? If "No", describe.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Control Measures (identify needed maintenance and repairs, failed control measures that need replacement, or a description of corrective actions in relevant task comments).					
130	Earthen Berm [5400403010002] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Earthen Berm [5400403010003] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
150	Jersey Barriers [5400403170004] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement. Comments: Base course berm between Jersey Barriers is eroding and needs repair (see CAR #1260).		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160	Vegetated Swale [5400404070001] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Area/Activity exposed to stormwater (identify needed maintenance or a description of corrective actions in relevant task comment).					
180	Material loading/unloading and storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
190	Transfer areas for substances in bulk: controls adequate (appropriate, effective, and operating)? If "No" describe.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
200	Product/chemical storage areas (raw material): controls adequate (appropriate, effective, and operating)? If "No" describe.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

210	Liquid tank storage/secondary containment: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
220	Industrial processing and finished product storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
230	Equipment operation and maintenance areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
240	Fueling areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
250	Outdoor vehicle and equipment washing areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
260	Machinery: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
270	Waste handling and disposal areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
280	Erodible areas/construction: controls adequate (appropriate, effective, and operating)? If "No" describe. Comments: See task line 150 above.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
290	Locations and sources of run-on to the site: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
300	Non-stormwater/illicit connections: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
310	Salt storage piles or pile containing salt: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
320	Dust generation and vehicle tracking: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
330	Housekeeping (Industrial materials/residues/trash in contact with stormwater): controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
340	Leaks and spills: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
350	Sector P [54004-] Vehicle storage/maintenance areas: controls adequate (appropriate, effective, and operating)? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Non-Compliance				
370	Free of incidents of observed non-compliance not already identified above? If "No" describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Additional Control Measures				
390	Are permit requirements satisfied with existing control measure(s)? If "No" describe additional control measures needed. Comments: The facility uses a large rusted metal table to conduct work. Table is outside with no cover or paint on it (see CAR #1259).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Labor Report

Completed: 12/11/2017 9:30:00 AM

Report: 1/10/2018 - 118432: Holly Wheeler

	1/10/2018		
Signature / Name	Date	Signature / Name	Date

I confirm the information as recorded is true, accurate and complete.

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg. FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Graithelm Operations Manager

Signature: Graithelm Date: 1/16/18

Stormwater Industrial Routine Facility Inspection Report

General Information			
Facility Name	TA54 Maintenance Facility West (MFW)		
NPDES Tracking No.	NMR 050000		
Date of Inspection	03/28/2016	Start/End Time	08:16 – 08:28 hrs
Inspector's Name(s)	David Schrock		
Inspector's Title(s)	DSESH-EWMO DEP		
Inspector's Contact Information	505-665-6547		
Inspector's Qualifications	CISEC #1762		
Weather Information			
Weather at time of this inspection?			
<input checked="" type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snow <input type="checkbox"/> High Winds <input type="checkbox"/> Other: Temperature: 39 F			
Have any previously unidentified discharges of pollutants occurred since the last inspection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
If yes, describe:			
Are there any discharges occurring at the time of inspection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
If yes, describe:			

Control Measures

- Number the structural stormwater control measures identified in your SWPPP on your site map and list them below (add as many control measures as are implemented on-site). Carry a copy of the numbered site map with you during your inspections. This list will ensure that you are inspecting all required control measures at your facility.
- Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.

	Structural Control Measure	Control Measure is Operating Effectively?	If No, In Need of Maintenance, Repair, or Replacement?	Corrective Action Needed and Notes (identify needed maintenance and repairs, or any failed control measures that need replacement)
1	Vegetative swale along the north side	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement	
2	Culverts along the north side	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement	
3	Earthen berm along the south & west sides	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement	

Areas of Industrial Materials or Activities exposed to stormwater

Below are some general areas that should be assessed during routine inspections. Customize this list as needed for the specific types of industrial materials or activities at your facility.

	Area/Activity	Inspected?	Controls Adequate (appropriate, effective, and operating)?	Corrective Action Needed and Notes
1	Material loading/unloading and storage areas	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2	Equipment operations and maintenance areas	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3	Fueling areas	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4	Outdoor vehicle and equipment washing areas	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5	Waste handling and disposal areas	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
6	Erodible areas/construction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
7	Non-stormwater/ illicit connections	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8	Salt storage piles or pile containing salt	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9	Dust generation and vehicle tracking	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Areas of Industrial Materials or Activities exposed to stormwater

Below are some general areas that should be assessed during routine inspections. Customize this list as needed for the specific types of industrial materials or activities at your facility.

	Area/Activity	Inspected?	Controls Adequate (appropriate, effective, and operating)?	Corrective Action Needed and Notes
1	Material loading/unloading and storage areas	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2	Equipment operations and maintenance areas	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3	Fueling areas	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4	Outdoor vehicle and equipment washing areas	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5	Waste handling and disposal areas	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
6	Erodible areas/construction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
7	Non-stormwater/ illicit connections	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8	Salt storage piles or pile containing salt	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9	Dust generation and vehicle tracking	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Non-Compliance

Describe any incidents of non-compliance observed and not described above:
No non-compliance incidences observed.

Additional Control Measures

Describe any additional control measures needed to comply with the permit requirements:
No additional control measures needed to comply with the permit.

Notes

Use this space for any additional notes or observations from the inspection:
Outstanding housekeeping practices observed.

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print name and title:

Signature:

Date:

ENV-CP-Form-1020.0

Rev. 11/18/15

Stormwater Industrial Routine Facility Inspection Report

General Information			
Facility Name	TA54 Maintenance Facility West (MFW)		
NPDES Tracking No.	NMR 050000		
Date of Inspection	06-29-2016	Start/End Time	11:45/12:39 hrs
Inspector's Name(s)	David Schrock		
Inspector's Title(s)	DSESH-EWMO DEP		
Inspector's Contact Information	505-665-6547		
Inspector's Qualifications	CISEC #1762		
Weather Information			
Weather at time of this inspection?			
<input checked="" type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snow <input type="checkbox"/> High Winds <input type="checkbox"/> Other: Temperature: 91 F			
Have any previously unidentified discharges of pollutants occurred since the last inspection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe:			
Are there any discharges occurring at the time of inspection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe:			

Control Measures

- Number the structural stormwater control measures identified in your SWPPP on your site map and list them below (add as many control measures as are implemented on-site). Carry a copy of the numbered site map with you during your inspections. This list will ensure that you are inspecting all required control measures at your facility.
- Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.

#	Structural Control Measure	Control Measure is Operating Effectively?	If No, In Need of Maintenance, Repair, or Replacement?	Corrective Action Needed and Notes (identify needed maintenance and repairs, or any failed control measures that need replacement)
1	Vegetative swale along the north side	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement	
2	Culverts along the north side	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement	
3	Earthen berm along the south & west sides	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement	

Areas of Industrial Materials or Activities exposed to stormwater

Below are some general areas that should be assessed during routine inspections. Customize this list as needed for the specific types of industrial materials or activities at your facility.

	Area/Activity	Inspected?	Controls Adequate (appropriate, effective, and operating)?	Corrective Action Needed and Notes
1	Material loading/unloading and storage areas	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2	Equipment operations and maintenance areas	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3	Fueling areas	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4	Outdoor vehicle and equipment washing areas	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5	Waste handling and disposal areas	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
6	Erodible areas/construction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
7	Non-stormwater/ illicit connections	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8	Salt storage piles or pile containing salt	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9	Dust generation and vehicle tracking	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Non-Compliance

Describe any incidents of non-compliance observed and not described above:

No non-compliance incidences observed.

Additional Control Measures

Describe any additional control measures needed to comply with the permit requirements:

No additional control measures needed to comply with the permit.

Notes

Use this space for any additional notes or observations from the inspection:

Outstanding housekeeping practices observed.

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print name and title:

Signature:

Date:

Los Alamos National Lab - ADESH

Work Order MSGP-RI-58819

MSGP Routine Inspection
Printed 9/27/2016 - 3:46 PM

Maintenance Details

Requested: 9/27/2016 2:50:00 PM**Target:** 9/30/2016 MSGP Program**Procedure:** MSGP Stormwater
Industrial Routine Facility
Inspection (EPC-CP-Form-
1020.1)**Priority/Type:** Normal / Inspection RG245.5**Department:** Environmental and
Waste Management
Facility Operations TA-54 MFW**Last PM:** N/A**Contact:****Project:** Monthly Routine
Inspections 9-6-16
(P-MSGP-RI-5119)**Phone:****Reason:** MSGP Stormwater Industrial Routine Facility Inspection**Weather at inspection:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
Weather Information							
20	Describe the weather at time of inspection in the Weather lookup table. If "Other" is chosen, provide description in task comments of this line. Document the temperature (F°) in the "Reading" field of this line.	65°F	Cloudy	Windy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Within the Facility Boundary							
40	Is the facility free of new discharges of pollutants that have occurred since the last inspection? If "Failed", describe:	CAR 971			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50	If "Failed" has a CAR been previously initiated for this new discharge? (Range: 0 - 0)				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60	Is the facility free of discharge of pollutants at the time of inspection? If "Failed" describe: (Range: 0 - 0)				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70	Is the facility free of evidence of, or the potential for, pollutants entering the drainage system. If "Failed" describe: (Range: 0 - 0)				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outfall Inspection needed maintenance and repairs, failed control measures that need replacement, or a description of corrective actions in relevant task comment)							
90	Monitored Outfall [049] Free of Evidence of Erosion? (Range: 0 - 0)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
100	Monitored Outfall [049] Flow Dissipation Devices Operating Effectively? (Range: 0 - 0)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
110	Monitored Outfall [049] Free of Evidence of Pollutants in Discharges and/or Receiving Water? (Range: 0 - 0)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Control Measures (Identify needed maintenance and repairs, failed control measures that need replacement, or a description of corrective actions in relevant task comments).							
130	Earthen Berm [5400403010002] Control Measure is operating effectively? (Range: 0 - 0)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
140	Earthen Berm [5400403010002] If "Failed", is control measure in need of maintenance, Repair, or Replacement?				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
150	Earthen Berm [5400403010003] Control Measure is operating effectively? (Range: 0 - 0)				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

160	Earthen Berm [5400403010003] If "Failed", is control measure in need of maintenance, Repair, or Replacement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
170	Jersey Barriers [5400403170004] Control Measure is operating effectively?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	Jersey Barriers [5400403170004] If "Failed", is control measure in need of maintenance, Repair, or Replacement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
190	Vegetated Swale [5400404070001] Control Measure is operating effectively? (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
200	Vegetated Swale [5400404070001] If "Failed", is control measure in need of maintenance, Repair, or Replacement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Area/Activity exposed to stormwater (identify needed maintenance or a description of corrective actions in relevant task comment).				
220	Material loading/unloading and storage areas inspected?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
230	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
240	Transfer areas for substances in bulk inspected?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
250	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
260	Produce/chemical storage areas (raw material) inspected?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
270	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
280	Liquid tank storage/secondary containment inspected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
290	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
300	Industrial processing and finished product storage areas inspected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
310	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
320	Equipment operation and maintenance areas inspected?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
330	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
340	Fueling areas inspected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
350	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
360	Outdoor vehicle and equipment washing areas inspected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
370	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
380	Machinery inspected?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
390	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
400	Waste handling and disposal areas inspected?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
410	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
420	Erodible areas/construction inspected?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
430	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
440	Locations and sources of run-on to the site inspected?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
450	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
460	Non-stormwater/illegal connections inspected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
470		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)			
480	Salt storage piles or pile containing salt inspected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
490	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
500	Dust generation and vehicle tracking inspected?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
510	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
520	Housekeeping (Industrial materials/residues/trash in contact with stormwater) inspected?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
530	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
540	Leaks and spills inspected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
550	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
560	Sector P [54004-] Vehicle storage/maintenance areas inspected?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
570	Sector P [54004-] Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Non-Compliance				
590	Free of incidents of observed non-compliance not associated with any of the above? (Range: 0 - 0)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Additional Control Measures				
610	Are permit requirements satisfied with existing control measure(s) not associated with any of the above? (Range: 0 - 0)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Labor				
Labor	Assigned	Work Date	Reg Hrs	OT Hrs
David Schrock	10/1/2016 / 14			
Labor Report				
Completed: _____ Failure: _____				
Report:				

Signature / Name	Date	Signature / Name	Date	

WO ID: MSGP-R1-58819Page 5 of 5

Signature (lead inspector):



Date and Time:

9/29/16 15:58**CERTIFICATION STATEMENT**

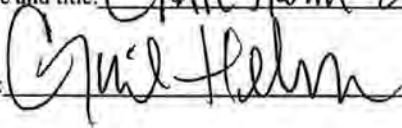
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title:

Gar Helm SWMO Operations Manager

Signature:



Date:




10/31/16

Los Alamos National Lab - ADESH

Work Order MSGP-RI-59447

MSGP Routine Inspection
Printed 1/5/2017 - 7:32 AM

Maintenance Details

Requested: 12/7/2016 1:57:00 PM**Target:** 1/6/2017 MSGP Program**Procedure:** MSGP Stormwater
Industrial Routine
Facility Inspection
(EPC-CP-Form-1020.1)**Priority/Type:** / Inspection RG245.5**Department:** Environmental and
Waste Management
Facility Operations TA-54 MFW**Last PM:** 9/29/2016**Contact:****Project:** Routine Facility
Inspections Dec 2016
(P-MSGP-RI-5158)**Phone:****Reason:** MSGP Stormwater Industrial Routine Facility Inspection**Precipitation Type:****Odor:****Clarity:****Settled Solids:****Suspended Solids:****Special Instructions:** NMR053195

Tasks

#	Description	Rating	Meas.	Initials	Failed	N/A	Complete
Weather Information							
Describe the weather at time of inspection in the Weather lookup table. If "Other" is chosen, provide description in task comments of this line. Document the temperature (F) in the "Reading" field of this line.							
20			Sunny 30F	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Within the Facility Boundary							
Is the facility free of new discharges of pollutants that have occurred since the last inspection? If "Failed", describe:							
40			CAR 1039	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	If "Failed" has a CAR been previously initiated for this new discharge? (Range: 0 - 0)			DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the facility free of discharge of pollutants at the time of inspection? If "Failed" describe: (Range: 0 - 0)							
60			CAR 1039	DS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the facility free of evidence of, or the potential for, pollutants entering the drainage system. If "Failed" describe: (Range: 0 - 0)							
Comments: Part of the earthen berm was starting to erode between the Jersey barriers.							
70			CAR 1039	DS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outfall Inspection (needed maintenance and repairs, failed control measures that need replacement, or a description of corrective actions in relevant task comment)							
Monitored Outfall [049] Free of Evidence of Erosion? (Range: 0 - 0)							
90				DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Monitored Outfall [049] Flow Dissipation Devices Operating Effectively? (Range: 0 - 0)							
100				DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Monitored Outfall [049] Free of Evidence of Pollutants in Discharges and/or Receiving Water? (Range: 0 - 0)							
110				DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

370	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	DS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
380	Machinery inspected?	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
390	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
400	Waste handling and disposal areas inspected?	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
410	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
420	Erodible areas/construction inspected?	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
430	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
440	Locations and sources of run-on to the site inspected?	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
450	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
460	Non-stormwater/illicit connections inspected?	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
470	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
480	Salt storage piles or pile containing salt inspected?	DS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
490	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	DS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
500	Dust generation and vehicle tracking inspected?	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
510	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
520	Housekeeping (Industrial materials/residues/trash in contact with stormwater) inspected?	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
530	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
540	Leaks and spills inspected?	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
550	Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
560	Sector P [54004-] Vehicle storage/maintenance areas inspected?	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
570	Sector P [54004-] Area/Activity controls adequate (appropriate, effective, and operating)? (Range: 0 - 0)	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Non-Compliance					
590	Free of incidents of observed non-compliance not associated with any of the above? (Range: 0 - 0)	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Additional Control Measures					
610	Are permit requirements satisfied with existing control measure(s)? If "Failed" describe additional control measures needed. (Range: 0 - 0)	DS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Labor

Labor	Assigned	Work Date	Reg Hrs	OT Hrs	Other Hrs
David Schrock	12/30/2016 / 14				

WO ID: MSGP-R1-59447 Page 5 of 5

Signature (lead inspector):  Date and Time: 12/20/16 11:04 hrs

"I confirm the information as recorded is true, accurate and complete."

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

Print name and title: Gail Helm Ops Manager

Signature:  Date: 1/5/17

ATTACHMENT G: ARS AND CORRECTIVE ACTION DOCUMENTATION

From: [Dale, Leslie J](#)
To: [Lemke, Terrill W](#); [Wheeler, Holly Lynn](#)
Cc: [Grieggs, Tony](#)
Subject: FW: EPA Multi-Sector General Permit (MSGP) Annual Report Accepted – Los Alamos National Laboratory, NPDES ID: NMR053195, NeT Submission ID: MSGP-AR-13075
Date: Monday, January 30, 2017 3:28:36 PM
Attachments: [AcceptedNewAnnualReportReceipt.pdf](#)

FYI

From: Bretzke, John Clifford
Sent: Monday, January 30, 2017 3:25 PM
To: Dale, Leslie J <leslie@lanl.gov>
Subject: FW: EPA Multi-Sector General Permit (MSGP) Annual Report Accepted – Los Alamos National Laboratory, NPDES ID: NMR053195, NeT Submission ID: MSGP-AR-13075

fyi

From: donotreply@epa.gov [<mailto:donotreply@epa.gov>]
Sent: Monday, January 30, 2017 3:24 PM
To: Bretzke, John Clifford <jbretzke@lanl.gov>
Cc: rachel@avanticorporation.com; farris.erika@epa.gov; nguyen.helen@epa.gov; emily@avanticorporation.com; julie@avanticorporation.com; paola@avanticorporation.com; jahan.nasim@epa.gov
Subject: EPA Multi-Sector General Permit (MSGP) Annual Report Accepted – Los Alamos National Laboratory, NPDES ID: NMR053195, NeT Submission ID: MSGP-AR-13075

2017-01-30

Your EPA Multi-Sector General Permit (MSGP) Annual Report submitted for Los Alamos National Laboratory, PO Box 1663 MS K490 Los Alamos NM 87545, for NPDES ID NMR053195, has been accepted by the EPA.

Attached to this email, you will find a copy of your completed Annual Report form. To access your Annual Report in NeT, please visit: https://cdx.epa.gov/epa_home.asp.

If you have questions about this email or about NeT, please call the EPA NOI Processing Center at 1-866-352-7755 (toll free) or send an email to noi@avanticorporation.com. If you have questions regarding the MSGP, please contact EPA at rachel@avanticorporation.com; farris.erika@epa.gov; nguyen.helen@epa.gov; emily@avanticorporation.com; julie@avanticorporation.com; paola@avanticorporation.com; jahan.nasim@epa.gov.

This is an automated response; please do not reply to this email.



2015 NPDES Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activity (MSGP) Forms

United States Environmental Protection Agency
1200 Pennsylvania Ave, NW Washington, DC 20460

Permit Information (* indicates form required data)

What action would you like to take? *

New Industrial Stormwater Annual Report

Please select the NPDES ID corresponding to the facility for which you would like to submit an Annual Report and click the Submit button.

NPDES ID *

NMR053195: LOS ALAMOS NATIONAL LABORATORY

☒ Confirm NPDES ID: NMR053195: LOS ALAMOS NATIONAL LABORATORY *

Facility Information

Facility Name

Los Alamos National Laboratory

Street

PO Box 1663

Supplemental address

MS K490

City

Los Alamos

State

New Mexico

Zip Code

87545

First Name

Holly

Middle Name

Last Name

Wheeler

Telephone Number

5056671312

Summary of past year's inspections, assessments, and corrective actions

1. Provide a summary of your past year's routine facility inspection documentation (see Part 3.1.2 of the permit). In addition, if you are an operator of an airport facility (Sector S) that is subject to the airport effluent limitations guidelines, and are complying with the MSGP Part 8.S.8.1 effluent limitation through the use of non-urea-containing deicers, provide a statement certifying that you do not use airfield pavement deicers containing urea (e.g., "*I certify that [name of airport] is in compliance with the effluent limitation guideline for airfield pavement deicing by not using airfield pavement deicers that contain urea.*"). [Note: Operators of airport facilities that are complying with Part 8.S.8.1 by meeting the numeric effluent limitation for ammonia do not need to include this statement.] *

Los Alamos National Laboratory (LANL), operated by Los Alamos National Security, LLC (LANS), consists of 14 active industrial sites that operate under 8 different Sectors (A, D, F, K, N, O, P, and AA). All 14 active sites were inspected according to the schedules identified in the site-specific SWPPPs. The 26 sites that qualify for a conditional exclusion for no exposure were inspected between December 1st and 22nd, 2016. A total of 198 inspections and/or evaluations resulting in corrective actions were conducted at a total of 40 sites as follows:
TA-3-22 Power and Steam Plant – 20; TA-3-29 Indoor TSD and Machine Shop – 1; TA-3-30 Warehouse – 2; TA-3-34-Metal Shop -1; TA-3-38 Carpenter Shop – 13; TA-3-38 Metals Fab Shop – 16; TA-3-39 and 102 Metal Shop – 7; TA-3-40, Room 1315 Machine Shop – 1; TA-3-66 Sigma Facility – 7; TA-3-2206 Warehouse – 1; TA-9-28 Heavy Equipment Maintenance – 1; TA-14-23 Burn Cage – 1; TA-15-313 Machine Shop – 1; TA-22-52 Machine Shop – 1; TA-33-39 Machine Shop – 1; TA-33-113 Machine Shop – 1; TA-35-2 Machine Shop – 1; TA-35-125 Machine Shop – 1; TA-46-31 Machine Shop – 1; TA-48-8 Machine Shop – 1; TA-50-54 Machine Shop – 1; TA-50-69 TSD – 1; TA-53-2 Machine Shop – 2; TA-53-3 Machine Shop – 1; TA-53-16 Machine Shop – 1; TA-53-26 Machine Shop – 1; TA-54-38 Indoor TSD – 1; TA-54 Area L – 8; TA-54 Area G – 13; TA-54 Maintenance Facility West – 6; TA-54 RANT – 9; TA-55-3 Metal Shop – 1; TA-55-5 Warehouse – 1; TA-55-268 Warehouse – 1; TA-55-314 Warehouse – 1; TA-60 Asphalt Batch Plant – 12; TA-60 MRF – 14; TA-60 Roads and Grounds – 12; TA-60-1 Heavy Equipment Yard – 19; and TA-60-2 Warehouse – 16.

2. Provide a summary of your past year's quarterly visual assessment documentation (see Part 3.2.2 of the permit) *

A total of 668 visual assessments were completed at 66 different outfalls. Evidence of an oil sheen was observed in four samples: Outfall 021 on 11/04/2016, Outfall 024 on 09/07/2016 and 11/04/2016, and Outfall 052 on 05/02/2016. No other evidence of pollutants was observed.

3. For any four-sample (minimum) average benchmark monitoring exceedance, if after reviewing the selection, design, installation and implementation of your control measures and considering whether any modifications are necessary to meet the effluent limits in the permit, you determine that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice, provide your rationale for why you believe no further reductions are achievable (see Part 6.2.1.2 of the permit). Enter "NA" if not applicable. *

NA

4. Provide a summary of your past year's corrective action documentation (See Part 4.4 of the permit). (Note: If corrective action is not yet completed at the time of submission of this annual report, you must describe the status of any outstanding corrective action(s).) Also describe any incidents of noncompliance in the past year or currently ongoing, or if none, provide a statement that you are in compliance with the permit. *

A total of 198 inspections and/or evaluations resulting in corrective actions were conducted at a total of 40 sites with the following total count of conditions observed:

Unauthorized Release or Discharge – 24; Control Measures Needing Maintenance, Repairs, or Replacement – 48; Additional Control Measures Needed – 2; Control Measures Inadequate to Meet Non-Numeric Effluent Limitations – 63; Incidents of Noncompliance [New Mexico Water Quality Standard (NM WQS) Exceedances – 23; Incidents of Noncompliance: Average Exceeds or is Average Exceeds or is Mathematically Certain to Exceed Benchmark Value – 6; Average Exceeds or is Mathematically Certain to Exceed Benchmark Value – 23.

At this time, there are only 2 outstanding corrective actions, both identified on December 19, 2016 and proposed for completion by February 2, 2017.

Regarding incidents of noncompliance, 28 monitored constituents from different outfalls exceeded an individual New Mexico Water Quality Standard (NM WQS). In addition, 9 monitored quarterly benchmark constituent value exceedances occurred where the benchmark value was modified to reflect a NM WQS per Section 9.6.2.1. Corrective actions to address these exceedances have been completed.

EPC-DO: 17-084; LA-UR-17-20556

Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. 40 CFR 122.22 (d)



2015 NPDES Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activity (MSGP) Forms

United States Environmental Protection Agency
1200 Pennsylvania Ave, NW Washington, DC 20460

Permit Information (* indicates form required data)

What action would you like to take? *

New Industrial Stormwater Annual Report

Enter the NPDES ID corresponding to the facility for which you would like to submit an Annual Report and click the Submit button.

NPDES ID *

NMR053195

☒ Confirm NPDES ID: NMR053195 *

Facility Information

Facility Name

Los Alamos National Laboratory

Street

PO Box 1663

Supplemental address

MS K490

City

Los Alamos

State

New Mexico

Zip Code

87545

First Name

Holly

Middle Name

Last Name

Wheeler

Telephone Number

5056671312

Summary of past year's inspections, assessments, and corrective actions

1. Provide a summary of your past year's routine facility inspection documentation (see Part 3.2 of the permit). In addition, if you are an operator of an airport facility (Sector S) that is subject to the airport effluent limitations guidelines, and are complying with the MSGP Part 8.S.8.1 effluent limitation through the use of non-urea-containing deicers, provide a statement certifying that you do not use airfield pavement deicers containing urea (e.g., "I certify that [name of airport] is in compliance with the effluent limitation guideline for airfield pavement deicing by not using airfield pavement deicers that contain urea."). [Note: Operators of airport facilities that are complying with Part 8.S.8.1 by meeting the numeric effluent limitation for ammonia do not need to include this statement.] *

LANL consists of 14 sites under 8 Sectors (A, D, F, K, N, O, P, AA). As specified in a letter to EPA dated Nov 24, 2015, (ENV-DO-15-0328), LANL is providing information collected from the 2015 Comprehensive Site Inspection along with other documentation identified in Part 7.5 of the 2015 MSGP. All 14 sites, one inactive site and 25 sites that qualify for a conditional exclusion for no exposure were inspected Sept 8th-29th, 2015. The active sites became authorized to discharge stormwater under the 2015 MSGP on Oct 3, 2015. Routine inspections were then conducted at these sites in accordance with the 2015 MSGP. Corrective actions identified at all sites between Sept 1 and Dec 31, 2015 are summarized below. An evaluation of analytical monitoring data for the 2015 calendar year is included below.

Power & Steam Plant: Insp-4, Ctrls Maint, Repair, Repl-3, Ctrls Inad to Meet Non-Num. Eff Limit-1; TA-3-34 Metal Shop: Insp-1, Ctrls Inad to Meet Non-Num Eff Limit-1; TA-3-38 Carpenter Shop: Insp-5, Discharges During Insp-1; TA-3-38 Metals Fab Shop: Insp-7, Discharges During Insp-2, Pollutants Entering Drainage-2, Ctrls Inad to Meet Non-Num Eff Limit-1; TA-3-39 & 102 Metal Shop: Insp-2, Ctrls Inad to Meet Non-Num Eff Limit-1; Sigma Facility: Insp-3, Discharges During Insp-2, Ctrls Inad to Meet Non-Num Eff Limit-4; Heavy Equipment Maintenance: Insp-1, Discharges During Insp-1, Ctrls Inad to Meet Non-Num Eff Limit-1; TA-15-313 Machine Shop: Insp-1, Ctrls Inad to Meet Non-Num Eff Limit-1; TA-33-113 Machine Shop: Insp-1, Ctrls Inad to Meet Non-Num Eff Limit-1; TA-46-31 Machine Shop: Insp-1, Discharges During Insp-1, Ctrls Maint, Repair, Repl-1, Ctrls Inad to Meet Non-Num Eff Limit-3; TA-48-8 Machine Shop: Insp-1, Ctrls Maint, Repair, Repl-1, Ctrls Inad to Meet Non-Num Eff Limit-1; TA-53-2 Machine Shop: Insp-1, Ctrls Inad to Meet Non-Num Eff Limit-3; TA-53-16 Machine Shop: Insp-1, Ctrls Inad to Meet Non-Num Eff Limit-1; TA-53-18 Machine Shop: Insp-1, Ctrls Maint, Repair, Repl-1, Ctrls Inad to Meet Non-Num Eff Limit-1; TA-53-26 Machine Shop: Insp-1, Ctrls Inad to Meet Non-Num Eff Limit-1; TA-53-39 Shop & Storage Bldg: Insp-1, Ctrls Inad to Meet Non-Num Eff Limit-2; TA-54 Area L: Insp-3, Discharges During Insp-1, Ctrls Maint, Repair, Repl-1, Ctrls Inad to Meet Non-Num Eff Limit-2; Area G: Insp-9, Discharges During Insp-5, Ctrls Maint, Repair, Repl-3; Maintenance Facility West: Insp-4, Discharges During Insp-2, Ctrls Inad to Meet Non-Num Eff Limit-1, NonComp (NM WQS Exceed Al, Cu)-2*; RANT: Insp 2; Asphalt Batch Plant: Insp-5, Discharges During Insp-1, Ctrls Maint, Repair, Repl-1, Ctrls Inad to Meet Non-Num Eff Limit-1, NonComp (ELG Exceed TSS)-4**; MRF: Insp-6, Discharges During Insp-1, Ctrls Inad to Meet Non-Num Eff Limit-3; Roads & Grounds: Insp-6, Discharges During Insp-2, Ctrls Maint, Repair, Repl-5, Ctrls Inad to Meet Non-Num Eff Limit-9, NonComp (NM WQS Exceed TI)-1; Heavy Equipment Yard: Insp-6, Discharges During Insp-1, Ctrls Maint, Repair, Repl-5, Ctrls Inad to Meet Non-Num Eff Limit-7; TA-60-2 Whse: Insp-5, Discharges During Insp-1, Prev Unidentified Discharges-1, Ctrls Inad to Meet Non-Num Eff Limit-4.

*Per Part 6.2.4.2 of the 2008 MSGP, LANL ceased monitoring for aluminum and copper at outfall 049, due to their presence below LANL background values submitted to EPA on November 4, 2010 (ENV-RCRA-10-215, LA-UR-10-07291).

**The 30-day avg. effluent limit was exceeded for TSS from rain events on 7/7, 7/15 and 7/20/2015, which were the only discharges that occurred during the second monitoring period at this facility. A subsequent sample was collected on 8/8/2015, which exceeded the daily max. effluent limit for TSS. This sample was collected before analytical results were received for the previous ELG monitoring. An Exceedance Report for Numeric Effluent Limits was sent to EPA on 9/17/2015 (ENV-DO-15-0254, LA-UR # 15-27266). Corrective actions are identified in the report.
LA-UR-16-20466

2. Provide a summary of your past year's quarterly visual assessment documentation (see Part 3.3.2 of the permit) *

A total of 91 quarterly visual assessments were completed at 38 different outfalls. No obvious indicators of pollutants were present in any of these samples.
LA-UR-16-20466

3. For any four-sample (minimum) average benchmark monitoring exceedance, if after reviewing the selection, design, installation and implementation of your control measures and considering whether any modifications are necessary to meet the effluent limits in the permit, you determine that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice, provide your rationale for why you believe no further reductions are achievable (see Part 6.2.1.2 of the permit). *

At this time, LANL is not seeking to determine that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice. Therefore, no rationale is provided.
LA-UR-16-20466

4. Provide a summary of your past year's corrective action documentation (See Part 4.3 of the permit). (Note: If corrective action is not yet completed at the time of submission of this annual report, you must describe the status of any outstanding corrective action(s).) Also describe any incidents of noncompliance in the past year or currently ongoing, or if none, provide a statement that you are in compliance with the permit. *

Please see the response to Section 1 for a summary of corrective action documentation including unauthorized releases, discharges that violate a numeric effluent limit, control measures that were not stringent enough for the discharge to meet applicable water quality standards or the non-numeric effluent limits, and instances where control measures were never installed, were installed incorrectly or not in accordance with Parts 2 and/or 8 of the 2015 MSGP, or were not being properly operated or maintained. Regarding incidents of noncompliance, two ELG exceedances occurred at the TA-60 Asphalt Batch Plant. An Exceedance Report for Numeric Effluent Limits was sent to EPA on 9/17/2015 (ENV-DO-15-0254, LA-UR # 15-27266). Corrective actions are identified in the report. Specifics relative to these exceedances are contained in the footnote to the table in response to Section 1 above. In addition, one New Mexico Water Quality Standard (WQS) exceedance occurred for Thallium at TA-60 Roads and Grounds. The other New Mexico WQS exceedances identified in Section 1 above are below natural background for LANL. All corrective actions identified during calendar year 2015 are closed.

LA-UR-16-20466

Certification Information

Certifier E-Mail *

grieggst@lanl.gov

☒ Confirm Certifier: grieggst@lanl.gov *

Corrective Action Report and Documentation

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated information submitted. Based on my inquiry of the person(s) who manage the system, or person(s) directly responsible for information gathering, the information received is to the best of my knowledge true, accurate, and complete.

I understand and acknowledge the implications and penalties for submitting false information, including the possibility of a fine and/or imprisonment.

SIGNATURE OF CERTIFICATION:

Printed Name: Mark (Barry) Walker **Title:** MSS-EWMO Maintenance & Work Control Manager

Signature: Barry Walker

Digitally signed by Barry Walker
DN: cn=Barry Walker, o=MSS-EWMO, ou=MSS-
EWMO, email=mbwalker@epa.gov, c=US
Date: 2018.01.31 09:26:17 -0700

Date: 1/31/2018

Inspection Id	FDD	MSGP Facility Desc	Inspection Date	RCRA Notify Date	Specific Location	Inspector	Inspector Name	CA Report Status	Finding	Finding Other Desc	Problem Description	Inspection Type	Inspection Type Other	Corrective Action Description	SIO	Swppp	CA Initiate Date	CA Complete Date	Completed	CA Status Desc
1260	EWMO	TA-54 Maintenance Facility W	12/11/2017 9:30	12/11/2017 9:30	SW end of TA-54 MFW along the boundary	118432	WHEELER HOLLY L	A new corrective action ?	Control measures not properly operated or maintained	-	The berm between the Jersey barriers on the SW boundry of TA-54 MFW is eroded and needs some maintenance	Routine facility inspection	-	Additional base course was added to the berm between the jersey barriers.	N	N	12/12/2017 0:00	12/12/2017 0:00	Y	Repair the berm between the Jersey barriers.
1259	EWMO	TA-54 Maintenance Facility W	12/11/2017 9:30	12/11/2017 9:30	TA-54 MFW to the NW.	118432	WHEELER HOLLY L	A new corrective action ?	Control measures inadequate to meet non-numeric effluent limitations	-	A rusted steel metal table was exposed to precipitation at TA-54 Maintenance Facility West.	Routine facility inspection	-	Request for salvage was maded on 12/12/2017. They picked up the table up on 1/9/2018.	N	N	12/12/2017 0:00	1/9/2018 0:00	Y	Cover the rusted steel table or salvage it.
1258	EWMO	TA-54 Maintenance Facility W	12/11/2017 9:30	12/11/2017 9:30	TA-54 MFW on the east side.	118432	WHEELER HOLLY L	A new corrective action ?	Control measures inadequate to meet non-numeric effluent limitations	-	The roll off bin containing metal for recycle was not covered at TA-54 Maintenance Facility West.	Routine facility inspection	-	Metal roll off bin was partially covered. Tarps have been purchased and bins have been covered.	N	N	12/19/2017 0:00	12/19/2017 0:00	Y	Cover the roll off bin containing metal for recycle.
1134	EWMO	TA-54 Maintenance Facility W	6/28/2017 0:00	6/28/2017 0:00	Outfall 049 at TA-54 Maintenance Facility West	118432	WHEELER HOLLY L	A new corrective action ?	Other (describe) :	Impaired water quality standard exceedance	Discharge from outfall 049 at TA-54 Maintenance Facility West exceeded the New Mexico water quality standard for total recoverable Aluminum.	Other (describe) :	Impaired waters monitoring.		N	Y	6/28/2017 0:00	8/1/2017 0:00	Y	NA
1039	EWMO	TA-54 Maintenance Facility W	12/20/2016 0:00	12/20/2016 0:00	Northeast portion of TA-54 Maintenance Facility West	118432	WHEELER HOLLY L	A new corrective action ?	Control measures not properly operated or maintained	-	At the Northeast portion of TA-54 Maintenance Facility West, part of the earthen berm between the Jersey barriers was starting to erode.	Routine facility inspection	-	The earthen berm was rebuilt between the Jersey barriers on the northeast portion of the site.	N	N	12/20/2016 0:00	12/20/2016 0:00	Y	N/A
971	EWMO	TA-54 Maintenance Facility W	9/23/2016 0:00	9/23/2016 0:00	Outfall 049 at TA-54 Maintenance Facility West	118432	WHEELER HOLLY L	A new corrective action ?	Other (describe) :	Impaired water quality standard exceedance	Discharge from outfall 049 at TA-54 Maintenance Facility West exceeded the New Mexico water quality standard for total recoverable Aluminum. This occurred during the storm event on 7/25/2016.	Other (describe) :	Impaired water monitoring		N	Y	9/23/2016 0:00	10/5/2016 0:00	Y	na
944	EWMO	TA-54 Maintenance Facility W	7/26/2016 0:00	7/26/2016 0:00	SW corner of the TA-54 MFW.	232597	SCHROCK DAVID E	A new corrective action ?	Control measures not properly operated or maintained	-	At TA-54 Maintenance Facility West, stormwater eroded the earthen berm at the southeast corner.	Other (describe) :	Observation after a rain event	Repaired earthen berm in accordance with the BMP manual.	N	N	7/26/2016 0:00	8/1/2016 0:00	Y	N/A
863	EWMO	TA-54 Maintenance Facility W	1/22/2016 0:00	1/22/2016 0:00	Outfall 049 at TA-54 Maintenance Facility West	118432	WHEELER HOLLY L	A new corrective action ?	Other (describe) :	Impaired water quality standard exceedance	At TA-54 Maintenance Facility West, aluminum and copper exceeded the State of New Mexico water quality criteria at outfall 049 during a storm event on 5/15/2015.	Comprehensive site inspection	-	Per Part 6.2.4.2 of the 2008 MSGP, "this monitoring requirement does not apply after one year if the pollutant for which the waterbody is impaired is not detected above natural background levels in your stormwater discharge, and you document, as required in Part 5.4 (Additional Documentation Requirements), that this pollutant is not expected to be present above natural background levels in your discharge." Therefore, LANL will no longer monitor for aluminum or copper at outfall 049. A background study was provided as part of the 2010 Annual Report submitted to EPA on November 4, 2010 (ENV-RCRA-10-215, LA-UR # 10-07291, Storm Water Background Concentrations for MSGP Pollutants of Concern).	N	N	1/22/2016 0:00	1/22/2016 0:00	Y	N/A

ATTACHMENT H: SAMPLING DATA



Environmental Protection & Compliance Division
Environmental Compliance Programs (EPC-CP)
PO Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-0666

Date: **JUN 28 2017**
Symbol: EPC-DO:17-252
LA-UR: 17-25156

Locates Action No.: N/A

U.S. EPA Region 6
NPDES Stormwater Program (WQ-PP)
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

To whom it may concern:

Subject: National Pollutant Discharge Elimination System (NPDES) Permit Tracking No. NMR053195, Multi-Sector General Permit (MSGP) Industrial Discharge Monitoring Reports (MDMRs) for April 29 and May 09, 2017, and a "No Discharge" MDMR for the First Quarter (April 1 – May 31, 2017)

Enclosed are Los Alamos National Laboratory's MDMRs (Enclosure 1) for April 29 and May 09, 2017, and a "No Discharge" MDMR for the first quarter of monitoring (April 1 through May 31), as required under MSGP Permit Tracking No. NMR053195. These reports are being submitted on behalf of Los Alamos National Security LLC and contain analytical results for impaired waters and quarterly benchmark monitoring at outfalls 004, 017, 029, 042, 047, and 049.

Please contact Holly Wheeler at (505) 667-1312 or Terrill Lemke at (505) 665-2397 if you have questions regarding these MDMRs.

Sincerely,

Anthony R. Grieggs
Group Leader
Environmental Compliance Programs (EPC-CP)
Los Alamos National Security, LLC

ARG:TWL:HLW/em

Enclosure: 1. NPDES Permit Tracking No. NMR053195, MDMRs for April 29 and May 09, 2017 and a "No Discharge MDMR for the First Quarter (April 1 – May 31, 2017)

Cy: Helen Nguyen, EPA Region 6, Dallas TX (E-File)
Nasim Jahan, EPA Region 6, Dallas TX (E-File)
Michelle Hunter, NMED/GWQB, Santa Fe, NM (E-File)
Shelly Lemon, NMED/SWQB, Santa Fe, NM (E-File)
Craig S. Leasure, PADOPS, (E-File)
William R. Mairson, PADOPS, (E-File)
Michael T. Brandt, ADESH, (E-File)
Raeanna Sharp-Geiger, ADESH, (E-File)
Karen Armijo, NA-LA, (E-File)
Arturo Duran, EM-SG, (E-File)
David Rhodes, EM-SG, (E-File)
Bruce Robinson, ADEM-PO, (E-File)
Robert Stokes, DESHS-EWMS, (E-File)
Terrill W. Lemke, EPC-CP, (E-File)
Holly L. Wheeler, EPC-CP, (E-File)
Leslie J. Dale, EPC-CP, (E-File)
Ellena I. Martinez, EPC-DP, (E-File)
Adesh-records@lanl.gov, (E-File)
lasomailbox@nnsa.doe.gov, (E-File)
locatesteam@lanl.gov, (E-File)
epc-correspondence@lanl.gov, (E-File)

ENCLOSURE 1

NPDES Permit Tracking No. NMR053195, MDMRs for April 29 and May 09, 2016 and a “No Discharge MDMR for the First Quarter (April 1 – May 31, 2017)

EPC-DO:17-252

LA-UR-17-25156
JUN 28 2017
Date:

**A. Approval to User Paper DMR Form**1. Have you been granted a waiver from electronic reporting from EPA Regional Office*? ☒ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted: ☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.☒ The owner/operator has issues regarding available computer access or computer capability.Name of EPA staff person that granted the waiver: Everett SpencerDate approval obtained: 06/17/2016*** Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper DMR form. If you have not obtained a waiver, you must file this form electronically using the NetDMR at <http://www.epa.gov/netdmr/>****B. Permit Information**1. NPDES ID: NMR053195

2. Reason(s) for Submission (Check all that apply):

☒ Submitting monitoring data (Fill in all Sections).☐ Reporting no discharge for all outfalls for this monitoring period (Fill in Sections A, B, C, D, E.1, and G).☐ Reporting that your site status has changed to inactive and unstaffed (Fill in Sections A, B, C, D, and F and include date of status change in comment field in Section F.4).☐ Reporting that your site status has changed to active (Fill in all Sections and include date of status change in comment field in Section F.4).☐ Reporting that no further pollutant reductions are achievable for all outfalls and for all pollutants via Part 6.2.1.2 of the MSGP (Fill in Sections A, B, C, D, and G).**C. Facility Operator Information****1. Operator Information**Operator Name: Los Alamos National Security, LLC

Mailing Address:

Street: P.O. Box 1663, MS K490City: Los AlamosState: NM ZIP Code: 87545 - Phone: 505 667 0666E-mail: grieggst@lanl.gov**2. DMR Preparer (Complete if DMR was prepared by someone other than the certifier):**First Name, Middle Initial, Last Name: Holly L. WheelerOrganization: EPC-CPPhone: 505 667 1312Ext. E-mail: hbenson@lanl.gov

D. Facility Information

1. Facility Name: Los Alamos National Laboratory

2. Facility Address:

Street/Location Bikini Atoll Rd. SM30 K490

City: Los Alamos State: NM ZIP Code: 87545 -

County or Similar Government Subdivision: Los Alamos

E. Discharge Information

1. Identify monitoring period: ☒ Check here if proposing alternative monitoring periods due to irregular stormwater runoff. Identify alternative monitoring schedule and indicate for which alternative monitoring period you are reporting monitoring data:
- | | |
|--|--|
| <input type="checkbox"/> Quarter 1 (January 1 – March 31) | <input checked="" type="checkbox"/> Quarter 1: From <u>04</u> / <u>01</u> To <u>05</u> / <u>31</u> |
| <input type="checkbox"/> Quarter 2 (April 1 – June 30) | <input type="checkbox"/> Quarter 2: From <u>06</u> / <u>01</u> To <u>07</u> / <u>31</u> |
| <input type="checkbox"/> Quarter 3 (July 1 – September 30) | <input type="checkbox"/> Quarter 3: From <u>08</u> / <u>01</u> To <u>09</u> / <u>30</u> |
| <input type="checkbox"/> Quarter 4 (October 1 – December 31) | <input type="checkbox"/> Quarter 4: From <u>10</u> / <u>01</u> To <u>11</u> / <u>30</u> |
2. Are you required to monitor for cadmium, copper, chromium, lead, nickel, silver, or zinc in freshwater? ☒ Yes (Skip to 3) ☐ No (Skip to 4)
3. What is the hardness level of the receiving water? 57
4. Does your facility discharge into any saltwater receiving waters? ☐ Yes ☒ No

F. Monitoring Information
Note: Make additional copies of this form as necessary.

1. Nature of Discharge: ☐ Rainfall (Complete line items 2.a., 2.b., & 2.c.) ☒ Snowmelt

2.a. Duration of the rainfall event (hours): 2.b. Rainfall amount (inches): 2.c. Time since previous measurable storm event (days):

3.a. Outfall ID (list the same 3- digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
042	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Adjusted Gross Alpha	14.4	pCi/L		04/29/2017	<input type="checkbox"/>	<input type="checkbox"/>
042	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aluminum, total recoverable	2770	ug/L		04/29/2017	<input type="checkbox"/>	<input type="checkbox"/>
042	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Copper, dissolved	8.17	ug/L		04/29/2017	<input type="checkbox"/>	<input type="checkbox"/>
041	<input checked="" type="checkbox"/> Substantially identical to outfall: 042	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

042: The impaired water pollutant total recoverable Aluminum exceeds the New Mexico water quality standard. The impaired water pollutant dissolved Copper exceeds the New Mexico water quality standard. Aroclor, total (I) - NODI B. Thallium, dissolved (I) - NODI B.

F. Monitoring Information **Note: Make additional copies of this form as necessary.**

1. Nature of Discharge: <input type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.) <input checked="" type="checkbox"/> Snowmelt		2.c. Time since previous measurable storm event (days):								
2.a. Duration of the rainfall event (hours):		2.b. Rainfall amount (inches):								
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
047	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Adjusted Gross Alpha	ND		0.253 pCi/L	04/29/2017	<input type="checkbox"/>	<input type="checkbox"/>
047	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aluminum, total recoverable	269	ug/L		04/29/2017	<input type="checkbox"/>	<input type="checkbox"/>
047	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Magnesium, total	0.402	mg/L		04/29/2017	<input type="checkbox"/>	<input type="checkbox"/>
046	<input checked="" type="checkbox"/> Substantially identical to outfall: 047	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
045	<input checked="" type="checkbox"/> Substantially identical to outfall: 047	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
048	<input checked="" type="checkbox"/> Substantially identical to outfall: 047	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
044	<input checked="" type="checkbox"/> Substantially identical to outfall: 047	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

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4. Comment and/or Explanation of Any Violations (Reference all attachments here)

047: The impaired water pollutant Adjusted Gross Alpha was not detected in stormwater discharge from this outfall, therefore, annual monitoring will be discontinued per Part 6.2.4.1. The average concentration of total Magnesium is mathematically certain to exceed the benchmark value. Ammonia, total (QBM) - NODI 9. Aroclor, total (I) - NODI B. Arsenic, dissolved (QBM) - NODI 9. Cadmium, dissolved (QBM) - NODI 9. Chemical Oxygen Demand (COD) (QBM) - NODI 9. Cyanide, total (QBM) - NODI 9. Lead, dissolved (QBM) - NODI 9. Mercury, total (QBM) - NODI 9. Selenium, total (QBM) - NODI 9. Silver, dissolved (QBM) - NODI 9.

F. Monitoring Information										Note: Make additional copies of this form as necessary.		
1. Nature of Discharge:		<input type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.)		<input checked="" type="checkbox"/> Snowmelt								
2.a. Duration of the rainfall event (hours):			2.b. Rainfall amount (inches):			2.c. Time since previous measurable storm event (days):						
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049	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aluminum, total recoverable	4600	ug/L		04/29/2017	<input type="checkbox"/>	<input type="checkbox"/>		

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4. Comment and/or Explanation of Any Violations (Reference all attachments here)

049: The impaired water pollutant total recoverable Aluminum exceeds the New Mexico water quality standard. Aroclor, total (I) - NODI B.

G. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name: Anthony R Grieggs

Title: EPC-CP Group Leader

Signature: 

Date: 0628/2017

E-mail: grieggst@lanl.gov

**A. Approval to User Paper DMR Form**1. Have you been granted a waiver from electronic reporting from EPA Regional Office*? ☒ YES ☐ NO

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Mailing Address:

Street: P.O. Box 1663, MS K490City: Los AlamosState: NM ZIP Code: 87545 - Phone: 505 667 0666E-mail: grieggst@lanl.gov**2. DMR Preparer (Complete if DMR was prepared by someone other than the certifier):**First Name, Middle Initial, Last Name: Holly L. WheelerOrganization: EPC-CPPhone: 505 667 1312Ext. E-mail: hbenson@lanl.gov

D. Facility Information

1. Facility Name: Los Alamos National Laboratory

2. Facility Address:

Street/Location Bikini Atoll Rd. SM30 K490

City: Los Alamos State: NM ZIP Code: 87545 -

County or Similar Government Subdivision: Los Alamos

E. Discharge Information

1. Identify monitoring period: ☒ Check here if proposing alternative monitoring periods due to irregular stormwater runoff. Identify alternative monitoring schedule and indicate for which alternative monitoring period you are reporting monitoring data:
- | | |
|--|--|
| <input type="checkbox"/> Quarter 1 (January 1 - March 31) | <input checked="" type="checkbox"/> Quarter 1: From <u>04</u> / <u>01</u> To <u>05</u> / <u>31</u> |
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| <input type="checkbox"/> Quarter 3 (July 1 - September 30) | <input type="checkbox"/> Quarter 3: From <u>08</u> / <u>01</u> To <u>09</u> / <u>30</u> |
| <input type="checkbox"/> Quarter 4 (October 1 - December 31) | <input type="checkbox"/> Quarter 4: From <u>10</u> / <u>01</u> To <u>11</u> / <u>30</u> |
2. Are you required to monitor for cadmium, copper, chromium, lead, nickel, silver, or zinc in freshwater? ☒ Yes (Skip to 3) ☐ No (Skip to 4)
3. What is the hardness level of the receiving water? 57
4. Does your facility discharge into any saltwater receiving waters? ☐ Yes ☒ No

F. Monitoring Information **Note: Make additional copies of this form as necessary.**

1. Nature of Discharge: ☒ Rainfall (Complete line items 2.a., 2.b., & 2.c.) ☐ Snowmelt

2.a. Duration of the rainfall event (hours): 2 2.b. Rainfall amount (inches): 0.4 2.c. Time since previous measurable storm event (days): 10

3.a. Outfall ID (list the same 3- digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
004	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Adjusted Gross Alpha	17.7	pCi/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
004	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Aluminum, total recoverable	6570	ug/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
004	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aluminum, total recoverable	6570	ug/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
004	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aroclor, total	ND		0.0347 ug/L	05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
004	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Iron, total	6650	ug/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
004	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Nitrate plus Nitrite Nitrogen	0.733	mg/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

Rainfall duration = 2.25 hours. Rainfall amount = 0.42 inches.

004: The impaired water pollutant Adjusted Gross Alpha exceeds the New Mexico water quality standard. The average concentration of total recoverable Aluminum is mathematically certain to exceed the benchmark value. The impaired water pollutant total recoverable Aluminum exceeds the New Mexico water quality standard. The impaired water pollutant total Aroclor was not detected in stormwater discharge from this outfall, therefore annual monitoring will be discontinued per Part 6.2.4.1. The average concentration of total Iron is mathematically certain to exceed the benchmark value.

F. Monitoring Information **Note: Make additional copies of this form as necessary.**

1. Nature of Discharge: ☒ Rainfall (Complete line items 2.a., 2.b., & 2.c.) ☐ Snowmelt

2.a. Duration of the rainfall event (hours): 2 2.b. Rainfall amount (inches): 0.4 2.c. Time since previous measurable storm event (days): 11

3.a. Outfall ID (list the same 3- digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, ST, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
017	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Adjusted Gross Alpha	4.82	pCi/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
017	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Aluminum, total recoverable	3710	ug/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
017	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aluminum, total recoverable	3710	ug/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
017	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aroclor, total	0.166	ug/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
017	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Copper, dissolved	15.5	ug/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
017	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Copper, dissolved	15.5	ug/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
017	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Iron, total	5230	ug/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
017	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Nitrate plus Nitrite Nitrogen	0.295	mg/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>

017	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Thallium, dissolved	ND		0.600 ug/L	05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
017	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Zinc, dissolved	59.7	ug/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
013	<input checked="" type="checkbox"/> Substantially identical to outfall: 017	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
014	<input checked="" type="checkbox"/> Substantially identical to outfall: 017	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
015	<input checked="" type="checkbox"/> Substantially identical to outfall: 017	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
016	<input checked="" type="checkbox"/> Substantially identical to outfall: 017	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
019	<input checked="" type="checkbox"/> Substantially identical to outfall: 017	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)
Rainfall duration = 2.25 hours. Rainfall amount = 0.42 inches.

017: The average concentration of total recoverable Aluminum is mathematically certain to exceed the benchmark value. The impaired water pollutant total recoverable Aluminum exceeds the New Mexico water quality standard. The impaired water pollutant dissolved Copper exceeds the New Mexico water quality standard. The average concentration of total Iron is mathematically certain to exceed the benchmark value. The impaired water pollutant dissolved Thallium was not detected in stormwater discharge from this outfall, therefore annual monitoring will be discontinued per Part 6.2.4.1.

F. Monitoring Information Note: Make additional copies of this form as necessary.

1. Nature of Discharge: ☒ Rainfall (Complete line items 2.a., 2.b., & 2.c.) ☐ Snowmelt

2.a. Duration of the rainfall event (hours): 2 2.b. Rainfall amount (inches): 0.4 2.c. Time since previous measurable storm event (days): 10

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029	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aluminum, total recoverable	1120	ug/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
029	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Chemical Oxygen Demand (COD)	154	mg/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>
029	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Iron, total	3910	ug/L		05/09/2017	<input type="checkbox"/>	<input type="checkbox"/>

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4. Comment and/or Explanation of Any Violations (Reference all attachments here)
Rainfall duration = 2.25 hours. Rainfall amount = 0.42 inches.

029: The impaired water pollutant total recoverable Aluminum exceeds the New Mexico water quality standard. Aroclor, total (I) - NODI B. Thallium, dissolved (I) - NODI B. Total Suspended Solids (TSS) (QBM) - NODI 9. Aluminum, total recoverable (QBM) - NODI 9.

G. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name: Anthony R Grieggs

Title: EPC-CP Group Leader

Signature: 

Date 06/28/2017

E-mail: grieggst@lanl.gov

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1. Have you been granted a waiver from electronic reporting from EPA Regional Office*?
- ☒
- YES
- ☐
- NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

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| <input type="checkbox"/> Quarter 1 (January 1 - March 31) | <input checked="" type="checkbox"/> Quarter 1: From <u>04</u> / <u>01</u> To <u>05</u> / <u>31</u> |
| <input type="checkbox"/> Quarter 2 (April 1 - June 30) | <input type="checkbox"/> Quarter 2: From <u>06</u> / <u>01</u> To <u>07</u> / <u>31</u> |
| <input type="checkbox"/> Quarter 3 (July 1 - September 30) | <input type="checkbox"/> Quarter 3: From <u>08</u> / <u>01</u> To <u>09</u> / <u>30</u> |
| <input type="checkbox"/> Quarter 4 (October 1 - December 31) | <input type="checkbox"/> Quarter 4: From <u>10</u> / <u>01</u> To <u>11</u> / <u>30</u> |
2. Are you required to monitor for cadmium, copper, chromium, lead, nickel, silver, or zinc in freshwater? ☒ Yes (Skip to 3) ☐ No (Skip to 4)
3. What is the hardness level of the receiving water? 57
4. Does your facility discharge into any saltwater receiving waters? ☐ Yes ☒ No

F. Monitoring Information										Note: Make additional copies of this form as necessary.	
1. Nature of Discharge:		<input type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.)		<input type="checkbox"/> Snowmelt							
2.a. Duration of the rainfall event (hours):				2.b. Rainfall amount (inches):		2.c. Time since previous measurable storm event (days):					
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?	
012	<input type="checkbox"/> Substantially identical to outfall:	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>	
011	<input checked="" type="checkbox"/> Substantially identical to outfall: 012	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>	

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

012: NODI: C

F. Monitoring Information										Note: Make additional copies of this form as necessary.		
1. Nature of Discharge:		<input type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.)		<input type="checkbox"/> Snowmelt								
2.a. Duration of the rainfall event (hours):		2.b. Rainfall amount (inches):		2.c. Time since previous measurable storm event (days):								
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?		
020	<input type="checkbox"/> Substantially identical to outfall:	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>		

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

020: NODI: C

F. Monitoring Information Note: Make additional copies of this form as necessary.

1. Nature of Discharge: <input type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.) <input type="checkbox"/> Snowmelt										
2.a. Duration of the rainfall event (hours):		2.b. Rainfall amount (inches):		2.c. Time since previous measurable storm event (days):						
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
031	<input type="checkbox"/> Substantially identical to outfall:	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
030	<input checked="" type="checkbox"/> Substantially identical to outfall: 031	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

031: NODI: C

F. Monitoring Information Note: Make additional copies of this form as necessary.

1. Nature of Discharge: <input type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.) <input type="checkbox"/> Snowmelt										
2.a. Duration of the rainfall event (hours):		2.b. Rainfall amount (inches):		2.c. Time since previous measurable storm event (days):						
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
036	<input type="checkbox"/> Substantially identical to outfall:	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
037	<input checked="" type="checkbox"/> Substantially identical to outfall: 036	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

036: NODI: C

F. Monitoring Information										Note: Make additional copies of this form as necessary.		
1. Nature of Discharge:		<input type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.)		<input type="checkbox"/> Snowmelt								
2.a. Duration of the rainfall event (hours):		2.b. Rainfall amount (inches):		2.c. Time since previous measurable storm event (days):								
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?		
039	<input type="checkbox"/> Substantially identical to outfall:	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>		
038	<input checked="" type="checkbox"/> Substantially identical to outfall: 039	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>		
040	<input checked="" type="checkbox"/> Substantially identical to outfall: 039	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>		

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

039: NODI: C

F. Monitoring Information				Note: Make additional copies of this form as necessary.						
1. Nature of Discharge:		<input type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.) <input type="checkbox"/> Snowmelt								
2.a. Duration of the rainfall event (hours):		2.b. Rainfall amount (inches):			2.c. Time since previous measurable storm event (days):					
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
043	<input type="checkbox"/> Substantially identical to outfall:	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

043: NODI: C

F. Monitoring Information										Note: Make additional copies of this form as necessary.	
1. Nature of Discharge:		<input type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.)		<input type="checkbox"/> Snowmelt							
2.a. Duration of the rainfall event (hours):		2.b. Rainfall amount (inches):		2.c. Time since previous measurable storm event (days):							
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?	
051	<input type="checkbox"/> Substantially identical to outfall:	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>	
052	<input checked="" type="checkbox"/> Substantially identical to outfall: 051	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>	

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

051: NODI: C

F. Monitoring Information Note: Make additional copies of this form as necessary.

1. Nature of Discharge: <input type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.) <input type="checkbox"/> Snowmelt										
2.a. Duration of the rainfall event (hours):		2.b. Rainfall amount (inches):		2.c. Time since previous measurable storm event (days):						
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
053	<input type="checkbox"/> Substantially identical to outfall:	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
065	<input checked="" type="checkbox"/> Substantially identical to outfall: 053	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
066	<input checked="" type="checkbox"/> Substantially identical to outfall: 053	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

053: NODI: C

F. Monitoring Information Note: Make additional copies of this form as necessary.

1. Nature of Discharge: <input type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.) <input type="checkbox"/> Snowmelt										
2.a. Duration of the rainfall event (hours):		2.b. Rainfall amount (inches):		2.c. Time since previous measurable storm event (days):						
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
072	<input type="checkbox"/> Substantially identical to outfall:	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
070	<input checked="" type="checkbox"/> Substantially identical to outfall: 072	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
071	<input checked="" type="checkbox"/> Substantially identical to outfall: 072	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

072: NODI: C

F. Monitoring Information										Note: Make additional copies of this form as necessary.	
1. Nature of Discharge:		<input type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.)		<input type="checkbox"/> Snowmelt							
2.a. Duration of the rainfall event (hours):		2.b. Rainfall amount (inches):		2.c. Time since previous measurable storm event (days):							
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?	
075	<input type="checkbox"/> Substantially identical to outfall:	<input checked="" type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>	

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

075: NODI: C

G. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name: Anthony R Grieggs

Title: EPC-CP Group Leader

Signature:  Date 06/28/2017

E-mail: grieggst@lanl.gov



Environmental Protection & Compliance Division (EPC-DO)

Environmental Compliance Programs (EPC-CP)

PO Box 1663, K490

Los Alamos, New Mexico 87545

(505) 667-0666

Date: SEP 22 2016

Symbol: EPC-DO-16-283

LA-UR: 16-27215

Locates Action No.: N/A

U.S. EPA Region 6

NPDES Stormwater Program (WQ-PP)

1445 Ross Avenue, Suite 1200

Dallas, TX 75202-2733

To whom it may concern:

Subject: National Pollutant Discharge Elimination System (NPDES) Permit Tracking No. NMR053195, Multi-Sector General Permit (MSGP) Industrial Discharge Monitoring Reports (MDMRs) for July 15, 21 and 25, 2016

Enclosed are Los Alamos National Laboratory's MDMRs (Enclosure 1) for July 15, 21 and 25, 2016, as required under MSGP Permit Tracking No. NMR053195. These reports are being submitted on behalf of Los Alamos National Security LLC and contain analytical results for impaired waters and quarterly benchmark monitoring at outfalls 005, 020, 031, 047, 049, 051, and 072 .

Please contact Holly Wheeler at (505) 667-1312 or Terrill Lemke at (505) 665-2397 if you have questions regarding these MDMRs.

Sincerely,

Anthony R. Grieggs

Group Leader

Environmental Compliance Programs (EPC-CP)

Los Alamos National Security, LLC

ARG:TWL:HLW/lm

Enclosure: 1. NPDES Permit Tracking No. NMR053195, MDMRs for July 15, 21 and 25, 2016

Cy: Everett Spencer, USEPA/Region 6, Dallas TX (E-File)
Helen Nguyen, USEPA/Region 6, Dallas TX (E-File)
Michelle Hunter, NMED/GWQB, Santa Fe, NM (E-File)
Shelly Lemon, NMED/SWQB, Santa Fe, NM (E-File)
Craig S. Leasure, PADOPS, (E-File)
William R. Mairson, PADOPS, (E-File)
Michael T. Brandt, ADESH, (E-File)
Raeanna Sharp-Geiger, ADESH, (E-File)
Karen E. Armijo, NA-LA, (E-File)
Terrill W. Lemke, EPC-CP, (E-File)
Holly L. Wheeler, EPC-CP, (E-File)
Leslie J. Dale, EPC-CP, (E-File)
Ellena I. Martinez, EPC-DP, (E-File)
Saundra Martinez, ADEM-PO, (E-File)
lasomailbox@nnsa.doe.gov, (E-File)
locatesteam@lanl.gov, (E-File)
epc-correspondence@lanl.gov

ENCLOSURE 1

**NPDES Permit Tracking No. NMR053195, MDMRs
for July 15, 21 and 25, 2016**

EPC-DO-16-283

LA-UR-16-27215

Date: SEP 22 2016



A. Approval to User Paper DMR Form

1. Have you been granted a waiver from electronic reporting from EPA Regional Office*? ☒ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

- Waiver granted: ☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.
- ☒ The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver: Everett SpencerDate approval obtained: 06/17/2016

* Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper DMR form. If you have not obtained a waiver, you must file this form electronically using the NetDMR at <http://www.epa.gov/netdmr/>

B. Permit Information

1. NPDES ID: NMR053195

2. Reason(s) for Submission (Check all that apply):

- ☒ Submitting monitoring data (Fill in all Sections).
- ☐ Reporting no discharge for all outfalls for this monitoring period (Fill in Sections A, B, C, D, E.1, and G).
- ☐ Reporting that your site status has changed to inactive and unstaffed (Fill in Sections A, B, C, D, and F and include date of status change in comment field in Section F.4).
- ☐ Reporting that your site status has changed to active (Fill in all Sections and include date of status change in comment field in Section F.4).
- ☐ Reporting that no further pollutant reductions are achievable for all outfalls and for all pollutants via Part 6.2.1.2 of the MSGP (Fill in Sections A, B, C, D, and G).

C. Facility Operator Information

1. Operator Information

Operator Name: Los Alamos National Security, LLC

Mailing Address:

Street: P.O. Box 1663, MS K490City: Los AlamosState: NMZIP Code: 87545 - Phone: 505 667 0666E-mail: grieggst@lanl.gov

2. DMR Preparer (Complete if DMR was prepared by someone other than the certifier):

First Name, Middle Initial, Last Name: Holly L. WheelerOrganization: EPC-CPPhone: 505 667 1312Ext. E-mail: hbenson@lanl.gov

D. Facility Information

1. Facility Name: Los Alamos National Laboratory

2. Facility Address:

Street/Location: Bikini Atoll Rd. SM30 K490

City: Los Alamos State: NM ZIP Code: 87545 -

County or Similar Government Subdivision: Los Alamos

E. Discharge Information

1. Identify monitoring period: ☒ Check here if proposing alternative monitoring periods due to irregular stormwater runoff. Identify alternative monitoring schedule and indicate for which alternative monitoring period you are reporting monitoring data:
- | | |
|--|--|
| <input type="checkbox"/> Quarter 1 (January 1 - March 31) | <input type="checkbox"/> Quarter 1: From <u>04</u> / <u>01</u> To <u>05</u> / <u>31</u> |
| <input type="checkbox"/> Quarter 2 (April 1 - June 30) | <input checked="" type="checkbox"/> Quarter 2: From <u>06</u> / <u>01</u> To <u>07</u> / <u>31</u> |
| <input type="checkbox"/> Quarter 3 (July 1 - September 30) | <input type="checkbox"/> Quarter 3: From <u>08</u> / <u>01</u> To <u>09</u> / <u>30</u> |
| <input type="checkbox"/> Quarter 4 (October 1 - December 31) | <input type="checkbox"/> Quarter 4: From <u>10</u> / <u>01</u> To <u>11</u> / <u>30</u> |
2. Are you required to monitor for cadmium, copper, chromium, lead, nickel, silver, or zinc in freshwater? ☒ Yes (Skip to 3) ☐ No (Skip to 4)
3. What is the hardness level of the receiving water? 57
4. Does your facility discharge into any saltwater receiving waters? ☐ Yes ☒ No

F. Monitoring Information										
Note: Make additional copies of this form as necessary.										
1. Nature of Discharge: <input checked="" type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.) <input type="checkbox"/> Snowmelt										
2.a. Duration of the rainfall event (hours): 1 2.b. Rainfall amount (inches): 0.3 2.c. Time since previous measurable storm event (days): 14										
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
005	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Iron, total	4450	ug/L		07/15/2016	<input type="checkbox"/>	<input type="checkbox"/>
006	<input checked="" type="checkbox"/> Substantially identical to outfall: 005	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

Rainfall duration = 0.67 hours. Rainfall amount = 0.31 inches.

005: The average concentration of total Iron is mathematically certain to exceed the benchmark value.

F. Monitoring Information										
Note: Make additional copies of this form as necessary.										
1. Nature of Discharge: <input checked="" type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.) <input type="checkbox"/> Snowmelt										
2.a. Duration of the rainfall event (hours): 1 2.b. Rainfall amount (inches): 0.3 2.c. Time since previous measurable storm event (days): 14										
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

Rainfall duration = 0.67 hours. Rainfall amount = 0.31 inches.

005: Adjusted Gross Alpha (I) - NODI 9. Aluminum, total recoverable (I) - NODI 9. Aroclor, total (I) - NODI B. Copper, dissolved (I) - NODI 9. Thallium, dissolved (I) - NODI B.

G. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name: Anthony R Grieggs

Title: EPC-CP Group Leader

Signature:  Date 09/22/2016

E-mail: grieggst@lanl.gov



A. Approval to User Paper DMR Form

1. Have you been granted a waiver from electronic reporting from EPA Regional Office*? ☒ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted: ☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.☒ The owner/operator has issues regarding available computer access or computer capability.Name of EPA staff person that granted the waiver: Everett SpencerDate approval obtained: 06/17/2016*** Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper DMR form. If you have not obtained a waiver, you must file this form electronically using the NetDMR at <http://www.epa.gov/netdmr/>**

B. Permit Information

1. NPDES ID: NMR053195

2. Reason(s) for Submission (Check all that apply):

☒ Submitting monitoring data (Fill in all Sections).☐ Reporting no discharge for all outfalls for this monitoring period (Fill in Sections A, B, C, D, E.1, and G).☐ Reporting that your site status has changed to inactive and unstaffed (Fill in Sections A, B, C, D, and F and include date of status change in comment field in Section F.4).☐ Reporting that your site status has changed to active (Fill in all Sections and include date of status change in comment field in Section F.4).☐ Reporting that no further pollutant reductions are achievable for all outfalls and for all pollutants via Part 6.2.1.2 of the MSGP (Fill in Sections A, B, C, D, and G).

C. Facility Operator Information

1. Operator Information

Operator Name: Los Alamos National Security, LLC

Mailing Address:

Street: P.O. Box 1663, MS K490City: Los AlamosState: NM ZIP Code: 87545 - Phone: 505 667 0666E-mail: grieggst@lanl.gov

2. DMR Preparer (Complete if DMR was prepared by someone other than the certifier):

First Name, Middle Initial, Last Name: Holly L. WheelerOrganization: EPC-CPPhone: 505 667 1312Ext. E-mail: hbenson@lanl.gov

D. Facility Information

1. Facility Name: Los Alamos National Laboratory

2. Facility Address:

Street/Location Bikini Atoll Rd. SM30 K490

City: Los Alamos State: NM ZIP Code: 87545 -

County or Similar Government Subdivision: Los Alamos

E. Discharge Information

1. Identify monitoring period: ☒ Check here if proposing alternative monitoring periods due to irregular stormwater runoff. Identify alternative monitoring schedule and indicate for which alternative monitoring period you are reporting monitoring data:
- | | |
|--|--|
| <input type="checkbox"/> Quarter 1 (January 1 - March 31) | <input type="checkbox"/> Quarter 1: From <u>04</u> / <u>01</u> To <u>05</u> / <u>31</u> |
| <input type="checkbox"/> Quarter 2 (April 1 - June 30) | <input checked="" type="checkbox"/> Quarter 2: From <u>06</u> / <u>01</u> To <u>07</u> / <u>31</u> |
| <input type="checkbox"/> Quarter 3 (July 1 - September 30) | <input type="checkbox"/> Quarter 3: From <u>08</u> / <u>01</u> To <u>09</u> / <u>30</u> |
| <input type="checkbox"/> Quarter 4 (October 1 - December 31) | <input type="checkbox"/> Quarter 4: From <u>10</u> / <u>01</u> To <u>11</u> / <u>30</u> |
2. Are you required to monitor for cadmium, copper, chromium, lead, nickel, silver, or zinc in freshwater? ☒ Yes (Skip to 3) ☐ No (Skip to 4)
3. What is the hardness level of the receiving water? 57
4. Does your facility discharge into any saltwater receiving waters? ☐ Yes ☒ No

F. Monitoring Information

Note: Make additional copies of this form as necessary.

 1. Nature of Discharge: ☒ Rainfall (Complete line items 2.a., 2.b., & 2.c.) ☐ Snowmelt

2.a. Duration of the rainfall event (hours): 1 2.b. Rainfall amount (inches): 0.2 2.c. Time since previous measurable storm event (days): 6

3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
020	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Aluminum, total recoverable	97.1	ug/L		07/21/2016	<input type="checkbox"/>	<input type="checkbox"/>
020	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aluminum, total recoverable	97.1	ug/L		07/21/2016	<input type="checkbox"/>	<input type="checkbox"/>
020	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Copper, dissolved	4.24	ug/L		07/21/2016	<input type="checkbox"/>	<input type="checkbox"/>
020	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Copper, dissolved	4.24	ug/L		07/21/2016	<input type="checkbox"/>	<input type="checkbox"/>
020	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Iron, total	128	ug/L		07/21/2016	<input type="checkbox"/>	<input type="checkbox"/>
020	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Nitrate plus Nitrite Nitrogen	0.443	mg/L		07/21/2016	<input type="checkbox"/>	<input type="checkbox"/>
020	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Zinc, dissolved	130	ug/L		07/21/2016	<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

Rainfall duration = 0.83 hours. Rainfall amount = 0.21 inches.

020: Adjusted Gross Alpha (I) - NODI B. Aroclor, total (I) - NODI B. Thallium, dissolved (I) - NODI B.

F. Monitoring Information										
Note: Make additional copies of this form as necessary.										
1. Nature of Discharge: <input checked="" type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.) <input type="checkbox"/> Snowmelt										
2.a. Duration of the rainfall event (hours): 1 2.b. Rainfall amount (inches): 0.4 2.c. Time since previous measurable storm event (days): 81										
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
031	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Adjusted Gross Alpha	38.9	pCi/L		07/21/2016	<input type="checkbox"/>	<input type="checkbox"/>
031	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aluminum, total recoverable	2990	ug/L		07/21/2016	<input type="checkbox"/>	<input type="checkbox"/>
031	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aroclor, total	ND		0.172 ug/L	07/21/2016	<input type="checkbox"/>	<input type="checkbox"/>
031	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Copper, dissolved	11.3	ug/L		07/21/2016	<input type="checkbox"/>	<input type="checkbox"/>
030	<input checked="" type="checkbox"/> Substantially identical to outfall: 031	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

Rainfall duration = 0.75 hours. Rainfall amount = 0.36 inches.

031: The impaired water pollutant Adjusted Gross Alpha exceeds the New Mexico water quality standard. The impaired water pollutant total recoverable Aluminum exceeds the New Mexico water quality standard. The impaired water pollutant total Aroclor was not detected in stormwater discharge from this outfall. Therefore, annual monitoring for total Aroclor will be discontinued per Part 6.2.4.1. The impaired water pollutant dissolved Copper exceeds the New Mexico water quality standard.

F. Monitoring Information										
Note: Make additional copies of this form as necessary.										
1. Nature of Discharge: <input checked="" type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.) <input type="checkbox"/> Snowmelt										
2.a. Duration of the rainfall event (hours): 0 2.b. Rainfall amount (inches): 0.1 2.c. Time since previous measurable storm event (days): 3										
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
047	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Adjusted Gross Alpha	17.5	pCi/L		07/21/2016	<input type="checkbox"/>	<input type="checkbox"/>
046	<input checked="" type="checkbox"/> Substantially identical to outfall: 047	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
045	<input checked="" type="checkbox"/> Substantially identical to outfall: 047	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
048	<input checked="" type="checkbox"/> Substantially identical to outfall: 047	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
044	<input checked="" type="checkbox"/> Substantially identical to outfall: 047	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)
 Rainfall duration = 0.50 hours. Rainfall amount = 0.09 inches.
 047: The impaired water pollutant Adjusted Gross Alpha exceeds the New Mexico water quality standard.

F. Monitoring Information										
Note: Make additional copies of this form as necessary.										
1. Nature of Discharge: <input checked="" type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.) <input type="checkbox"/> Snowmelt										
2.a. Duration of the rainfall event (hours): 0 2.b. Rainfall amount (inches): 0.1 2.c. Time since previous measurable storm event (days): 3										
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

Rainfall duration = 0.50 hours. Rainfall amount = 0.09 inches.

047: Aluminum, total recoverable (I) - NODI 9. Aroclor, total (I) - NODI B.

G. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name: Anthony R Grieggs

Title: EPC-CP Group Leader

Signature:  Date 09/22/2016

E-mail: grieggst@lanl.gov



A. Approval to User Paper DMR Form

1. Have you been granted a waiver from electronic reporting from EPA Regional Office*? ☒ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted: ☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.☒ The owner/operator has issues regarding available computer access or computer capability.Name of EPA staff person that granted the waiver: Everett SpencerDate approval obtained: 06/17/2016*** Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper DMR form. If you have not obtained a waiver, you must file this form electronically using the NetDMR at <http://www.epa.gov/netdmr/>**

B. Permit Information

1. NPDES ID: NMR053195

2. Reason(s) for Submission (Check all that apply):

☒ Submitting monitoring data (Fill in all Sections).☐ Reporting no discharge for all outfalls for this monitoring period (Fill in Sections A, B, C, D, E.1, and G).☐ Reporting that your site status has changed to inactive and unstaffed (Fill in Sections A, B, C, D, and F and include date of status change in comment field in Section F.4).☐ Reporting that your site status has changed to active (Fill in all Sections and include date of status change in comment field in Section F.4).☐ Reporting that no further pollutant reductions are achievable for all outfalls and for all pollutants via Part 6.2.1.2 of the MSGP (Fill in Sections A, B, C, D, and G).

C. Facility Operator Information

1. Operator Information

Operator Name: Los Alamos National Security, LLC

Mailing Address:

Street: P.O. Box 1663, MS K490City: Los AlamosState: NM ZIP Code: 87545 - Phone: 505 667 0666E-mail: grieggst@lanl.gov

2. DMR Preparer (Complete if DMR was prepared by someone other than the certifier):

First Name, Middle Initial, Last Name: Holly L. WheelerOrganization: EPC-CPPhone: 505 667 1312Ext. E-mail: hbenson@lanl.gov

D. Facility Information

1. Facility Name: Los Alamos National Laboratory

2. Facility Address:

Street/Location Bikini Atoll Rd. SM30 K490

City: Los Alamos State: NM ZIP Code: 87545 -

County or Similar Government Subdivision: Los Alamos

E. Discharge Information

1. Identify monitoring period: ☒ Check here if proposing alternative monitoring periods due to irregular stormwater runoff. Identify alternative monitoring schedule and indicate for which alternative monitoring period you are reporting monitoring data:
- | | |
|--|--|
| <input type="checkbox"/> Quarter 1 (January 1 - March 31) | <input type="checkbox"/> Quarter 1: From <u>04</u> / <u>01</u> To <u>05</u> / <u>31</u> |
| <input type="checkbox"/> Quarter 2 (April 1 - June 30) | <input checked="" type="checkbox"/> Quarter 2: From <u>06</u> / <u>01</u> To <u>07</u> / <u>31</u> |
| <input type="checkbox"/> Quarter 3 (July 1 - September 30) | <input type="checkbox"/> Quarter 3: From <u>08</u> / <u>01</u> To <u>09</u> / <u>30</u> |
| <input type="checkbox"/> Quarter 4 (October 1 - December 31) | <input type="checkbox"/> Quarter 4: From <u>10</u> / <u>01</u> To <u>11</u> / <u>30</u> |
2. Are you required to monitor for cadmium, copper, chromium, lead, nickel, silver, or zinc in freshwater? ☒ Yes (Skip to 3) ☐ No (Skip to 4)
3. What is the hardness level of the receiving water? 57
4. Does your facility discharge into any saltwater receiving waters? ☐ Yes ☒ No

F. Monitoring Information

Note: Make additional copies of this form as necessary.

1. Nature of Discharge: ☒ Rainfall (Complete line items 2.a., 2.b., & 2.c.) ☐ Snowmelt

2.a. Duration of the rainfall event (hours): 1 2.b. Rainfall amount (inches): 0.4 2.c. Time since previous measurable storm event (days): 4

3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
047	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Arsenic, dissolved	ND		1.70 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
047	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Cadmium, dissolved	BQL		1.00 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
047	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Lead, dissolved	BQL		2.00 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
047	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Silver, dissolved	ND		0.200 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
046	<input checked="" type="checkbox"/> Substantially identical to outfall: 047	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
045	<input checked="" type="checkbox"/> Substantially identical to outfall: 047	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
048	<input checked="" type="checkbox"/> Substantially identical to outfall: 047	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
044	<input checked="" type="checkbox"/> Substantially identical to outfall: 047	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

Rainfall duration = 1.00 hours. Rainfall amount = 0.38 inches.

F. Monitoring Information										
Note: Make additional copies of this form as necessary.										
1. Nature of Discharge: <input checked="" type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.) <input type="checkbox"/> Snowmelt										
2.a. Duration of the rainfall event (hours): 1 2.b. Rainfall amount (inches): 0.4 2.c. Time since previous measurable storm event (days): 4										
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

Rainfall duration = 1.00 hours. Rainfall amount = 0.38 inches.

047: Adjusted Gross Alpha (I) - NODI 9. Aluminum, total recoverable (I) - NODI 9. Aroclor, total (I) - NODI B.

F. Monitoring Information										
Note: Make additional copies of this form as necessary.										
1. Nature of Discharge: <input checked="" type="checkbox"/> Rainfall (Complete line items 2.a., 2.b., & 2.c.) <input type="checkbox"/> Snowmelt										
2.a. Duration of the rainfall event (hours): 1 2.b. Rainfall amount (inches): 0.4 2.c. Time since previous measurable storm event (days): 24										
3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
049	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aluminum, total recoverable	4670	ug/L		07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
049	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aroclor, total	ND		0.0351 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)
Rainfall duration = 1.00 hours. Rainfall amount = 0.38 inches.

049: The impaired water pollutant total recoverable Aluminum exceeds the New Mexico water quality standard. The impaired water pollutant total Aroclor was not detected in stormwater discharge from this outfall. Therefore, annual monitoring for total Aroclor will be discontinued per Part 6.2.4.1.

F. Monitoring Information

Note: Make additional copies of this form as necessary.

1. Nature of Discharge: ☒ Rainfall (Complete line items 2.a., 2.b., & 2.c.) ☐ Snowmelt

2.a. Duration of the rainfall event (hours): 1 2.b. Rainfall amount (inches): 0.2 2.c. Time since previous measurable storm event (days): 86

3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
051	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aluminum, total recoverable	14100	ug/L		07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
051	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Ammonia, total	0.242	mg/L		07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
051	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aroclor, total	ND		0.0354 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
051	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Arsenic, dissolved	ND		1.70 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
051	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Cadmium, dissolved	BQL		1.00 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
051	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Chemical Oxygen Demand (COD)	407	mg/L		07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
051	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Cyanide, total	ND		0.00167 mg/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
051	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Lead, dissolved	BQL		2.00 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>

051	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Magnesium, total	8.79	mg/L		07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
051	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Mercury, total	ND		0.067 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
051	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Selenium, total	ND		1.50 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
051	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Silver, dissolved	ND		0.200 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
052	<input checked="" type="checkbox"/> Substantially identical to outfall: 051	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

Rainfall duration = 0.75 hours. Rainfall amount = 0.24 inches.

051: The impaired water pollutant total recoverable Aluminum exceeds the New Mexico water quality standard. The impaired water pollutant total Aroclor was not detected in stormwater discharge from this outfall. Therefore, annual monitoring for total Aroclor will be discontinued per Part 6.2.4.1. The average concentration of total Magnesium is mathematically certain to exceed the benchmark value.

F. Monitoring Information

Note: Make additional copies of this form as necessary.

1. Nature of Discharge: ☒ Rainfall (Complete line items 2.a., 2.b., & 2.c.) ☐ Snowmelt

2.a. Duration of the rainfall event (hours): 1 2.b. Rainfall amount (inches): 0.2 2.c. Time since previous measurable storm event (days): 278

3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
072	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	I	Aluminum, total recoverable	836	ug/L		07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
072	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Ammonia, total	4.07	mg/L		07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
072	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Arsenic, dissolved	BQL		5.00 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
072	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Cadmium, dissolved	2.28	ug/L		07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
072	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Chemical Oxygen Demand (COD)	1220	mg/L		07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
072	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Cyanide, total	BQL		0.005 mg/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
072	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Lead, dissolved	6.69	ug/L		07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
072	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Magnesium, total	6.9	mg/L		07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>

072	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Mercury, total	BQL		0.200 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
072	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Selenium, total	BQL		5.00 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
072	<input type="checkbox"/> Substantially identical to outfall:	<input type="checkbox"/>	QBM	Silver, dissolved	ND		0.200 ug/L	07/25/2016	<input type="checkbox"/>	<input type="checkbox"/>
070	<input checked="" type="checkbox"/> Substantially identical to outfall: 072	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
071	<input checked="" type="checkbox"/> Substantially identical to outfall: 072	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

Rainfall duration = 0.75 hours. Rainfall amount = 0.24 inches.

072: The average concentration of Chemical Oxygen Demand is mathematically certain to exceed the benchmark value. The average concentration of total Magnesium is mathematically certain to exceed the benchmark value.

G. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name: Anthony R Grieggs

Title: EPC-CP Group Leader

Signature:  Date 09/22/2016

E-mail: grieggst@lanl.gov

ATTACHMENT I: SOP AND MAINTENANCE PROCEDURES

Number	Title
EWMO-DOP-20085	EWMO Industrial Truck And Equipment Refueling and Recharging
EWMO-DOP-20086	EWMO Division Specific Forklift and Drum Handler Equipment Operations
EWMO-RM-AOP-20201	Discovery of An Airborne, Liquid and/or Solid Material Release or Spill
EWMO-RM-AOP-20203	Severe Weather
EWMO-RM-AOP-20204	Waste Container Questionable Integrity
EWMO-RM-ERP-20200	EWMO Area Emergency Response
EWMO-BEP-20048	EWMO Division Building Emergency Plan
EWMO-PLAN-20036	EWMO Snow Removal Plan
EM-PLAN-20191	Seasonal Facility Preservation Plan
EP-DIV-PLAN-20195	F-SMA-2 Storm Water Controls
WO 00512757-01	IWD TA-50-54 All Labor Support To Spray Micro Blaze
DESHS-EWMO-WMC-IWD	Waste Management Coordinator Daily Activities
P409	LANL Waste Management (Tools)
P101-14	Chemical Management

EWMO Industrial Truck and Equipment Refueling and Recharging

Effective Date: 11/17/2017

Next Review Date: 11/17/2020

Hazard Class: ☐ Low ☒ Moderate ☐ High/Complex
Usage Mode: ☐ Reference ☐ UET ☒ Both UET & Reference

The Responsible Manager has determined that the following organizations' review is required for initial procedure release as well as subsequent major revisions. Review documentation is contained in the Document History File.

Engineering	Quality Assurance
Fire Protection Engineer	Radiological Protection
Industrial Hygiene and Safety	Shift Operation Supervisor
Shift Operations Supervisor	Safety Basis
Operations Manager	WD-SRS Waste Operator
Environmental Compliance Program	Criticality Safety

Classification Review: ☒ Unclassified ☐ UCNi ☐ Classified

Teri Tingey / 200975 / /s/ Teri Tingey / 11/6/2017

Name (print) Z# Signature Date

Responsible Manager, Facility Operations Director

Stephanie Griego / 140892 / /s/ Stephanie Griego / 11/7/2017

Name (print) Z# Signature Date

Working Copy / Information Only (circle one)

Initials / Date: _____ / _____

This document fully satisfies the requirements of P300, Integrated Work Management, in order to systematically describe the work activity, the associated hazards, and the controls that **MUST** be employed to mitigate the risks.

**EWMO Industrial Truck and
Equipment Refueling and Recharging**

Document No.: EWMO-DOP-20085
Revision: 3
Effective Date: 11/17/2017
Page: 2 of 33

Reference

REVISION HISTORY

A comprehensive log of changes made to this procedure, including superseded documents and complete revision descriptions, is accessible through the Electronic Document Management System (EDMS). The following log is abridged to one page and includes only the latest revisions.

Document No./Revision No.	Issue Date	Action	Description
EP-AREAG-FO-DOP-0603, R.2	Approved for Training	Minor Revision	Update recharging area requirements, references, and editorial updates.
EP-AREAG-FO-DOP-0603, R.3	April 21, 2010	Major Revision	This revision contains revised refueling area requirements. Rev bar are omitted total rewrite. Hazards from preexisting IWD have been incorporated into this procedure through Precautions, limitations, Warnings, and Cautions.
EP-DIV-DOP-20085, R.0	February 12, 2013	Major Revision	This revision contains additional recharging area requirements. Added RANT and WCRRF requirements for electric forklifts. Procedure elevated to a Division level. Added additional attachment for establishing designated charging areas. Revised statement that operators are trained in accordance with LANL P101-4, Forklifts and Powered Industrial Trucks. Deleted Appendix 2 and renumbered remaining Appendices. Reformatted to new procedure template and new number. This procedure will supersede EP-AREAG-FO-DOP-0603.
EP-DIV-DOP-20085, R.1	May 14, 2013	Major Revision	Revise procedure to remove the instructions for Emergency Refueling in Area G. Make editorial corrections as necessary. This revision does not introduce any new hazards.
EP-DIV-DOP-20085, R.2	September 30, 2013	Major Revision	Revise procedure to incorporate requirements of ABD-WFM-002 Rev 2.0 Technical Safety Requirements (TSRs) for Technical Area 54, Area G. No new hazards are introduced by this revision. This revision is a Total Rewrite - Revision bars are not included.
EWMO-DOP-20085, R.0	August 10, 2016	Major Revision	Revised procedure in accordance with DOE/IG-0922 and EP-AP-10007. Added bullet for petroleum contaminated soil. Removed Section 6.1, Establishment of a Refueling Area and referenced EP-AREAG-FO-AP-1174. Updated Attachments.
EWMO-DOP-20085, R.1	November 21, 2016	Major Revision	Revised procedure to implement changes associated with ABD-WFM-006, R2.4 implementation.
EWMO-DOP-20085, R.2	April 13, 2017	Major Revision	Updated SAC 5.10.1.1 and SAC 5.10.5 requirements associated with R2.5.2 of ABD-WFM-006.
EWMO-DOP-20085, R.3	November 17, 2017	Major Revision	Revise procedure to implement changes in WCRRF TSRs Rev. 2.6. Updated WCRRF SAC 5.10.1.1 and deleted WCRRF SAC 5.10.5, RNS-specific forklift restrictions. Updated Revision History page. Updated (\$) use bullet in Section 3.1. Deleted (\$)’s on requirements as necessary according to Engineering criteria. Updated references and made minor editorial changes.

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1. PURPOSE

The procedure contains instructions and requirements for the proper and safe refueling of industrial trucks and equipment (e.g., earth movers, high and low-lift industrial trucks, All Terrain Vehicles, generators, aerial lifts, and small combustion engine equipment), removal and replacement of portable liquefied petroleum (LP) tanks on forklifts, and the recharging process for electric industrial trucks (high-lift and low-lift) in Environmental and Waste Management Operations (EWMO) facilities including 1) Radioassay and Nondestructive Testing (RANT) Facility, 2) Waste Characterization, Reduction, and Repackaging Facility (WCRRF), and 3) Technical Area (TA) 54 Areas G, L, J, and Administrative areas.

2. SCOPE

This procedure applies to personnel who supervise, schedule, and perform refueling, LP tank removal, replacement, and recharging evolutions.

This procedure applies to industrial trucks and equipment, regardless of size or application, designed with an internal combustion engine using diesel, gasoline, or LP. In addition, this procedure establishes the charging requirements for electrical industrial trucks (high-lift, low-lift) powered with industrial batteries. This procedure does not cover the requirements for recharging the electric trailer jockey in the RANT facility.

This procedure ensures that refueling and recharging of vehicles is performed in designated refueling and recharging locations in accordance with P101-4, Forklifts and Powered Industrial Trucks, and the following Technical Safety Requirements (TSRs):

- ABD-WFM-002, Technical Safety Requirements (TSRs) for Technical Area 54, Area G
- ABD-WFM-006, Technical Safety Requirements (TSRs) for Waste Characterization, Reduction, and Repackaging Facility (WCRRF)
- ABD-WFM-008, Technical Safety Requirements (TSRs) for the Radioassay and Nondestructive Testing (RANT) Site

3. PRECAUTIONS AND LIMITATIONS

3.1 General Task Hazards and Controls

- When a worker observes an unsafe condition or act that may pose an imminent danger or other safety concern/hazard, the worker has the authority and responsibility to inform the Person-In-Charge (PIC) and the worker engaged in the work and initiate a pause and/or stop work based on the risk posed to the individual, the employees, the environment, or the facility in accordance with P101-18, Procedure for Pause/Stop Work.
- General site hazards and their controls for the applicable facility are provided in EWMO-AP-20253, EWMO General Site Hazards and Controls. Personnel performing activities associated with this procedure shall meet facility access criteria, recognize the associated site hazards, and uphold the established controls.
- The PIC shall be notified if this procedure cannot be performed as written.
- Procedure steps marked with the (\$) symbol implement Technical Safety Requirements (TSRs) which failure to complete or meet could cause a TSR violation as described in Section 5.3.3 of the TSRs. These steps may not be changed without the approval of the Engineering Manager.
- Refueling shall not be conducted during inclement weather (lightning or thunder storm).
- When freezing temperatures exist outdoors, precautions should be taken (proper personal protective equipment, gloves) to protect hands from being exposed to steel surfaces and/or when handling LP containers.
- Refueling personnel may respond to incipient stage fire associated with refueling activities if trained and competent in performing the task.
- All personnel operating power industrial trucks and equipment, as well as forklift operations, must be trained in accordance with P101-4, Forklifts and Powered Industrial Trucks, and EWMO-DOP-20086, EWMO Division Specific Forklift and Drum Handler Equipment Operations.

3.1 General Task Hazards and Controls (continued)

- When refueling is conducted with liquid fuels (e.g., gas, diesel), minimize static conditions by ensuring vehicle is grounded and stay in contact with dispensing nozzles, especially when atmospheric conditions are dry and cool. Personnel must touch vehicle frame metal to eliminate potential static charge prior to handling and dispensing fuel from nozzle. If a tingling sensation is detected (e.g., the hair begins to stand on one's arms), then stop dispensing and leave the nozzle inside the vapor space for at least 30 seconds after the fuel flow stops.
- The process of grounding the refueling vehicle should be conducted by the Maintenance Personnel acting as the Refueling Personnel. Grounding of the refueling vehicle should be conducted in accordance with the applicable Standing Order.
- A catch pan should be used during the refueling of gas or diesel engines.
- If during refueling operations a petroleum by-product (e.g., oil, gas, diesel, hydraulic fluid, etc.) leaks or is spilled onto the soil, immediately notify both the Operation Center and the Deployed Environmental Professional. The contaminated soil must be cleaned up, containerized, and characterized in accordance with regulatory requirements for New Mexico Special Waste.

3.2 TA-54 Area G Specific Requirements

- Periodic inspection/maintenance of vehicles/equipment shall be current. [Administrative Control (AC) 5.6.6(1)]
- The refueling vehicle (gas and diesel) is limited to a 500 gallon capacity of fuel in Zone 4 (see Appendix A, Depiction of Zones and Designated Refueling Location in Zone 4). [derived from Limiting Condition of Operation (LCO) 3.5.1]
- Establishment or modification of refueling locations is performed in accordance with AREAG-FO-AP-1174, TA-54 Area G Establishing Defined Areas. Operational acceptance of the refueling location is performed in accordance with AREAG-FO-DOP-1179, TA-54 Area G Operational Acceptance of Defined Areas and Refueling Locations.

3.2 TA-54 Area G Specific Requirements (continued)

NOTE *LCO 3.5.1 is not applicable to refueling locations involving only propane cylinders. The LCO separation distance does not apply to the hose between the refueling vehicle and the vehicle/equipment undergoing refueling or to refueling vehicles located downhill from the RETRIEVAL AREAS.*

- Minimum Refueling Separation Distances between vehicle/equipment refueling locations and DEFINED AREAs SHALL meet the following criteria: [LCO 3.5.1]

Capacity of Refueling Vehicle at Refueling Location	Minimum Refueling Separation Distance to DEFINED AREA with non-metal waste containers (ft)	Minimum Refueling Separation Distance to DEFINED AREA with only METAL CONTAINERS (ft)
> 7 gal. and ≤100 gal.	43	22
> 100 gal. and ≤ 500 gal.	71	45
> 500 gal. and ≤ 5,000 gal.	203	141

LOW ACTIVITY AREAS are excluded from above.

- Vehicles/equipment in transit within Area G with greater than 100 gallons of flammable liquid SHALL be escorted and follow a designated route. [SAC 5.7.6]
- AREAG-FO-AP-1190, Access Control for TA-54 Areas G, L, and J, provides the designated route for vehicles/equipment in transit within Area G with greater than 100 gallons of flammable liquid.
- The refueling of TRANSPORTATION VEHICLES is prohibited when material at risk (MAR) is on the TRANSPORTATION VEHICLE. The control does not apply to propane-fueled forklifts. [SAC 5.7.2]
- No refueling shall be conducted inside domes, buildings, or structures.
- During refueling, the engine shall be stopped and the operator shall not occupy the industrial truck or equipment.
- Open flame or ignition source is prohibited at a minimum of 25 feet (ft) from any refueling locations.
- Personnel conducting refueling must have readily available an approved fire extinguisher that has passed current inspection.

3.3 TA-54 West RANT Specific Requirements

- A refueling service truck visits the site on a routine schedule to supply diesel fuel. Service to vehicles requiring diesel fuel is performed away from facilities and container storage areas.
- No propane is used at or delivered to the RANT Facility.
- Refueling is prohibited within 30 ft of Building TA-54-38, CONTAINER STORAGE AREA, and MLU operations. This element of fire protection program applies only during OPERATION and WARM STANDBY MODE. [AC 5.6.5]

NOTE *The following vehicles are described in SAC 5.7.3.B: “Exceptions: (1) Emergency vehicles in the case of any emergency; (2) Equipment with less than 5 gal. of fuel may be used for grounds maintenance and for snow and ice removal; (3) Vehicles or equipment to support non-emergency, off-normal conditions addressed in LCO 3.3.”*

- Only electric powered forklifts are allowed at the RANT Site when transuranic waste is present outside of sealed Type B containers. An exception to this control is allowed for vehicles or equipment necessary to support non-emergency, off-normal conditions addressed in LCO 3.3 and for those vehicles described in SAC 5.7.3.B. [SAC 5.7.1.A]
- Propane, gasoline, or diesel fueled vehicles SHALL not be used inside Building TA-54-38 except when necessary to put the facility in COLD STANDBY. [LCO 3.3.3]

3.4 WCRRF Specific Requirements

- Propane, gasoline, or diesel-fueled vehicles shall not be used anywhere at the WCRRF when INVENTORY is present at the WCRRF. Exceptions: (1) Emergency vehicles in the case of any emergency. (2) Equipment with less than 5 gallons of fuel may be used for grounds maintenance and for snow and ice removal when INVENTORY is not present in the WCRRF yard (All INVENTORY is within BUILDING TA-50-0069). (3) Transportation vehicle for the delivery and pickup of WASTE CONTAINERS and LLW SHALL be allowed at the WCRRF. [SAC 5.10.1.1]
- Electric forklift recharging takes place outside the building.

3.5 Gasoline and Diesel-Powered Vehicles and Equipment (TA-54 Areas G, L, J, Admin only)

- Fuel tanks shall not be overfilled to prevent spills or fuel expansion in the tank due to warmer temperature.
- Refueling locations shall be established to ensure a minimum of 20 ft from all other combustible materials.
- Cell phones shall be turned off and shall not be used during any refueling operations.

3.6 LP Powered Vehicles and Equipment (TA-54 Areas G, L, J, Admin only)

- LP tanks, that are removable U.S. Department of Transportation-type LP tanks, shall not be refilled by a bulk cylinder truck within the boundary of TA-54, Area G or L. However, exchange of the tanks may take place at designated LP Tanks Exchange and Storage Locations.

NOTE *Appendix B provides the TA-54 Area G map displaying LP Tanks Exchange and Storage Locations.*

- Compressed gas cylinders in storage, in TRANSPORT, or in use will be secured. [AC 5.6.11(9)]
- Compressed gas cylinders will be stored in designated locations when not in use. [AC 5.6.11(9)]
- Compressed gas cylinders in storage will be closed with the valve cap secured. [AC 5.6.11(9)]
- All full reserve and empty LP tanks shall be stored in UL-listed cabinets in one of the following locations:
 - one cabinet, at the TA-54 Area G gate, just north of Building 375
 - one cabinet, at TA-54 Area G Pad 10, a minimum of 20 ft from any building
 - two cabinets, each at TA-54 Area G, a minimum of 20 ft east of Building 8 and 20 ft setback from road
- LP Tank Exchange and Storage Locations shall be equipped with at least one approved portable fire extinguisher having a minimum capacity of 20 pounds (lbs) of dry chemical with A-B-C rating. The required fire extinguisher shall be located no more than 50 ft (15.25 m) from the storage location.

3.6 LP Powered Vehicles and Equipment (TA-54 Areas G, L, J, Admin only) (continued)

- LP tanks shall not be exchanged within any structure unless authorized by the Shift Operations Manager.
- LP tanks shall not be exchanged near sources of heat or open flame or similar sources of ignition or near open pits, underground entrances, shafts, or similar areas.
- Leak tests shall be conducted on LP service valves and LP connection coupler using a leak detection solution when exchanging LP tanks.
- LP forklift tanks weigh 54 lbs and; therefore, fall under the requirements of EP-DIV-POLICY-20057, Health and Safety Policy - Manual Movement. This procedure provides all the necessary steps, warnings, precautions, and approvals for proper and safe handling of LP cylinders and; therefore, no additional approvals and documentation are required for replacing the LP cylinders on forklifts in TA-54 Area G.

3.7 Battery Powered Vehicles and Equipment

- Only trained and authorized personnel shall replace industrial batteries.
- Operators shall contact the applicable Operations Center to obtain approval to relocate any forklift battery charging equipment.
- Electric-powered vehicles/equipment are charged in locations where hydrogen gas does not accumulate (e.g., domes, ventilated enclosures, outdoors). [ABD-WFM-002, AC 5.6.9(2)]
- Appendix C and D provide the locations of established forklift electric charging areas for RANT and WCRRF, respectively.
- Batteries shall not be removed within any facility or structure.
- Wherever on-board equipment chargers are used, charging shall be accomplished in locations taking into account the electrical requirements of the charger and designated locations.
- When charging batteries, the battery vent caps shall not be removed.

3.7 Battery Powered Vehicles and Equipment (continued)

- Industrial trucks shall be properly parked, parking brake shall be applied, and key placed in the off position.
- If equipment is not equipped with a parking brake system, wheel chocks are required and shall be used.
- The battery compartment covers shall be opened to dissipate gas and heat.
- Open flame or spark is prohibited at battery charging locations.
- Metal objects (i.e., tools) shall be kept away from the battery terminals to prevent arcing or sparking.
- Metal objects such as personal watches and rings shall be kept away from uncovered batteries.
- “No Smoking” signs are required in locations where battery charging is being conducted.

**3.8 Hybrid (LP and Gasoline) Powered Industrial Trucks and Equipment
(TA-54 Areas G, L, J, Admin only)**

- Hybrid powered industrial trucks are limited to LP in Area G.
- Equipment LP bottle change out will be performed at designated LP Tank Exchange and Storage Locations.

4. PREREQUISITE ACTIONS

NOTE *The listed prerequisite actions may be completed in any order.*

4.1 Planning and Coordination

PIC

- [1] **ENSURE** that the current revision of this document is available and **IDENTIFY** the document as a Working Copy on the Title Page.
- [2] **ENSURE** that the performance of this procedure is included in the facility Plan of the Day meeting.
- [3] **ENSURE** that a Radiological Work Permit for the planned activity has been issued.
- [4] **ENSURE** that a pre-job briefing is conducted for personnel involved in the performance of this procedure per EWMO-AP-0112, EWMO Pre-Job Briefings.

Operations Center

- [5] **NOTIFY** personnel (e.g., public announcement system, e pagers, two-way radios, etc.) when and where refueling activity is being conducted.

4.2 Materials and Equipment

Operator

- [1] **IF** performing Section 5.2, Industrial Truck (Forklift) LP Tank Removal and Replacement (TA-54 Areas G, L, J, Admin Only),
 THEN ENSURE that a leak test solution is available, as required.

5. PERFORMANCE—INDUSTRIAL TRUCK AND EQUIPMENT REFUELING AND RECHARGING

5.1 Refueling (TA-54 Areas G, L, J, Admin only)

This sub-section is stand-alone and may performed independently or in conjunction with other Performance sections.

WARNING

Operators are prohibited from having vehicles refueled while handling and/or transporting MAR to prevent the potential of a fire or explosion, which may cause an uncontrolled release of radiological materials to the personnel and to the environment.

Operator

- [1] **DETERMINE** whether vehicle requires fuel by observing fuel gauge.
- [2] **OPERATE** vehicle to designated refueling location.
- [3] **IF** waiting to receive fuel,
THEN TURN-OFF vehicle until directed by refueling attendant to proceed to the immediate refueling location.

WARNING

Operators are prohibited from using cell phones and are required to shut-down cell phones during refueling. Failure to comply with this requirement could lead to serious personnel injury.

- [4] **WHEN** at the immediate fueling location,
THEN PERFORM a complete shutdown of the vehicle.
- [5] **EXIT** the vehicle during the fueling process.

Refueling Personnel

- [6] **CHECK-IN** at the TA-54 Operations Center to receive locations approved for designated refueling for the vehicle/equipment type.
- [7] **(\$)** **IF** the refueling vehicle has an inventory of greater than 100 gallons of fuel,
THEN OBTAIN an escort and follow a designated route per AREAG-FO-AP-1190.
[SAC 5.7.6]

5.1 Refueling (TA-54 Areas G, L, J, Admin only) (continued)

- [8] **DISCUSS** any additional requirements before performing any refueling activities with the TA-54 Operation Center.
- [9] **ENSURE** the following before refueling:
- Minimum Refueling Separation Distances per Table 5.1-1 below are met. [LCO 3.5.1]
 - (\$) With the exception of propane-fueled forklifts, TRANSPORTATION VEHICLES have **no** MAR in/on the vehicle. [SAC 5.7.2]
 - Fire extinguisher is readily available (on service truck or within 50 ft of designated refueling location).
 - Refueling location shall be posted “Refueling Location” during the refueling process.
 - Fuel spill tray is placed under the fueling connection point.
 - “No Smoking” signs are posted in designated refueling locations.

NOTE 1 *Normal refueling activities involve a refueling truck with a capacity of 500 gallons.*

NOTE 2 *LCO 3.5.1 is not applicable to refueling locations involving only propane cylinders. The LCO separation distance is not applicable to the hose between the refueling vehicle and the vehicle/equipment undergoing refueling or to refueling vehicles located downhill from the RETRIEVAL AREAS.*

Table 5.1-1, Minimum Refueling Separation Distances [LCO 3.5.1]

Capacity of Refueling Vehicle at Refueling Location	Minimum Refueling Separation Distance to DEFINED AREA with non-metal waste containers (ft)	Minimum Refueling Separation Distance to DEFINED AREA with only METAL CONTAINERS (ft)
> 7 gal. and ≤ 100 gal.	43	22
> 100 gal. and ≤ 500 gal.	71	45
> 500 gal. and ≤ 5,000 gal.	203	141

5.1 Refueling (TA-54 Areas G, L, J, Admin only) (continued)

NOTE *The process of grounding the vehicle is performed according to the Maintenance Integrated Work Document, Maintenance Personnel Training, and the applicable Standing Order.*

[10] **ENSURE** that the refueling vehicle is grounded.

[11] **NOTIFY** all equipment operators to properly park, shut-down vehicle, and exit the vehicle during refueling.

[12] **DETERMINE** the type of fuel the vehicle requires.

WARNING

- 1. Fuel tanks shall not be overfilled to prevent spills or fuel expansion in the tank during warmer temperatures.**
- 2. Personnel must touch the vehicle frame metal in order to eliminate potential static charge before handling and dispensing fuel from nozzle. Failure to comply with this practice could increase the potential for static conditions and ignition or explosion of fuel vapor.**

[13] **REFUEL** the vehicle.

**5.2 Industrial Truck (Forklift) LP Tank Removal and Replacement (TA-54 Areas G, L, J,
Admin only)**

This sub-section is stand-alone and may be performed independently or in conjunction with other Performance Sections.

Operator

- [1] **IF** the LP fuel gauge indicator displays less than 25%,
 THEN OPERATE the vehicle to a designated LP tank exchange and storage location
 (see Appendix B, TA-54 G Designated LP Tank Exchange and Storage Locations).
- [2] **VERIFY** that at least one approved portable fire extinguisher having a minimum
 capacity of 20 lbs of dry chemical with an A-B-C rating is present and operable no
 further than 50 ft (15.25 m) from the LP tank exchange and storage location.
- [3] **LOWER** the forks to the ground with the tines tilted forward.
- [4] **TURN** the ignition switch key to the OFF position.
- [5] **EXIT** the operator's cab and **PERFORM** one of the following:
 - Apply the vehicle parking or hand brake
 - Chock wheels to prevent inadvertent movement

WARNING

Personnel shall wear leather gloves while performing LP tank exchange to prevent injury to hands.

CAUTION

Do not over tighten the service valve once seated. Failure to comply with this requirement will impose excessive wear on the valve seal.

- [6] **TURN** the service valve on the LP tank clockwise to shutoff the LP supply (i.e., turn
 until valve is seated and will not turn anymore).
- [7] **ENTER** the equipment operator cab and **START** the vehicle to purge and depressurize
 LP fuel line.

5.2 Industrial Truck (Forklift) LP Tank Removal and Replacement (TA-54 Areas G, L, J, Admin only) (continued)

- [8] **TURN** the ignition switch to the OFF position.
- [9] **TURN** the supply line coupler counter-clockwise by hand in order to loosen and remove the supply line from LP tank.
- [10] **INSPECT** the rubber O-ring seal inside the coupler end for cracks and damage.
- [11] **IF** the rubber seal is damaged,
 THEN CONTACT the PIC for guidance.

NOTE *Some trucks are equipped with a cradle swivel device that allows swinging the tank to the edge of fork truck for easy removal and replacement.*

- [12] **REMOVE** the LP fastening strap securing the LP tank.
- [13] **IF** equipped with a swivel cradle,
 THEN UNLATCH the gate latch and swing the cradle until the LP tank is parallel with forklift.
- [14] **LIFT** and **REMOVE** the empty LP tank and **PLACE** the LP tank into the designated LP tank exchange and storage location.

5.2 Industrial Truck (Forklift) LP Tank Removal and Replacement (TA-54 Areas G, L, J, Admin only) (continued)

WARNING

- 1. Maintain proper lifting position when physically handling LP tanks to avoid a back injury.**
- 2. Care shall be exercised when handling LP tanks to prevent tanks from being dropped, thrown, rolled, or dragged. Mishandling of LP tanks may cause serious personnel injury. Refer to EP-DIV-POLICY-20057, EWMO Health and Safety Policy for proper lifting procedure.**
- 3. Full 30# LP cylinders weigh 54 lbs. Extreme caution must be exercised by the operator when removing full cylinders from LP supply cage and placing it on the forklift to prevent back injury. The use of proper PPE and safe lifting techniques shall be enforced, and if a worker feels they cannot safely handle the 30# LP cylinder alone, then the two-person rule should be used.**

[15] **REMOVE** a full LP tank from the LP storage and **VERIFY** the full status by viewing the site glass attached to top of tank (greater than 90% full).

[16] **PERFORM** a visual inspection of the replacement LP tank (e.g., LP valve, labels/placards visible, gauge operable, condition of tank or valve guard).

[17] **IF** the LP tank is damaged,
THEN:

[A] **LABEL** the LP tank damaged (e.g., Caution tag).

[B] **CONTACT** Operation Center to log Caution Tag into the Caution Tag Logbook.

[C] **CONTACT** the PIC for direction.

[18] **PLACE** the new LP tank in the LP cradle on the forklift.

[19] **VERIFY** that the LP tank is positioned with the alignment pin as illustrated in Appendix E, Propane Tank Configuration.

[20] **VERIFY** that the cradle gate latch is secured.

5.2 Industrial Truck (Forklift) LP Tank Removal and Replacement (TA-54 Areas G, L, J, Admin only) (continued)

- [21] **IF** equipped with a swivel cradle,
THEN LIFT the cradle pin and **ROTATE** the LP tank to the storage position.

CAUTION

Do not over tighten the service valve once seated; hand tighten only. Failure to comply with this requirement will impose excessive wear on the valve seal.

- [22] **CONNECT** the supply line coupler turning clockwise by hand until snug.
- [23] **ATTACH** the fastening strap to secure LP tank to equipment.
- [24] **TURN** the LP service valve counterclockwise approximately 1 and 1/2 turns to pressurize the LP line.
- [25] **IF** a LP leak is noticeable (e.g., hissing, rotten egg odor/stink, visible mist),
THEN IMMEDIATELY CLOSE the LP service valve and **CONTACT** the PIC for direction.
- [26] **PERFORM** a leak test using a leak detection solution at the LP coupler and service valve.
- [27] **IF** LP is observed leaking (e.g., soap bubbles are visible) at the coupler,
THEN:
- [A] **CLOSE** the LP service valve.
- [B] **NOTIFY** the PIC for direction.
- [C] **WHEN** the problem is remediated,
THEN GO to Step 5.2[22].

5.3 Recharging Electric Industrial Trucks (Forklift)

This sub-section is stand-alone and may be performed independently or in conjunction with other Performance sections.

Operator

- [1] **OPERATE** the forklift to the designated recharging station.
- [2] **ENSURE** the charging location is in an area where hydrogen gas does not accumulate (e.g., domes, ventilated enclosures, outdoors). [ABD-WFM-002, AC 5.6.9(2)]
- [3] **PLACE** the forklift in the park position with the parking brake applied and the ignition switch turned OFF.
- [4] **LOCATE** the battery connector end on the forklift.
- [5] **REVIEW** the manufacturer's tag and charger placard to ensure that the charger and forklift have compatible voltages (48, 36, 24-volt systems).
- [6] **SEPARATE** the battery connector from the forklift using the quick disconnect handle located on the connector end.
- [7] **REMOVE** or **OPEN** the battery service cover during charging operations to allow the hydrogen gas to dissipate.

NOTE *Chargers equipped with an auto charging function will activate the battery charger upon connection to battery.*

- [8] **CONNECT** the battery portion of the forklift battery connector (connector end fastened to the battery) to the charger.
- [9] **IF** battery charger is equipped with an automatic charging function,
 THEN:
 - [A] **VERIFY** that the charging light is illuminated on the battery charging panel.
 - [B] **GO TO** Step 5.3[11].
- [10] **SET** the charger to daily, weekly, or weekend depending on need.

5.3 Recharging Electric Industrial Trucks (Forklift) (continued)

NOTE *The forklift chargers have a variety of power-on devices to energize the charger (e.g., switch, push button, and auto start).*

[11] **POWER-UP** the charger and **OBSERVE** the charging gauge to ensure that a proper connection is performed.

NOTE 1 *Battery temperature will rise during charging process.*

NOTE 2 *Some chargers are equipped with automatic charging functions and shutdown after the battery charging is complete.*

[12] **WHEN** the charging is complete,
 THEN DISCONNECT battery from charging connector and ensure the charger is off.

[13] **REPLACE** or **CLOSE** the battery cover.

[14] **RECONNECT** the battery to the forklift.

6. PERFORMANCE—ESTABLISHING DESIGNATED RECHARGING LOCATIONS

This section is a stand-alone and may be performed independently or in conjunction with other Performance sections.

PIC

- [1] **RECORD** the date and location of the proposed designated recharging location in Attachment 1, Criteria for Establishing a Designated Recharging Location.
- [2] **COORDINATE** with Fire Protection Engineer (FPE) and Maintenance Supervisor to evaluate proposed location, ensuring the following requirements are met, and **CHECK** (√) YES or NO on Attachment 1.
 - Fire protection is adequate at the recharging location.
 - At Area G, electric-powered vehicles/equipment are charged in locations where hydrogen gas does accumulate (e.g., domes, ventilated enclosures, outdoors).
[AC 5.6.9(2)]
- [3] **DOCUMENT** additional requirements or restrictions in accordance with the FPE and Maintenance Supervisor in the Comments section on Attachment 1.
- [4] **IF** any of the criterion in Step 6.[2] is checked (√) NO,
THEN:
 - [A] **DOCUMENT** the deficiency in the Comments section on Attachment 1.
 - [B] **CONTACT** the TA-54 Operations Center, FPE, and the Industrial Hygiene and Safety Representative (IH&S) for guidance.
 - [C] **GO TO** Step 6.[1] and **REPEAT** this section after deficiency has been resolved.

7. POST-PERFORMANCE ACTIVITY

7.1 Activity Closeout

PIC

- [1] **RECORD** name, signature, Z#, and date on Attachment 1.

Engineering

- [2] **REVIEW** Attachment 1 for accuracy and completeness.
- [3] **RECORD** name, signature, Z#, and date on Attachment 1.

FPE

- [4] **REVIEW** Attachment 1 for accuracy and completeness.
- [5] **RECORD** name, signature, Z#, and date on Attachment 1.

IH&S

- [6] **IF** a designated recharging location was established,
THEN:
 - [A] **REVIEW** Attachment 1 for accuracy and completeness.
 - [B] **RECORD** name, signature, Z#, and date on Attachment 1.

Shift Operations Manager

- [7] **REVIEW** Attachment 1 for accuracy and completeness.
- [8] **SUBMIT** Attachment 1 for USQ review if applicable and **RECORD** the evaluation (e.g., USQ number) number and date completed on Attachment 1.
- [9] **RECORD** name, signature, Z#, and date on Attachment 1.
- [10] **DOCUMENT** designated refueling and recharging locations at TA-54 Operations Center Logbook, as applicable.

7.1 Activity Closeout (continued)

PIC

- [11] **IF** abnormal conditions were identified during the performance of this procedure, **THEN INITIATE** actions to correct the deficiency/discrepancy, such as generating a Nonconformance Report or Performance Feedback and Improvement Tracking, and **DOCUMENT** actions taken in the Comments Section of the applicable attachment.

NOTE *Completing a Post-Job Review may be accomplished using the applicable P300 form or online (the preferred method since the institution has access to feedback and lessons learned <http://int.lanl.gov/safety/iwmc/> [Click on the Submit IWD Part 4 Post-Job Review]).*

- [12] **IF** any of the following occur:
- A new activity was completed for the first time
 - A request was made by anyone involved with the performance of this procedure to perform a post-job review
 - An abnormal event occurred
 - A revision to an existing procedure was issued and it has been determined by the procedure owner or designee that a Post-Job Review is required
- THEN PERFORM** a Post-Job Review in accordance with P300, Integrated Work Management.

7.2 Records Processing

Records generated while performing this procedure must be processed and maintained in accordance with EP-AP-10003, Records Management.

Record Name	QA Record	Non-QA Record
Attachment 1, Criteria for Establishing a Designated Recharging Location	<input checked="" type="checkbox"/>	<input type="checkbox"/>

8. REFERENCES

ABD-WFM-002, Technical Safety Requirements (TSRs) for Technical Area 54, Area G

ABD-WFM-006, Technical Safety Requirements (TSRs) for Waste Characterization, Reduction, and Repackaging Facility (WCRRF)

ABD-WFM-008, Technical Safety Requirements (TSRs) for the Radioassay and Nondestructive Testing (RANT) Site

AREAG-FO-AP-1174, TA-54 Area G Establishing Defined Areas

AREAG-FO-DOP-1179, TA-54 Area G Operational Acceptance of Defined Areas and Refueling Locations

AREAG-FO-AP-1190, Access Control for TA-54 Areas G, L, and J

EP-AP-10003, Records Management

EP-DIV-POLICY-20057, Health and Safety Policy – Manual Movement

EWMO-AP-0112, EWMO Pre-Job Briefings

EWMO-AP-20253, EWMO General Site Hazards and Controls

EWMO-DOP-20086, EWMO Division Specific Forklift and Drum Handler Equipment Operations

P101-4, Forklifts and Powered Industrial Trucks

P101-18, Procedure for Pause/Stop Work

P300, Integrated Work Management

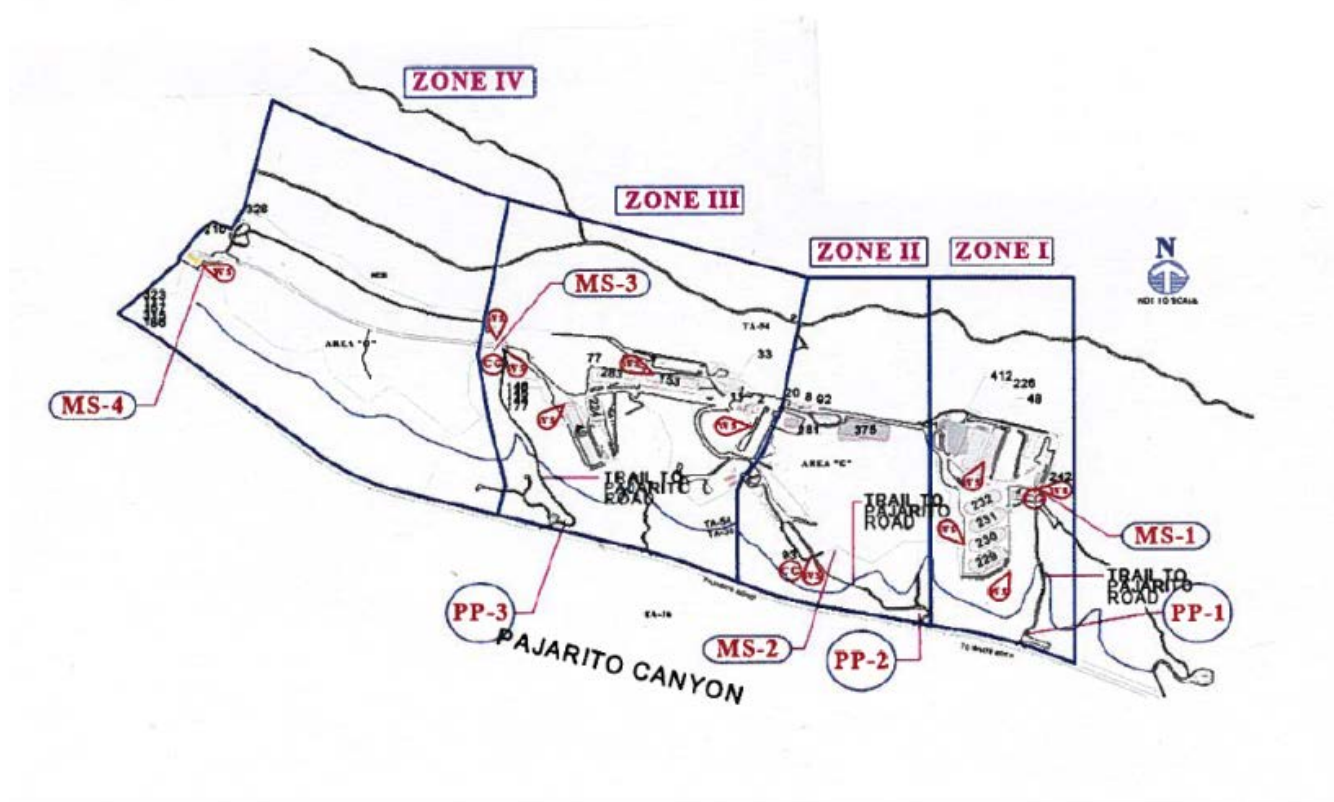
P322-4, Issues Management

P330-6, Nonconformance Reporting

APPENDIX A

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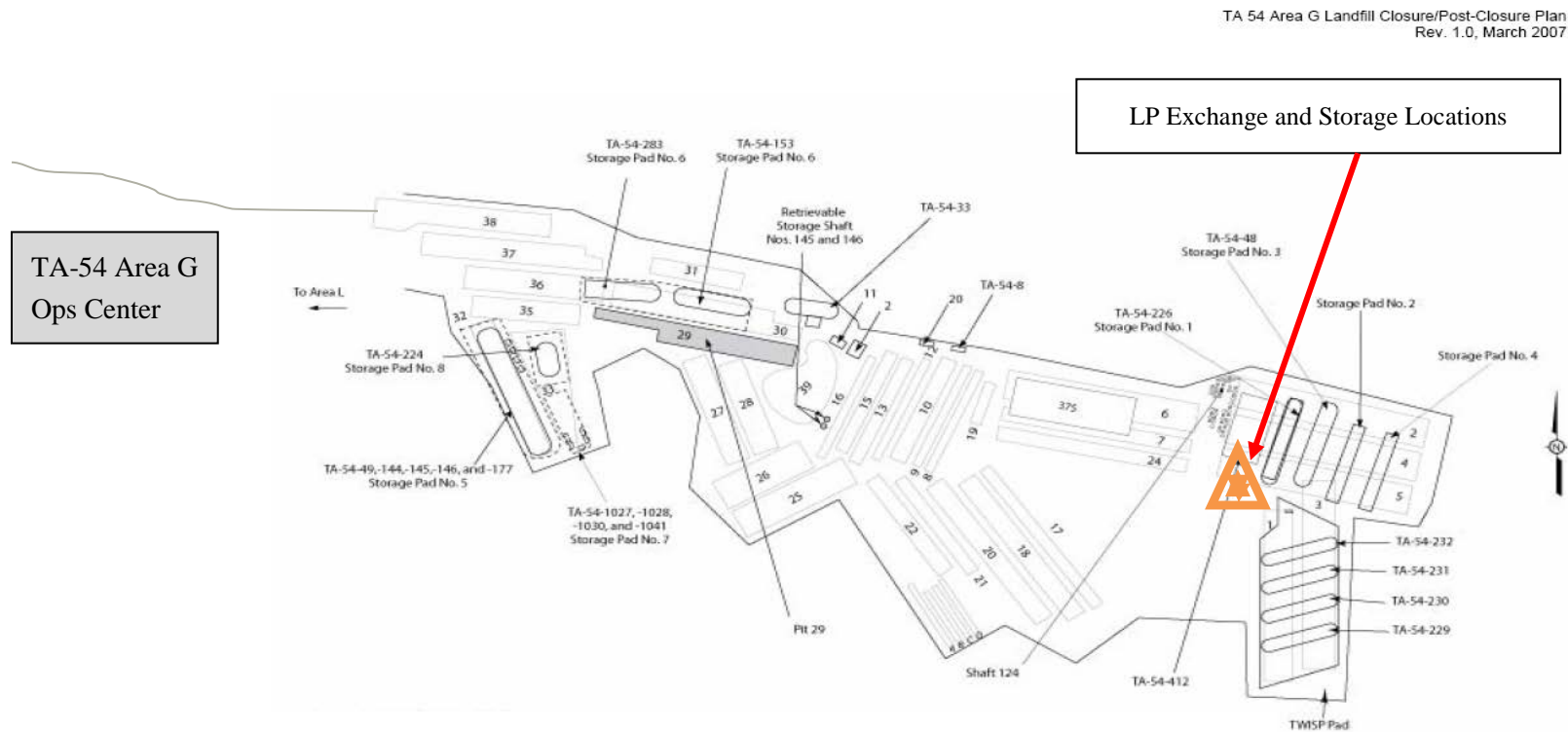
DEPICTION OF ZONES AND DESIGNATED REFUELING LOCATION IN ZONE 4



APPENDIX B

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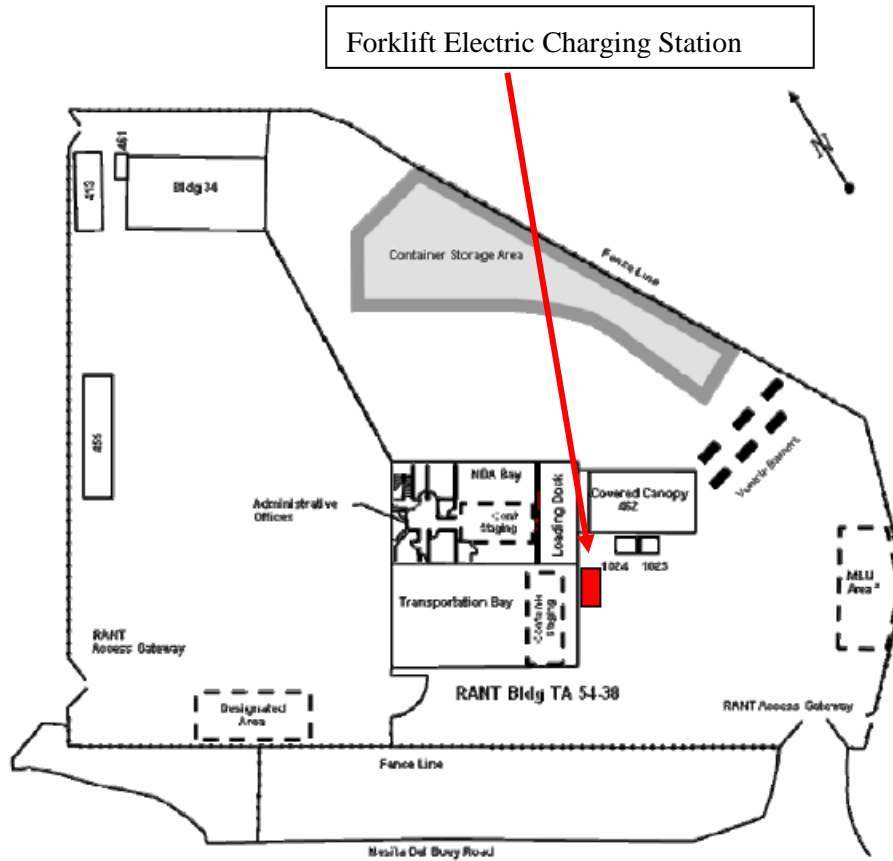
TA-54 AREA G DESIGNATED LP EXCHANGE AND STORAGE LOCATIONS



APPENDIX C

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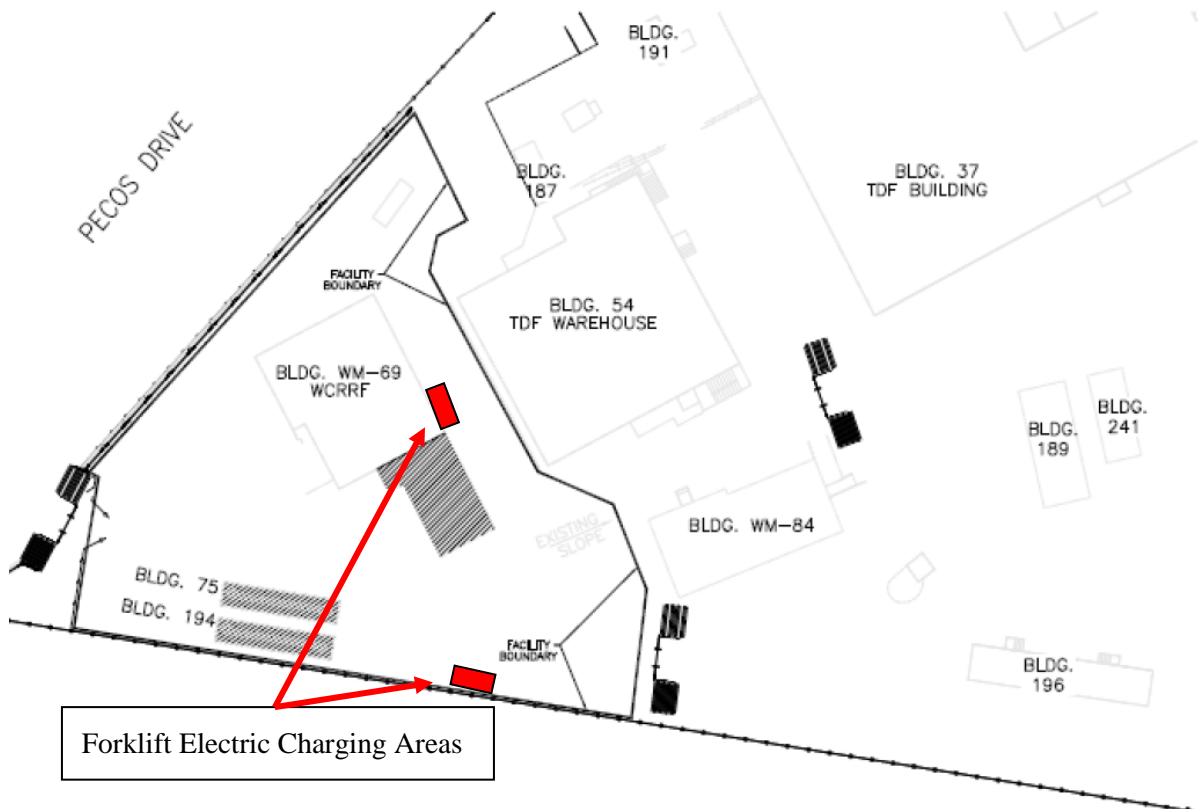
RANT FORKLIFT ELECTRIC CHARGING AREA



APPENDIX D

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WCRRF FORKLIFT ELECTRIC CHARGING AREAS



APPENDIX E

Page 1 of 2

PROPANE TANK CONFIGURATIONS

OLD SERIES LP TANK



NOTE *Arrow displays proper LP tank position to alignment pin*

APPENDIX E

Page 2 of 2

PROPANE TANK CONFIGURATIONS

NEW SERIES LP TANK



NOTE *Arrow displays proper LP tank position to alignment pin*

ATTACHMENT 1

Page 1 of 1

CRITERIA FOR ESTABLISHING A DESIGNATED RECHARGING LOCATION

6.[1] Date: _____ Location: _____

Requirements	Location Satisfies Criteria YES/NO (6.[2])	Comments
1. Fire protection is adequate at the recharging location.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2. Electric-powered vehicles/equipment are charged in locations where hydrogen gas does accumulate (e.g., domes, ventilated enclosures, outdoors). [Area G AC 5.6.9(2)]	<input type="checkbox"/> Yes <input type="checkbox"/> No	

7.1[1] Performed By: _____ / _____ / _____
PIC (Print) Signature Z # Date

7.1[3] Reviewed By: _____ / _____ / _____
Engineering (Print) Signature Z # Date

7.1[5] Reviewed By: _____ / _____ / _____
FPE (Print) Signature Z # Date

7.1[6][B] Reviewed By: _____ / _____ / _____
IH&S Professional (Print) Signature Z # Date

7.1[8] USQ Number: _____ Date: _____

7.1[9] Approved By: _____ / _____ / _____
Shift Operations Manager (Print) Signature Z # Date

EWMO Division Specific Forklift and Drum Handler Equipment Operations

Effective Date: 11/17/2017Next Review Date: 11/17/2020

Hazard Class: ☐ Low ☒ Moderate ☐ High/Complex
Usage Mode: ☐ Reference ☐ UET ☒ Both UET & Reference

The Responsible Manager has determined that the following organizations' review is required for initial procedure release as well as subsequent major revisions. Review documentation is contained in the Document History File.

EWMO Operations	WD Operations
Operator SME	Engineering
Quality Assurance	Safety Basis
Industrial Hygiene and Safety	Radiation Protection
Deployed Environmental Professional	Criticality Safety
Environmental Compliance Program	Fire Protection
Waste Management	

Classification Review: ☒ Unclassified ☐ UCNI ☐ Classified

Teri Tingey / 200975 / /s/ Teri Tingey / 11/6/2017
 Name (print) Z# Signature Date

Responsible Manager, Acting Facility Operations Director

Stephanie Griego / 140892 / /s/ Stephanie Griego / 11/7/2017
 Name (print) Z# Signature Date

Working Copy / Information Only (circle one)
 Initials / Date: _____ / _____

REVISION HISTORY

A comprehensive log of changes made to this procedure, including superseded documents and complete revision descriptions, is accessible through the Electronic Document Management System (EDMS). The following log is abridged to one page and includes only the latest revisions.

Document/Revision No.	Issue Date	Action	Description
EP-DIV-DOP-20086, R.2	March 15, 2013	Major	Revised procedure to add additional controls for TA-54 Area G when moving and handling palletized drums. Changed word from mast to backrest carriage. Changed word from Center of Gravity to Load Center on Attachment 5. Revision Bars in left column display location of changes. No additional hazards were identified during this revision.
EP-DIV-DOP-20086, R.3	September 30, 2013	Major Revision	Revise procedure to incorporate requirements of ABD-WFM-002 Rev 2.0 Technical Safety Requirements (TSRs) for Technical Area 54, Area G. No new hazards are introduced by this revision.
EP-DIV-DOP-20086, R.4	January 29, 2014	Major Revision	Revised procedure to update requirements for critical lifts per P101-25. Revision bars in left column display location of changes. No additional hazards were identified during this revision.
EP-DIV-DOP-20086, R.5	March 21, 2014	Major Revision	Revise procedure to require securing SWBs per AC 5.6.11(8). No additional hazards were identified during this revision.
EP-DIV-DOP-20086, R.5 IPC-1	April 15, 2014	IPC	Revise procedure to allow for SWBs to be loaded and unloaded from a transport vehicle without strapping in TA-54 Area G. This revision does not introduce any new hazards.
EWMO-DOP-20086, R.0	November 18, 2016	Major Revision	Revised to include TA-54 Area G Dome 375 and WCRRF RNS waste forklift controls. Revised to current procedure organization and template.
EWMO-DOP-20086, R.1	April 13, 2017	Major Revision	Updated SAC 5.10.1.1 and SAC 5.10.5 requirements associated with R2.5.2 of ABD-WFM-006.
EWMO-DOP-20086, R.2	November 17, 2017	Major Revision	Revise procedure to implement changes in WCRRF TSRs Rev. 2.6. Deleted (\$) usage bullet in Section 3 because no (\$) steps are implemented in the procedure. Updated WCRRF SAC 5.10.1.1, 5.10.2.2, and 5.10.3.1, and deleted SACs 5.10.5 and 5.10.9. Deleted steps 5.1[3] and 5.2[2]. Added SOM as one of the performers where required for WCRRF. Also revised sections throughout based on revised LANL procedures P101-25, Cranes, Hoists, Lifting Devices, and Rigging Equipment, and P101-4, Forklifts and Powered Industrial Trucks. For forklift operations, the term "critical lift" was changed to "High Consequence Material Handling Activity" in P101-4, and P101-25 no longer applies. No new hazards identified.

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1. PURPOSE

This procedure provides the requirements and instructions for the proper and safe operations and inspections of forklifts and drum handlers at Environmental and Waste Management Operations (EWMO) facilities: 1) Radioassay and Nondestructive Testing Facility (RANT), 2) Waste Characterization, Reduction, and Repackaging Facility (WCRRF), and 3) Technical Area (TA)-54.

2. SCOPE

This procedure applies to personnel who supervise, operate, spot, and inspect forklifts and drum handlers. The procedure also identifies the operational requirements identified in EWMO area specific safety basis documents for the facilities listed above. Forklift and drum handler operations are a critical support activity and must be conducted in a safe manner to ensure the safe handling, placement, and movement of radioactive waste containers, materials, and equipment. This procedure applies to all types and sizes of powered industrial low lifts and high lifts industrial equipment used for the purpose of lifting and handling waste containers, materials, and equipment. This procedure works in conjunction with P101-4, Forklift and Powered Industrial Trucks, and EWMO-DOP-20085, EWMO Industrial Truck and Equipment Refueling and Recharging. This procedure does not contain the instructions for conducting hoist and crane operations or for using the forklift as a hoist.

3. PRECAUTIONS AND LIMITATIONS

- General site hazards and their controls for EWMO-supported facilities are provided in EWMO-AP-20253, EWMO General Site Hazards and Controls. Personnel performing activities associated with this procedure shall meet facility access criteria, recognize the associated site hazards, and uphold the established controls.

NOTE *The term “High Consequence Material Handling Activity” has replaced the term “critical lift” for forklifts in accordance with LANL procedure P101-4, Forklift and Powered Industrial Trucks.*

- Forklift operations are governed by LANL procedure P101-4, Forklift and Powered Industrial Trucks.
- High Consequence Material Handling Activities (formerly known as critical lifts) require the completion of the applicable sections of Form 2041, High Consequence Material Handling Activity.
- Not Applicable (N/A) is documented on the attachments during the performance of this procedure indicating information that is not required to be recorded.
- Forklift/drum handlers are not used as an employee man-lift, unless approved by the manufacturer and designed for that purpose.

3. PRECAUTIONS AND LIMITATIONS (continued)

- High temperature and humidity; use of respirators and impermeable or multilayered work clothing with limited air movement; physical exertion; poor physical condition; certain medicines; and inadequate tolerance for hot workplaces may result in heat stress. In order to reduce the potential of heat stress the following activities should be practiced:
 - Allow sufficient time for proper acclimatization to heat
 - Increase fluid and electrolyte intake before and during work
 - Use an approved work/rest regimen per IHS personnel instructions
 - Recognize the early symptoms of heat stress
 - Consider heat stress when selecting personal protective equipment
- When entering or exiting forklift operator cab, maintain at least three points of contact.
- Forklift operators shall be trained and qualified to operate forklifts in accordance with P101-4.
- Review radiation level postings and maps prior to crossing radiological boundaries. Limit forklift and drum handler operations inside Radiation Areas. Ensure Radiological boundary (e.g., rope, signage) is replaced after crossing the boundary. Do not drive over radiological postings.
- No person shall be allowed to stand or pass under the elevated portion (forks) of any truck, whether loaded or empty.
- Only a person that is properly seated in a seat provided by the forklift manufacturer may ride on a fork lift.
- All persons are be prohibited from placing arms or legs between the uprights of the mast or outside the confines of the operator cab while operating a forklift.
- Extreme care shall be used when tilting the load forward or backward, particularly when high tiering/stacking. Tilting forward while engaging an elevated load shall be prohibited except to pick up a load. An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack. When stacking or tiering, only enough backward tilt to stabilize the load shall be used to prevent a loss of load.

4. PREREQUISITE ACTIONS

NOTE *A separate pre-job briefing is not required for this procedure when being performed in conjunction with other procedures that contain the requirements of an Integrated Work Document in accordance with P300, Integrated Work Management.*

Supervisor/Shift Operations Supervisor (SOS)

- [1] **ENSURE** that a pre-job briefing is performed for all personnel involved in the performance of this procedure in accordance with EWMO-AP-0112, EWMO Pre-Job Briefings.
- [2] **ENSURE** that the procedure is the latest revision and **DOCUMENT** on the Title Page.
- [3] **ENSURE** that a Radiological Work Permit (RWP) has been obtained and that workers are briefed on the RWP in accordance with P121, Radiation Protection, as applicable.
- [4] **ENSURE** that the forklift and drum handler operators and spotters are trained to the requirements of this procedure.
- [5] **IF** activities involving any of the following are to be performed in a DEFINED AREA in Area G,
 - Low Level Waste (LLW)
 - Mixed LLW
 - Hazardous Waste
 - TRITIUM WASTE
 - TRITIUM-CONTAMINATED WASTE
 - TRU WASTE**THEN VERIFY** the following with the TA-54 Operations Center:
 - DEFINED AREA(s) involved in the work activity are in OPERATION MODE.
 - Area G is in Staffing Condition 1 (one), as defined in EWMO-AP-20059, EWMO Watchbill Administration.

5. PERFORMANCE

5.1 Forklift Inspection

NOTE *Forklifts that are used continuously (shift to shift) shall be inspected per 1910.178(q)(7) between shifts.*

Forklift Operator

[1] **RECORD** the following forklift information on Attachment 1:

- Forklift name
- Equipment number
- Technical Area
- Building/area
- Hour-meter reading (if applicable)
- Next PM Due Date (annual inspection)

[2] **CHECK** (✓) the type of forklift being inspected (Gas, Diesel, LP, or Electric) on Attachment 1.

[3] **CHECK** (✓) SAT or UNSAT to indicate whether the equipment satisfies the inspection criteria listed on Attachment 1.

[4] **IF** UNSAT was checked (✓) in the previous step,
THEN:

[A] **DOCUMENT** discrepancies in the Comments section of Attachment 1.

[B] **NOTIFY** the specific area Operations Center Operator.

[C] **REQUEST** guidance and direction from the SOM/SOS.

NOTE *In TA-54 Area G, the Operations Center will tag-out the forklift and initiate a Facility Service Request (FSR).*

[D] **COMPLETE** Attachment 3, Form 1569, Defective Equipment Report for Forklifts and Powered Industrial Trucks.

[E] **SUBMIT** an FSR for maintenance along with a copy of Attachment 1.

5.1 Forklift Inspection (continued)

[5] **DOCUMENT** the following information on Attachment 1:

- Shift (Days, PMs, or Mids)
- Forklift operator's name (print and signature)
- Forklift operator's Z number
- Inspection date

5.2 Drum Handler Inspection

NOTE *Drum handlers should be inspected before every shift.*

Forklift Operator

[1] **RECORD** the following drum handler information on Attachment 2:

- Drum handler name/model number
- Equipment number
- Technical Area and building/area
- Hour-meter reading (if applicable)
- Next PM Due Date (annual inspection)

[2] **CHECK** (✓) SAT or UNSAT to indicate whether the equipment satisfies the inspection criteria listed on Attachment 2.

[3] **IF** UNSAT was checked (✓) in the previous step,
THEN:

[A] **DOCUMENT** the discrepancies in the Comments section of Attachment 2.

[B] **NOTIFY** the area SOM/SOS and the specific area Operations Center.

[C] **REQUEST** guidance and direction from the SOM/SOS.

NOTE *In TA-54 Area G, the Operations Center will tag-out the drum handler and initiate a FSR.*

[D] **COMPLETE** Attachment 3.

[E] **SUBMIT** an FSR for maintenance along with a copy of Attachment 2.

[4] **DOCUMENT** the following information on Attachment 2:

- Shift (Days, PMs, or Mids)
- Drum Handler operator name (print and signature)
- Drum Handler Operator's Z number
- Inspection date

5.3 General Forklift Safe Operating Practices

NOTE *Steps 5.3[1] through 5.3[14] may be performed out of sequence or concurrent with other steps in this section.*

Forklift Operator

- [1] **REVIEW** the manufacturer's tag to determine the maximum lifting capacity of the forklift with and without attachments.

CAUTION

Forklifts and powered industrial trucks SHALL not be altered or modified in a manner that affects their capacity or safe operation without written approval from the manufacturer.

- [2] **IF** the forklift is equipped with attachments other than factory-installed attachments, **THEN ENSURE** the following information is available for the operator:
- Identification of the approved attachments
 - Weight of the forklift
 - The maximum lifting capacity of the forklift with the additional attachment and attachment combination at a maximum elevation with load laterally centered
- [3] **REVIEW** surroundings for surface conditions, overhead clearance, and other activities to determine whether forklift operations can be conducted safely.
- [4] **PLAN** the travel path before performing forklift operations.
- [5] **ADJUST** the forklift tines to the maximum width while engaging the load for maximum stability of the load.
- [6] **ENSURE** that the load is centered; the heaviest point is generally between the forks and closest to the backrest.
- [7] **ENSURE** the forks are adjusted (height and tilt) prior to engaging a pallet/load for pickup.

5.3 General Forklift Safe Operating Practices (continued)

NOTE 1 *When calculating the maximum lifting capacity of the truck if the load center is increased, Table 5.3-1, Forklift Maximum Lifting Capacity at Various Load Centers, provides an example for reduction of maximum lifting capacity for a specified load center.*

NOTE 2 *Appendix 2, Maximum Lifting Capacity and Load Center Calculator Aid and Instructions, provides a generic table for determining your specific forklift reduced lifting capacity based upon manufactures maximum lifting capacity tag information.*

TABLE 5.3-1, FORKLIFT MAXIMUM
LIFTING CAPACITY AT VARIOUS LOAD CENTERS (EXAMPLE)

Maximum Lifting Capacity on Manufacturer Tag	
5,000 pounds (lbs.) (Example only manufacturer's tag information)	24 inches (in.) x 5,000 lbs. = 120,000 in.-lb.
	<i>Reduced Lifting Capacity</i>
@ 30 in.	<i>120,000 in.-lb. / 30 in. = 4,000 lbs.</i>
@ 36 in.	<i>120,000 in.-lb. / 36 in. = 3,333 lbs.</i>
@ 48 in.	<i>120,000 in.-lb. / 48 in. = 2,500 lbs.</i>
@ 60 in.	<i>120,000 in.-lb. / 60 in. = 2,000 lbs.</i>

[8] **DETERMINE** whether the load is within the safe lifting capacity of the forklift using Appendix 2 as necessary.

[9] **IF** the reduced lifting capacity for a specific load **CANNOT** be determined,
THEN NOTIFY SOM/SOS and Industrial Safety for guidance and assistance.

[10] **SLOWLY ENGAGE** the load and **ENSURE** that the load is positioned so that the load is resting against the backrest/carriage.

[11] **IF** the load is awkward and has the potential of falling off the forks,
THEN SECURE the load to the forklift using approved fastening device (e.g., rope, chain, tie-down fastening strap).

[12] **LIFT** the load approximately 3 to 5 inches off the surface, slightly tilted back to obtain a safe travel position.

5.3 General Forklift Safe Operating Practices (continued)

[13] **IF** view is obstructed,
 THEN UTILIZE a spotter and/or **OPERATE** the forklift in reverse with load trailing.

[14] **UTILIZE** a spotter when performing stacking, high lifts, racking, or load placement on truck flatbed/box van.

NOTE *Forklifts are considered unattended and shall be shut-down when the operator is more than 25 ft. from the equipment or the forklift is out the operator's view.*

[15] **WHEN** the forklift operations are complete, or when the forklift is to be left unattended,
 THEN PERFORM a proper shutdown to include the following:

[A] **OPERATE** the forklift to an appropriate and/or designated parking area.

[B] **PLACE** the forks in park or down position (on the ground and tilted slightly forward).

[C] **TURN** the forklift off and remove the keys.

[D] **APPLY** the parking brake and/or chock the wheels if forklift is on an incline.

[E] **LOCK** or **SECURE** the forklift as applicable.

[F] **IF** operating a LP type forklift,
 THEN ENSURE that the service valve on the LP Tank is CLOSED (turning valve clockwise until seated).

[G] **PERFORM** a visual inspection for leaks or abnormalities.

[H] **IF** a visual inspection reveals signs of a leak or abnormalities,
 THEN NOTIFY the Operations Center and supervision for guidance.

5.4 General Drum Handler Operating Practices

This section applies to several models of drum handlers (e.g., Rotogrip, Easy Lift) designed for lifting, repositioning, and/or transporting drum type containers.

Forklift/Drum Handler Operator

- [1] **REVIEW** the manufacturer's tag to determine the maximum lifting capacity of the drum handler.
- [2] **REVIEW** surroundings for surface conditions, overhead clearance, and other activities to determine whether drum handler operations can be conducted safely.
- [3] **PLAN** the travel path before performing drum handler operations.
- [4] **ALIGN** the drum handler to ensure the parrot beak/drum jaws are aligned with the center of the drum when negotiating the initial approach.
- [5] **ATTACH OR FASTEN** the parrot beak / drum jaws to the waste container.
- [6] **PICK UP** load slightly (2 to 4 inches) to ensure drum is properly fastened to the drum handler.
- [7] **IF** drum appears unstable or not properly attached,
 THEN:
 - [A] **LOWER** drum and **REPOSITION** parrot beak/drum jaws.
 - [B] **GO TO** Step 5.4[6].
- [8] **LIFT** the load approximately 3 to 5 inches travel height off the surface.
- [9] **IF** view is obstructed,
 THEN UTILIZE a spotter and/or **OPERATE** the drum handler in opposite direction (drum handler control arm side leading).

5.4 General Drum Handling Operating Practices (continued)

NOTE *Drum handlers are considered unattended and shall be shut-down when the operator is more than 25 ft. from the equipment or the drum handler is out the operator's view.*

[10] **WHEN** drum handler operations are complete,
 THEN PERFORM a proper shutdown to include the following;

- [A] **OPERATE** the drum handler to an appropriate and/or designated parking area.
- [B] **PLACE** the drum handler to the lowest point (down).
- [C] **TURN** the drum handler off and remove the keys.
- [D] **LOCK** or **SECURE** the drum handler as applicable.

5.5 Forklift High Consequence Material Handling Activity

NOTE *The term “High Consequence Material Handling Activity” has replaced the term “critical lift” for forklifts in accordance with LANL procedure P101-4.*

This section is performed in conjunction with other performance sections of this procedure.
This section applies to forklift High Consequence Material Handling Activities.

PIC

- [1] **DETERMINE** whether a forklift High Consequence Material Handling Activity is required based upon the following criteria and those identified for High Consequence Material Handling Activities in the Area Specific Forklift Operations Requirements, Sections 5.6, 5.7, and 5.8:
- If the load item is damaged or upset, it would result in a release into the environment of radioactive or hazardous material exceeding the established permissible environmental limits.
 - The load item is unique and, if damaged, would be irreplaceable or not repairable, and it is vital to a system, facility, or project operation.
 - The cost to replace or repair the load item, or the delay in operations of having the load item damaged, would have a negative impact on facility, organizational, Laboratory, or National Nuclear Security Administration budgets to the extent that it would affect program commitments.
 - If the load were mishandled or dropped, the event would cause consequence to nearby installations or facilities.
 - The load item requires special care in handling because of weight, size, asymmetrical shape, undetermined center of gravity, installation tolerances, or other unusual factors. The actual load center distance could exceed the stated load center distance, causing the truck’s weight capacity to be exceeded. The center of gravity should not extend beyond the manufacturer’s recommendations specified on the data plate.
 - The lift is near critical or expensive items that could be damaged.
 - The lift uses two or more lift trucks or a combination of such equipment.

5.5 Forklift High Consequence Material Handling Activity (continued)

- Any load that could at any time contact an energized power line or enter the minimum distance specified in 29 CFR 1926.1408, Power Line Safety (Up to 350kV) Equipment Operations, Table A.
- The lift requires personnel to be lifted.
- A significant risk of personal injury or property damage may exist.
- The failure of the lift could significantly impact the confidence of Laboratory customers or sponsors in the Laboratory's ability to safely execute current or future missions.
- The shape configuration and potential instability of the object on the forks may be critical to the proper handling. Workers must secure the load so it is safely arranged and stable. Workers must not carry merchandise or off-center loads unless they have been secured by wrapping or banding. A special platform or attachment may need to be designed to carry the merchandise or off-centered load.

[2] **IF** one or more of the criteria listed in Step 5.5[1] is applicable,
THEN OBTAIN and **COMPLETE** a [Form 2041, High Consequence Material Handling Activity](#), prior to performing forklift High Consequence Material Handling Activity.

5.6 TA-54 Area G Specific Forklift Operations Requirements

The following are forklift requirements and restrictions identified for TA-54 Area G. Minimum requirements for movement of palletized waste containers are provided in Table 5.6-1, below:

**TABLE 5.6-1, WASTE CONTAINER FASTENING
REQUIREMENTS FOR PAVED and UNPAVED SURFACES**

Paved Surfaces					
4 Drums	3 Drums	2 Drums	1 Drum	Standard Waste Boxes (SWBs)	Other Containers (Fiber Reinforced Plywood (FPRs), Other Metal Containers)
<p>*2 metal bands around drums</p> <p>OR</p> <p>1 nylon ratcheting strap around drums</p> <p>OR</p> <p>1 nylon ratcheting strap secured to backrest/carriage***</p>	<p>Tight triangle array (two of three against backrest/carriage)</p> <p>AND</p> <p>2 metal bands*</p> <p>OR</p> <p>1 nylon ratcheting strap around drums</p> <p>OR</p> <p>Tight triangle array (two against backrest/carriage)</p> <p>AND</p> <p>1 nylon ratcheting strap secured to backrest/carriage</p>	<p>Drums against backrest/carriage</p> <p>AND</p> <p>1 nylon ratcheting strap secured to backrest/carriage</p>	<p>Drum centered against backrest/carriage</p> <p>AND</p> <p>1 nylon ratcheting strap secured to backrest/carriage</p>	<p>Must be on a pallet</p> <p>AND</p> <p>1 nylon ratcheting strap secured to backrest/carriage***</p> <p>OR</p> <p>Handled using an approved rigging device (SWB lift fixture)</p>	<p>** 1 nylon ratcheting strap around container to be secured to the backrest/carriage (as applicable)</p>
<p>* Metal banding that currently exists on drum packs will continue to perform their safety function until the drum packs are disassembled.</p> <p>** FRPs and Metal containers vary in size (e.g., 10 L X 4 W, and 6 H) and may require special care in moving the container from point A to B. Strapping requirements may or may <u>not</u> apply in every application at the discretion of the Shift Operations Supervisor and Industrial Hygiene/Safety.</p> <p>*** Moving, or relocating of TRU WASTE drums or SWBs outside domes/buildings that are palletized with a forklift shall require securing the drums or SWBs to the backrest/carriage using an approved fastening device (e.g., strap, chain). This requirement does <u>not</u> apply to loading or unloading of TRU WASTE drums or SWBs on and off transport vehicles (e.g., flatbed, stake bed).</p>					
Unpaved Surfaces					
<p>Any time a forklift is used as the primary transport vehicle for transporting or moving palletized waste containers in Area G on unpaved surfaces, the load SHALL be secured to the carriage/backrest of the forklift using approved fastening device (e.g., strap, chain).</p>					

5.6 TA-54 Area G Specific Forklift Operations Requirements (continued)

The following additional forklift requirements and restrictions are identified in the TA-54 Area G safety basis documents ABD-WFM-002, Technical Safety Requirements (TSRs) for Technical Area 54, Area G.

- The posted speed limit for TA-54, Area G is less than or equal to 15 miles per hour (mph). [AC 5.6.9(1)]
- A spotter shall be present for TRU WASTE container lifts greater than 4 ft. above the ground surface directly below the TRU WASTE container. [SAC 5.7.8(1)]

NOTE *The term “High Consequence Material Handling Activity” has replaced the term “critical lift” for forklifts in accordance with LANL procedure P101-4.*

- A critical lift plan **SHALL** be used for planned lifts of the TRU WASTE container greater than 12 ft. above the ground surface directly below the TRU WASTE container. [SAC 5.7.8(2)]
- A critical lift plan **SHALL** be used for planned lifts of FRPs with MAR greater than 150 PE-Ci. [SAC 5.7.8(3)]
- Personnel maintain applicable LANL qualifications for vehicle and equipment operation. [AC 5.9(1)]
- Personnel are trained to recognize specific job hazards and associated controls. [AC 5.9(2)]
- TRU WASTE containers on stacked pallets in the storage array **SHALL** be secured (e.g., banded). [AC 5.6.11(6)]
- TRU WASTE containers **SHALL** be secured during transport by motorized vehicle (e.g., forklift or truck). [AC 5.6.11(8)]
- Compressed gas cylinders in storage, in transport, or in use **SHALL** be secured. [AC 5.6.11(9)]

5.6 TA-54 Area G Specific Forklift Operations Requirements (continued)

- NOTE 1** *TRU WASTE drums removed from Pit 9 or Trenches A-D are treated as UNVENTED TRU WASTE DRUMs until demonstrated to be vented or OVERPACKED.*
- NOTE 2** *LCO 3.4.2 is not applicable during retrieval of below-ground waste or during MINOR MOVEMENTS.*
- NOTE 3** *MINOR MOVEMENT is defined as: During HANDLING of UNVENTED TRU WASTE DRUMs, the movement of a drum to the extent necessary for attachment or removal of lid restraints and/or lifting devices; or the insertion or removal of a drum from an OVERPACK, DOUBLEPACK, or other blast-mitigation device.*
- After an UNVENTED TRU WASTE DRUM is removed from its underground storage configuration at a RETRIEVAL AREA, the UNVENTED TRU WASTE DRUM **SHALL NOT** be stacked, and **SHALL** be inserted into an OVERPACK/ DOUBLEPACK IMMEDIATELY, or placed in an ISOLATION AREA until inserted into an OVERPACK/ DOUBLEPACK, or until a lid restraint is applied for its transfer to an ISOLATION AREA within the above-ground STORAGE AREA, or the drum is VENTED. [SAC 5.7.7]
 - During HANDLING (other than MINOR MOVEMENT) of UNVENTED TRU WASTE DRUMS, a lid restraining device **SHALL** be installed. UNVENTED TRU WASTE DRUMS being TRANSPORTED **SHALL** have a lid restraining device installed **AND** have a shielding/engineered barrier between the UNVENTED TRU WASTE DRUM and the worker **OR** maintain safe standoff distance ≥ 30 ft. between the UNVENTED TRU WASTE DRUM and the worker. [LCO 3.4.2]
 - Use of spotters is required during forklift operations involving an UNVENTED DRUM.

5.6 TA-54 Area G Specific Forklift Operations Requirements (continued)

- Before engaging loads, the forklift operator shall review the load for overweight TRU WASTE drums. Overweight TRU WASTE drums are defined as TRU WASTE drums weighing greater than 800 pounds. Overweight TRU WASTE drums have been identified and labeled (> 800 pounds). When forklift operators engage pallets with TRU WASTE drums greater than 800 pounds, they must ensure that the TRU WASTE drums are positioned closest to the forklift backrest. If a pallet is being negotiated for pickup and the overweight TRU WASTE drums are furthest away from forks, then the operator will need to reposition pallet to ensure the overweight TRU WASTE drums are closest to the load backrest. If the pallet contains four overweight TRU WASTE drums, the operator must ensure that the pallet is up against the backrest and the forklift lifting capacity is capable of lifting the load.
- Overweight TRU WASTE drums shall not be stacked or tiered.
- When, lifting, handling, moving, transferring, and stacking TRU WASTE containers, forklift operations shall be restricted to handling only one pallet at a time.
- When lifting, handling, moving, transferring oversize containers (i.e., FRPs, metal containers), the operator shall ensure the load is centered over the forks.
- Without prior approval from Industrial Hygiene and Safety (IH&S), no more than two propane-fueled forklifts are to be operated at one time inside a tension support dome and all tension support dome doors must be open to prevent an unacceptable carbon monoxide concentration inside tension support domes.
- No more than two propane-fueled combustion engine vehicles (e.g., forklift or man lift) may be operated in an unventilated TA-54 dome or building without TA-54 Shift Operations Manager approval.

5.6 TA-54 Area G Specific Forklift Operations Requirements (continued)

- When propane-fueled combustion engine vehicles (e.g., forklift or man lift) operations occur in an unventilated TA-54 dome or building, the dome or building doors must be opened as follows. These requirements may be modified by IH&S:
 - One forklift – open the exterior equipment access doors (e.g., clamshell doors) before starting work.
 - Two forklifts – open all exterior equipment doors (e.g., the exterior equipment doors and exterior side-hinged doors) before operating industrial equipment to maximize passive dome or building ventilation.
- When TA-54 dome doors are to be closed due to high winds, forklift operations shall not occur without TA-54 Shift Operations Manager approval.
- No gasoline-fueled or diesel-fueled combustion engine vehicles (e.g., forklift) may be operated in a dome or building without TA-54 Shift Operations Manager approval. Prior to introducing gasoline-fueled or diesel-fueled combustion engine vehicles into a DEFINED AREA and the associated thermal separation distance, the requirements of LCO 3.3.1 **SHALL** be met and maintained. [LCO 3.3.1]
- Operators **SHALL** observe posted speed limit of less than or equal to 15 mph in Area G. [AC 5.6.9(1)]
- Periodic inspection and maintenance of LANL vehicles/equipment, as part of the maintenance program, **SHALL** be performed. [AC 5.6.6(1)]

5.7 RANT Specific Forklift Operations Requirements

This section will be revised prior to RANT changing modes from COLD STANDBY to OPERATION.

5.8 WCRRF Specific Forklift Operations Requirements

The following additional forklift requirements and restrictions are identified in the WCRRF area specific safety basis document, ABD-WFM-006, Technical Safety Requirements (TSRs) for Waste Characterization, Reduction, and Repackaging Facility (WCRRF).

- Use of spotters is required during WASTE CONTAINER forklift operations.
[AC 5.6.10]
- WASTE CONTAINERS **SHALL** not be stacked and **SHALL** not be lifted higher than 4 ft. excluding the Waste Characterization Glovebox drum lift, nesting/denesting overpacks, and lifts during loading or unloading from transportation vehicles.
[SAC 5.10.2.2]

NOTE *The term “High Consequence Material Handling Activity” has replaced the term “critical lift” for forklifts in accordance with LANL procedure P101-4.*

- A critical lift plan **SHALL** be implemented for lifts and forklift movements involving DEGRADED or LOSS OF INTEGRITY TRU drums when not secured in a WASTE CONTAINER. [SAC 5.10.3.1]
- Propane, gasoline, or diesel-fueled vehicles shall not be used anywhere at the WCRRF when INVENTORY is present at the WCRRF. Exceptions: (1) Emergency vehicles in the case of any emergency. (2) Equipment with less than 5 gallons of fuel may be used for grounds maintenance and for snow and ice removal when INVENTORY is not present in the WCRRF yard (All INVENTORY is within BUILDING TA-50-0069). (3) Transportation vehicle for the delivery and pickup of WASTE CONTAINERS and LLW **SHALL** be allowed at the WCRRF. [SAC 5.10.1.1]

5.9 Abnormal Operations

The following are abnormal conditions specific to forklift and drum handler operations that are not addressed in area specific emergency response procedures.

Forklift/Drum Handler Operator

- Loose strapping or insufficient banding if pallet is more than 4 feet above ground level:
 - **STOP** operations
 - **WARN** personnel in the immediate vicinity
 - **NOTIFY** Supervision and the Operations Center
 - **SAFELY** remove the pallet from the stack and lower the pallet to ground level
 - **REPAIR** the banding at ground level or **TIGHTEN** the nylon-ratcheting strap

- Forklift and drum handler failure (loss of hydraulics, brakes, power, etc.):
 - **PLACE** load in an “**at rest**” configuration
 - **WARN** others in the immediate area
 - **SECURE** the forklift and drum handler by shutting down, using wheel chocks, ropes, and barriers if available
 - **NOTIFY** Supervision and the Operations Center
 - **TAG OUT** forklift and drum handler with a “Danger Do Not Use” tag or an “Out of Service” tag

6. POST-PERFORMANCE ACTIVITY

6.1 Activity Closeout

Forklift/Drum Handler Operator

- [1] **RECORD** name, signature, Z#, and date on the applicable attachments (Attachment 1 and/or 2).
- [2] **IF** Attachment 3 was generated,
THEN FORWARD copies of the applicable attachments (Attachments 1, 2, and/or 3) to the applicable Operations Center and the EWMO Maintenance Manager.

SOM/SOS/PIC

- [3] **IF** abnormal conditions were identified during the performance of this procedure,
THEN INITIATE actions to correct the deficiency/discrepancy, such as generating a Nonconformance Report or Issues Management process and **DOCUMENT** actions taken in the Comments Section of the applicable attachment.

6.2 Records Processing

SOM/SOS/PIC

Records generated while performing this procedure must be processed and maintained in accordance with EP-AP-10003, Records Management.

Record Name	QA Record	Non-QA Record
Attachment 1, EWMO Forklift Inspection Logsheet	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attachment 2, EWMO Drum Handler Inspection Logsheet	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attachment 3, Form 1569, Defective Equipment Report for Forklifts and Powered Industrial Trucks	<input checked="" type="checkbox"/>	<input type="checkbox"/>

7. REFERENCES

ABD-WFM-002, Technical Safety Requirements (TSRs) for Technical Area 54, Area G

ABD-WFM-006, Technical Safety Requirements (TSRs) for Waste Characterization,
Reduction, and Repackaging Facility (WCRRF)

ABD-WFM-008, Technical Safety Requirements for the Radioassay and Nondestructive Assay
Testing (RANT) Site

EP-AP-10003, Records Management

EWMO-AP-0112, EWMO Pre-Job Briefings

EWMO-AP-20059, EWMO Watchbill Administration

EWMO-DOP-20085, EWMO Industrial Truck and Equipment Refueling and Recharging

P101-4, Forklift and Powered Industrial Trucks

P101-18, Procedure for Pause/Stop Work

P121, Radiation Protection

P300, Integrated Work Management

P315, Conduct of Operations Manual







P322-4, Issues Management

P330-6, Nonconformance Reporting

APPENDIX 1

Page 1 of 1

EXAMPLE FORKLIFT AND DRUM HANDLER SPOTTER HAND SIGNALS

 <p>Raise the Tines. With forearm vertical, forefinger pointing up, move hand in small horizontal circle.</p>	 <p>Lower the Tines. With arm extended, palm down, lower arm vertically.</p>
 <p>Tilt Mast Back. With forearm vertical, thumb extended, jerk thumb over shoulder.</p>	 <p>Tilt Mast Forward. With arm extended, thumb down, lower arm vertically.</p>
 <p>Move Tines in Direction Finger Points. With arm extended, palm down, point forefinger in direction of movement.</p>	 <p>Stop. Extend both arms, palms down.</p>

APPENDIX 2

Page 1 of 1

**MAXIMUM LIFTING CAPACITY AND LOAD CENTER
CALCULATOR AID AND INSTRUCTIONS**

NOTE *This is an aid only and is not considered a quality record and can be discarded after use.*

1. **REVIEW** the Manufacturer's capacity plate to obtain the max lifting capacity at a given rated distance, and **RECORD** in the Worksheet below.
2. **MULTIPLY** the max lifting capacity by the rated distance, in inches, to obtain the inch pound total and, **RECORD** the information in the Worksheet below.
3. **USING** load center listed in the worksheet **DIVIDE** the extended load distances into the inch pounds established to obtain the decreased lifting capacity of forklift in pounds.

Forklift Reduced Maximum Lifting Capacity Worksheet

	<i>Maximum Lifting capacity on Manufacturer Capacity Plate (Example: 5,000 lbs. X 24 in. = 120,000 in-lb.)</i>
Maximum Lifting Capacity _____ X _____ Rated Distance = _____ <i>in-lb.</i>	
@ 30 inches	Inch pounds divided by rated distance = _____ pounds
@ 36 inches	Inch pounds divided by rated distance = _____ pounds
@ 48 inches	Inch pounds divided by rated distance = _____ pounds
@ 60 inches	Inch pounds divided by rated distance = _____ pounds

EXAMPLE Given a maximum lifting capacity of 4,000 pounds, AND
A rated distance of 30 inches, THEN
The maximum lifting capacity is (30 in. x 4,000 lbs.) = 120,000 in-lb.
With a load center @ 48 inches, the Reduced Maximum Lifting Capacity is:

$$\frac{120,000 \text{ in-lb.}}{48 \text{ in.}} = 2,500 \text{ lbs.}$$

ATTACHMENT 1

Page 1 of 2

EWMO FORKLIFT INSPECTION LOGSHEET

5.1[1] Forklift Name: _____ Equipment No.: _____ TA: _____
TA/Bldg.: _____ Hour-meter Reading: _____ (as applicable)
Next PM Due Date: _____

5.1[2] Forklift Type: ☐ Gas ☐ Diesel ☐ LP ☐ Electric

Section 1. Forklifts Visual Inspection (all forklifts)	
Fork	No hairline cracks, broken, or cracked Fastening pins operable, no worn forks
Tires	No cracks in the side walls or tread No flat spots No separation from rim (hard rubber tires only) Proper air pressure (visual check for low or flat)
Mast	Backrest/Carriage in place No excessive wear, or damage on chains and pulleys Limit switches and/or mechanical stops in place and operable Hydraulics (no visual leaks or damaged seals)
Fire Extinguisher (If Equipped)	Inspection tag attached and current Displays fully charged (in green) Displays Hazardous Material Identification System Label (e.g., A,B,C type) or is listed on fire extinguisher manufacturer tag
Mirror (if equipped)	Exterior <u>not</u> cracked, broken or damaged
Cab Glass (if equipped)	Glass <u>not</u> broken, cracked, missing, or shattered
Cab Doors (if equipped)	Operable, shut, latches working properly
Roll Over Protection or Overhead guard	<u>Not</u> bent, or deformed
Seat Belts	Operable
Tags and Placards	Equipped with a Manufacturer's Tag for operation and safe lifting capacity of equipment If equipped with <u>other than factory installed attachments</u> , information is available to the operator through (label, placard or paper copy) that provides operator with information on maximum lifting capacity of forklift with add-on attachment
Annual Inspection Tag	Attached and current
Section 2. Forklifts Operational Checks (all forklifts)	
Mast Controls	Up, Down, Tilt, Side Shift are operable and default in a neutral position
Drive Controls	Forward, Reverse, Park are operable
Horn	Operable
Backup Alarm	Operable
Emergency & Service Brakes	Operable
Gauges and Control Console Components	Operable
Section 3. Gas, Diesel, LP (as applicable)	
Fluid Levels	Adequate Fuel (Gas, Diesel, LP)
Driving Lights	Headlights, turn signals, brake lights operable
LP Tanks (as applicable)	LP tank is properly secured and positioned in cradle with alignment notch down

ATTACHMENT 1

Page 2 of 2

EWMO FORKLIFT INSPECTION LOGSHEET

Section 4. Electric (as applicable)			
Battery Charge	Sufficient charge for work activities		
Warning Beacon	Yellow beacon for indoor use (as applicable) operational		
5.1[3] Equipment satisfies the inspection criteria:		<input type="checkbox"/> SAT	<input type="checkbox"/> UNSAT
Comments: _____			
5.1[5]/6.1[1]		Shift: <input type="checkbox"/> Days	<input type="checkbox"/> PMs <input type="checkbox"/> Mids
Inspection Performed By: _____		_____/_____/_____	
Name (print)		Signature	Z# Inspection Date

ATTACHMENT 2

Page 1 of 1

EWMO DRUM HANDLER INSPECTION LOGSHEET

5.2[1] Drum Handler Name/Model: _____ Equipment No.: _____ TA: _____
Bldg./Area: _____ Hour-meter Reading: _____ (if applicable)
Next PM Due Date: _____

Section 1. Drum Handler Visual Inspection (all drum handlers)	
Tires	No cracks in the side walls or tread No flat spots No separation from rim (hard rubber tires only)
Mast	No excessive wear, or damage on chains and pulleys Limit switches and/or mechanical stops in place and operable Hydraulics (no visual leaks or damaged seals)
Fire Extinguisher (If Equipped)	Inspection tag attached (Current) Displays fully charged (in green) Displays Hazardous Material Identification System Label (e.g., A,B,C type) or is listed on fire extinguisher manufacturer tag
Tags and Placards	Equipped with a Manufacturer's Tag for operation and safe lifting capacity of Equipment If equipped with other than factory installed attachments, information is available to the operator through (label, placard or paper copy) that provides operator with information on maximum lifting capacity of forklift with add-on attachment
Annual Inspection Tag	Attached and current
Section 2. Drum Handler Operational Checks (all drum handlers)	
Mast Controls	Up, Down, Rotation are operable and default in a neutral position
Drive Controls	Forward, Reverse, Operable
Horn	Operable
Backup Alarm	Operable
Emergency & Service Brakes	Operable
Gauges and Control Console Components	Operable
Drum Jaws	Operable no signs of wear (as applicable)
Parrot Beak	Operable no signs of wear (as applicable)
Emergency Stop Switch reverse switch	Operable (changes direction away from the operator)
Section 3. Electric	
Battery Charge	Sufficient for work activities
Warning Beacon	Yellow beacon for indoor use (as applicable) operational
5.2[2] Equipment satisfies the inspection criteria: <input type="checkbox"/> SAT <input type="checkbox"/> UNSAT	
Comments: _____	
5.2[4]/6.1[1] Shift: <input type="checkbox"/> Days <input type="checkbox"/> PMs <input type="checkbox"/> Mids	
Inspection Performed By: _____ / _____ / _____ Name (print) Signature Z# Inspection Date	

ATTACHMENT 3

Page 1 of 1

**FORM 1569, DEFECTIVE EQUIPMENT REPORT FOR FORKLIFTS AND POWERED
INDUSTRIAL TRUCKS**

5.1[4][D]/5.2[3][D]/6.1[2], as applicable, if found defective

Form 1569



**Defective Equipment Report for Forklifts
and Powered Industrial Trucks**

Type of Equipment <input type="checkbox"/> Forklift <input type="checkbox"/> Powered Industrial Truck		Hour Meter Reading	
Equipment Assigned To (Division, Group)	Contact	Phone Number	Property Number
Description of Equipment			Serial Number
Manufacturer's Name			
Location (Technical Area, Building, or Specific Area)			
Specific Location			
Defect or Symptom			
Operating conditions under which defect or symptom was first observed			
Date defect or symptom was first observed			
Additional Information			
Date Submitted for Corrective Action			
Name of Maintenance Contractor Representative		Submitted by (print name and z no.)	
Comments			

SAVE

PRINT

CLEAR FORM

Discovery of an Airborne, Liquid, and/or Solid Material Release or Spill

Effective Date: 9/1/2016

Next Review Date: 9/1/2018

The Responsible Manager has determined that the following organizations' review/concurrence is required for initial procedure release as well as subsequent major revisions. Review documentation is contained in the Document History File:

EWMO Operations	Safety Basis
Engineering	Deployed Environmental Professional
Environmental Compliance Programs	Operator SME
Industrial Hygiene & Safety	Quality Assurance
Radiation Protection	Criticality Safety
WD Operations	Security and Emergency Operations
WD Waste Storage & Shipping	

Classification Review: ☒ Unclassified ☐ UCNI ☐ Classified

<u>Art Crawford</u>	<u>/ 080070</u>	<u>/ /s/ Art Crawford</u>	<u>/ 8/30/2016</u>
Name (print)	Z#	Signature	Date

Responsible Manager, EWMO Deputy Facility Operations Director (FOD)

<u>David Solms</u>	<u>/278703</u>	<u>/ /s/ David Solms</u>	<u>/ 8/31/2016</u>
Name (print)	Z#	Signature	Date

Working Copy / Information Only (circle one)

Initials / Date: /

DOCUMENTATION of PERIODIC REVIEW

Document Number: EWMO-RM-AOP-20201 Revision: 0

Title: Discovery of An Airborne, Liquid, and/or Solid Material or Spill

Due Date for Review: 9-18-2017 RLM: Gail Helm Z#: 114849

Evaluation

1. Perform a Verification of the entire procedure.
2. Perform a Validation of the entire procedure.

Evaluation Results

	YES	NO
3. Is the document, in its entirety, still needed for operations at the facility? (If No, skip questions 4-7 and select "Cancellation" or "Revision.")	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Is the document technically accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Is the document usable in its current form?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Are the references current and complete? (If No, a Minor revision should be considered.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Does the document satisfy the current format requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

IWD-Equivalent Evaluation Results

	YES	NO	N/A
8. Is the P300 Hazard Grading Matrix for this document still accurate?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. Is the document still acceptable as P300 Part 1, <i>Activity Specific Information</i> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Is this document still acceptable as P300 Part 2, <i>Work-Area Information</i> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. Is this document still acceptable as P300 Part 3, <i>Validation and Work Release Information</i> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. Is this document still acceptable as P300 Part 4, <i>Post-Job Review</i> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

13. Based on this evaluation, the following action is required.

- ☒ None The document is extendable in accordance with its periodic review cycle.
☐ Revision Initiate a revision in accordance with the governing procedure.
☐ Cancellation Initiate cancellation in accordance with the governing procedure.

14. Periodic Review Evaluation Performed By:

Gary Mally / /s/ Gary Mally / 226235 / 9-18-2017
 Name (print) Signature Z number Date

Comments: No Comments

Responsible Line Manager (RLM) Approval:

Gail M. Helm / /s/ Gail Helm / 114849/ 9-18-2017
 RLM/Representative (print) Signature Z number Date

Facility Operations Director (FOD) Concurrence (if required):

_____ / _____ / _____ / _____
 FOD/Representative (print) Signature Z number Date

LANL

P315, Rev. 6
 Effective Date: 07/08/15

1.0 ENTRY CONDITIONS

- Discovery of an airborne, liquid, and/or solid material release
- Uncontrolled release of hazardous and/or radioactive material into the environment
- Strong chemical odor (e.g., acid, ammonia, liquefied petroleum, gasoline)

2.0 IMMEDIATE RESPONSE ACTIONS

✓	TIME/DATE	#	ACTIONS
Operations Center			
		2.1	<p>ENSURE that personnel have completed the <u>Abnormal Response</u> in accordance with EWMO-BEP-20048, EWMO Division Building Emergency Plan:</p> <ol style="list-style-type: none"> 1. SUSPEND work 2. WARN others 3. ISOLATE the immediate area 4. MOVE AWAY upwind from the area of concern 5. NOTIFY the Operations Center <p>AND OBTAIN event information from the caller (e.g., location, odor, gas, liquid, amount, inside/outside the building or structure.</p> <p>AND DOCUMENT the information on Attachment 1, Narrative/Comments for Discovery of an Airborne, Liquid, and/or Solid Material Release or Spill.</p>
		2.2	NOTIFY personnel of event using the public address system, two-way radio, E-pager, cell phone, and/or face to face.
		2.3	<p>NOTIFY the Shift Operations Manager/Facility Lead (SOM/FL).</p> <p>Name: _____</p>
NOTE The following steps may be performed out of sequence.			
		2.4	NOTIFY support personnel to assist Shift Operations Manager.
Shift Operations Manager/Facility Lead			
<p>NOTE When the Operations Manager is not physically present and/or on shift, the SOM will conduct the minimum notifications up the chain of command.</p>			
		2.5	<p>NOTIFY the applicable Operations Manager of the event, and</p> <p>REQUEST the Operations Manager to notify the FOD.</p>

2.0 IMMEDIATE RESPONSE ACTIONS (continued)

✓	TIME/DATE	#	ACTIONS
		2.6	CONDUCT information gathering, such as the following applicable items: <ul style="list-style-type: none"> • Container number and contents • Inside/outside facility structure • Location and amount • Spills or release • Temporary Limited Area • Weather conditions
		2.7	EVALUATE the event <u>and</u> DEVELOP actions, as applicable AND DOCUMENT actions in the Narrative/Comments section of Attachment 1.
		2.8	IF Emergency Response personnel are required, THEN GO TO EWMO-RM-ERP-20200, EWMO Area Emergency Response <u>and</u> EXIT this procedure.

3.0 SUBSEQUENT ACTIONS

Operations Center			
		3.1	IF actions were developed, THEN IMPLEMENT actions to return area/operations to normal AND DOCUMENT actions in the Narrative/Comments section of Attachment 1.
		3.2	REVIEW Attachment 1 to ensure all necessary information is complete, and SIGN and DATE the attachment.
		3.3	PROCESS the procedure as a quality record in accordance with EP-AP-10003, Records Management.

ATTACHMENT 1

Page 1 of 3

Narrative/Comments for Discovery of an Airborne, Liquid, and/or Solid Material Release or Spill

Notifier's Name/Organization:

Date/Time:

Location of Event:

Assembly Area/Muster Area:

Container ID:

Condition Status Notification: Date:

Time:

Any injuries? NO ☐ YES ☐ If Yes, describe:

Any alarms? NO ☐ YES ☐ If Yes, describe:

Any contamination? NO ☐ YES ☐ If Yes, describe:

ATTACHMENT 1

Page 2 of 3

Narrative/Comments for Discovery of an Airborne, Liquid, and/or Solid Material Release or Spill

Any personnel contamination? NO ☐ YES ☐ If Yes, describe:

Describe operations occurring at time of event:

All personnel accounted for? NO ☐ YES ☐ If No, describe:

Notifications

LAFD:	Date:	Time:
EOSC:	Date:	Time:
Shift Operations Manager:	Date:	Time:
Operations Manager:	Date:	Time:
DSESH Manager:	Date:	Time:
EWMO Engineering Manager:	Date:	Time:
WD-WPE Group Leader:	Date:	Time:
RP-1 Manager:	Date:	Time:
Industrial Hygienist:	Date:	Time:
FOD:	Date:	Time:
ADNHHO:	Date:	Time:
ADEM:	Date:	Time:
ECP-CP:	Date:	Time:
DOE:	Date:	Time:

Completed By:

Printed Name

Signature

Z#

Date/Time

Page 3 of 3

Additional Narrative/Comments

EWMO-RM-AOP-20203, R.0

Severe Weather

Effective Date: 9/16/2016

Next Review Date: 9/16/2017

The Responsible Manager has determined that the following organizations' review/concurrence is required for initial release as well as subsequent major revisions. Review documentation is contained in the Document History File:

EWMO Operations	Safety Basis
Engineering	Deployed Environmental Professional
Environmental Compliance Programs	Operator SME
Industrial Hygiene & Safety	Quality Assurance
Radiation Protection	Security and Emergency Operations
WD Operations	Criticality Safety Officer

Classification Review: ☒ Unclassified ☐ UCNI ☐ Classified

Shawn R. West	/ 233208	/ /s/ Shawn West	/ 9/8/2016
Name (print)	Z#	Signature	Date

Responsible Manager, EWMO Deputy Facility Operations Director (FOD)

David Solms	/278703	/ /s/ David Solms	/ 9/8/2016
Name (print)	Z#	Signature	Date

Working Copy / Information Only (circle one)

Initials / Date: _____ / _____

1.0 ENTRY CONDITIONS

NOTE 1 *Lightning response is captured in the EWMO-BEP-20048, EWMO Division Building Emergency Plan.*

NOTE 2 *Local weather conditions may vary significantly and/or change rapidly. Reports from personnel in the field must be evaluated to guide directed actions.*

When directed by LANL Emergency Management and Response or the FOD. Additionally, when weather threatens personnel or equipment safety, such as:

- Flooding
- Winds sustained at 25 miles per hour and greater and any wind gusts at 35 miles per hour and greater
- Rain, snow or hail storm

2.0 IMMEDIATE RESPONSE ACTIONS

✓	TIME/DATE	#	ACTIONS
Operations Center			
		2.1	<p>ENSURE that personnel have completed the <u>Notification Response</u> in accordance with EWMO-BEP-20048, EWMO Division Building Emergency Plan</p> <p>AND:</p> <ol style="list-style-type: none"> 1. NOTIFY the Operations Center. 2. WARN others. 3. WAIT for directions from the Operations Center and FL/IC. <p>Narrative/Comments:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
		2.3	<p>NOTIFY the Shift Operations Manager/Facility Lead (SOM/FL).</p> <p>Name: _____</p>
		2.2	<p>NOTIFY personnel of event using available communications systems, e.g., public address system, two-way radios, pagers, cell phones, and/or face to face.</p>

2.0 IMMEDIATE RESPONSE ACTIONS (CONTINUED)

✓	TIME/DATE	#	ACTIONS
<i>NOTE The following steps may be performed out of sequence.</i>			
		2.4	NOTIFY support personnel to assist Shift Operations Manager.
Shift Operations Manager/Facility Lead			
<i>NOTE When the Operations Manager is not physically present and/or on shift, the SOM will conduct the minimum notifications up the chain of command.</i>			
		2.5	NOTIFY the applicable Operations Manager of the event, and REQUEST the Operations Manager to notify the FOD.
		2.6	REVIEW operations in progress to assess vulnerability to the weather event of concern. Particular attention should be paid to: <ul style="list-style-type: none"> • Container handling • Crane operations • Personnel working outside • Waste shipments
		2.7	EVALUATE the event and DEVELOP actions as applicable.

3.0 SUBSEQUENT ACTIONS

Operations Center			
		3.1	IF actions were developed, THEN IMPLEMENT actions to return area/operations to normal. Actions: <hr/> <hr/> <hr/> <hr/>
		3.2	PROCESS the procedure as a quality record in accordance with EP-AP-10003, Records Management .

Document No.: EWMO-RM-AOP-20203

Revision: 0

Effective Date: 9/16/2016

Page: 4 of 4

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UET

Narrative/Comments:

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Completed By:

Printed Name
Signature
Z#
Date/Time

Printed Name

Signature

 $Z\#$

Date/Time

Waste Container Questionable Integrity

Effective Date: 9/9/2016

Next Review Date: 9/9/2018

The Responsible Manager has determined that the following organizations' review/concurrence is required for initial release as well as subsequent major revisions. Review documentation is contained in the Document History File:

EWMO Operations Engineering Environmental Compliance Programs Industrial Hygiene & Safety Radiation Protection WD Operations WD Waste Storage & Shipping	Safety Basis Deployed Environmental Professional Operator SME Quality Assurance Security and Emergency Operations Criticality Safety Officer
--	---

Classification Review: ☒ Unclassified ☐ UCNI ☐ Classified

Art Crawford / 080070 / /s/ Art Crawford / 9/8/2016

Name (print) Z# Signature Date

Responsible Manager, EWMO Deputy Facility Operations Director (FOD)

David Solms / 278703 / /s/ David Solms / 9/8/2016

Name (print) Z# Signature Date

Working Copy / Information Only (circle one)

Initials / Date: /

DOCUMENTATION of PERIODIC REVIEW

Document Number: EWMO-RM-AOP-20204 Revision: 0

Title: Waste Container Questionable Integrity

Due Date for Review: 9-18-2017 RLM: Gail Helm Z#: 114849

Evaluation

1. Perform a Verification of the entire procedure.
2. Perform a Validation of the entire procedure.

Evaluation Results

	YES	NO
3. Is the document, in its entirety, still needed for operations at the facility? (If No, skip questions 4-7 and select "Cancellation" or "Revision.")	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Is the document technically accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Is the document usable in its current form?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Are the references current and complete? (If No, a Minor revision should be considered.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Does the document satisfy the current format requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

IWD-Equivalent Evaluation Results

	YES	NO	N/A
8. Is the P300 Hazard Grading Matrix for this document still accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the document still acceptable as P300 Part 1, <i>Activity Specific Information</i> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Is this document still acceptable as P300 Part 2, <i>Work-Area Information</i> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. Is this document still acceptable as P300 Part 3, <i>Validation and Work Release Information</i> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. Is this document still acceptable as P300 Part 4, <i>Post-Job Review</i> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

13. Based on this evaluation, the following action is required.
- | | |
|--|--|
| <input checked="" type="checkbox"/> None | The document is extendable in accordance with its periodic review cycle. |
| <input type="checkbox"/> Revision | Initiate a revision in accordance with the governing procedure. |
| <input type="checkbox"/> Cancellation | Initiate cancellation in accordance with the governing procedure. |

14. Periodic Review Evaluation Performed By:

<u>Gary Mally</u>	<u>/s/ Gary Mally</u>	<u>/ 226235</u>	<u>/ 9-18-2017</u>
Name (print)	Signature	Z number	Date

Comments: No Comments

Responsible Line Manager (RLM) Approval:

<u>Gail M. Helm</u>	<u>/s/ Gail Helm</u>	<u>/114849/</u>	<u>9-18-2017</u>
RLM/Representative (print)	Signature	Z number	Date

Facility Operations Director (FOD) Concurrence (if required):

<u>/</u>	<u>/</u>	<u>/</u>
FOD/Representative (print)	Signature	Z number
		Date

LANL

P315, Rev. 6
Effective Date: 07/08/15

1.0 ENTRY CONDITIONS

- Visual indication of a fallen/dropped waste container
- Visual inspection of a waste container indicates an unanticipated loss of waste container integrity, for example; missing or broken filter, puncture, excessive corrosion, missing drum locking ring, external contamination (i.e., chemical or radioactive)
- Visual indication of a bulging waste drum
- Visual indication of a bulging inner waste drum

2.0 IMMEDIATE RESPONSE ACTIONS

✓	TIME/DATE	#	ACTIONS
Operations Center			
		2.1	<p>ENSURE that personnel have completed the <u>Abnormal Response</u> in accordance with EWMO-BEP-20048, EWMO Division Building Emergency Plan;</p> <ol style="list-style-type: none"> 1. SUSPEND work 2. WARN others 3. ISOLATE the immediate area 4. MOVE AWAY upwind from the area of concern 5. NOTIFY the Operations Center <p>AND OBTAIN incident information from the caller (e.g., location, position, container information, visual damage to exterior of container, leaking, personnel injury, inside/outside building/structure).</p> <p>AND DOCUMENT the information on Attachment 1, Narrative/Comments for Waste Container Questionable Integrity.</p>
		2.2	NOTIFY personnel of event using available communications systems such as the public address system, two-way radio, E-pager, cell phone, and/or face to face.
		2.3	<p>NOTIFY the Shift Operations Manager/Facility Lead (SOM/FL).</p> <p>Name: _____</p>
NOTE <i>The following steps may be performed out of sequence.</i>			
		2.4	NOTIFY support personnel to assist Shift Operations Manager. (e.g., Environmental, Safety and Health, Engineering, and Waste Coordinator)

2.0 IMMEDIATE RESPONSE ACTIONS (continued)

✓	TIME/DATE	#	ACTIONS
Shift Operations Manager/Facility Lead			
NOTE <i>When the Operations Manager is not physically present and/or on shift, the SOM will conduct the minimum notifications up the chain of command.</i>			
		2.5	NOTIFY the applicable Operations Manager of the event, and REQUEST the Operations Manager to notify the FOD.
		2.6	CONDUCT information gathering, such as the following applicable items: <ul style="list-style-type: none"> • Container number and contents • Spills/release • Temporary Limited Area • Weather conditions
		2.7	EVALUATE the event and DEVELOP actions in accordance with the applicable compliance documents (e.g., Safety Basis, RCRA, Radiation Protection).
		2.8	IF Emergency Response personnel are required, THEN GO TO EWMO-RM-ERP-20200, EWMO Area Emergency Response and EXIT this procedure.
Operations Center			
		3.1	IF actions were developed, THEN IMPLEMENT actions to return area/operations to normal AND DOCUMENT the actions in the Narrative/Comments section of Attachment 1.
		3.2	REVIEW Attachment 1 to ensure all necessary information is complete, and SIGN and DATE the attachment.
		3.3	IF there was a solid/liquid/gas spilled or released to the environment, THEN PROVIDE a copy of Attachment 1 to the Deployed Environmental Professional (EWMO-DEP).
		3.4	PROCESS the procedure as a quality record in accordance with EP-AP-10003, Records Management.

Waste Container Questionable Integrity

Document No.: EWMO-RM-AOP-20204

Revision: 0

Effective Date: 9/9/2016

Page: 4 of 6

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ATTACHMENT 1

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Narrative/Comments for Waste Container Questionable Integrity

Notifier's Name/Organization:

Date/Time:

Location of Event:

Assembly Area/Muster Area:

Container ID:

Condition Status Notification: Date:

Time:

Any injuries? NO ☐ YES ☐ If Yes, describe:

Any alarms? NO ☐ YES ☐ If Yes, describe:

Any contamination? NO ☐ YES ☐ If Yes, describe:

Waste Container Questionable Integrity

Document No.: EWMO-RM-AOP-20204

Revision: 0

Effective Date: 9/9/2016

Page: 5 of 6

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ATTACHMENT 1

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Narrative/Comments for Waste Container Questionable IntegrityAny personnel contamination? NO ☐ YES ☐ If Yes, describe:

Describe operations occurring at time of event:

All personnel accounted for? NO ☐ YES ☐ If No, describe:**Notifications**

LAFD:	Date:	Time:
EOSC:	Date:	Time:
Shift Operations Manager:	Date:	Time:
Operations Manager:	Date:	Time:
DSESH Manager:	Date:	Time:
EWMO Engineering Manager:	Date:	Time:
WD-WPE Group Leader:	Date:	Time:
RP-1 Manager:	Date:	Time:
Industrial Hygienist:	Date:	Time:
FOD:	Date:	Time:
ADNHOO:	Date:	Time:
ADEM:	Date:	Time:
ECP-CP:	Date:	Time:
DOE:	Date:	Time

Completed By:

Printed Name

Signature

Z#

Date/Time

UET

ATTACHMENT 1

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Narrative/Comments for Waste Container Questionable Integrity

Additional Narrative/Comments

EWMO Area Emergency Response

Effective Date: April 12, 2017

Next Review Date: April 12, 2018

The Responsible Manager has determined that the following organizations' review/concurrence is required for initial release as well as subsequent major revisions. Review documentation is contained in the Document History File:

TA-54 Operations Manager	TA-54 Shift Operations Manager
WCRRF Operations Manager	WCRRF Shift Operations Manager
Safety Basis	Engineering
Deployed Environmental Professional	WPE Process Engineering
Environmental Compliance Programs	Operations Center Operator SME
Industrial Hygiene & Safety	Quality Assurance
Radiation Protection	Security and Emergency Operations
WD-WT Operations	Criticality Safety Officer
WD-WSS Operations	

Classification Review: ☒ Unclassified ☐ UCNI ☐ Classified

Patrice Stevens	/ 106047	/ /s/ Patrice Stevens	/ 04/12/17
Name (print)	Z#	Signature	Date

Responsible Manager, EWMO Deputy Facility Operations Director (FOD)

David Solms	/ 278703	/ /s/ David Solms	/ 04/12/2017
Name (print)	Z#	Signature	Date

Working Copy / Information Only (circle one)

Initials / Date: _____ / _____

1.0 ENTRY CONDITIONS

- Request is made for Emergency Response personnel in support of an emergency
- Visual observation of fire or smoke
- Audible fire alarm
- Manual fire pull station activated
- Utility (water, gas, electricity) outages or leaks (water, fuel, sewer, oil) with significant impact to the facility or the environment
- Situation with the likely potential for involvement of more than one emergency response element
- Chemical reaction, such as smoke, fire, or release of a waste container's internal contents to the atmosphere
- Major injury
- A nitrate salt waste container exhibiting the following conditions:
 - Evidence of heating such as signs of discoloration, paint peeling, or yellowing
 - Evidence of pressurization such as expansion of side walls or rounded bottom or top
 - Signs of smoke or fire from a container
- Notification of an emergency condition from the Emergency Operations Center (EOC), including an after-hours notification

EWMO Area Emergency Response

Document No.: EWMO-RM-ERP-20200

Revision: 2

Effective Date: 04/12/17

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2.0 IMMEDIATE RESPONSE ACTIONS

✓	TIME/DATE	#	ACTIONS
Operations Center			
NOTE <i>Steps 2.1 and 2.2 may be performed in any order and will usually happen in parallel. Initial notification to personnel per Step 2.2 should be made with the information initially available and should not be delayed to gain additional information.</i>			
NOTE <i>If this procedure is entered due to an after-hours emergency, the Shift Operations Manager (SOM) will be the initial person notified and will direct accomplishment of this procedure as appropriate.</i>			
		2.1	ENSURE that personnel have completed the <u>Emergency Response</u> in accordance with EWMO-BEP-20048, EWMO Division Building Emergency Plan: <ol style="list-style-type: none">1. SUSPEND work.2. WARN others.3. ISOLATE the immediate area.4. EVACUATE to assembly area upwind from the incident.5. NOTIFY 911, as appropriate. AND OBTAIN incident information from the caller (e.g., location, entry condition, inside or outside of a structure). AND DOCUMENT the information on Attachment 1, Narrative/Comments for EWMO Area Emergency Response.
		2.2	NOTIFY personnel of incident and/or protective actions using available and appropriate methods including: <ul style="list-style-type: none">• the public address system,• two-way radio,• E-pager,• cell phone, and/or• face to face.
NOTE <i>Steps 2.3 through 2.7 may be performed out of sequence.</i>			
		2.3	NOTIFY the SOM. Name of SOM Notified: _____
		2.4	ENSURE that the Emergency Operations and Support Center (7-6211), Fire Department, and/or 911 are notified and contact information for the SOM/Facility Lead is provided.

2.0 IMMEDIATE RESPONSE ACTIONS (continued)

✓	TIME/DATE	#	ACTIONS																					
		2.5	OBTAIN meteorological data (e.g., wind direction) and, based on emergency conditions, PROVIDE directions on appropriate Assembly Area usage.																					
		2.6	DISPATCH an Operator to meet the Emergency Response vehicles and OPEN access gates if safe to do so.																					
		2.7	PERFORM accountability of personnel in affected area.																					
NOTE Steps 2.8 through 2.14 may be performed out of sequence.																								
NOTE When the Operations Manager is not physically present and/or on shift, the SOM will conduct the minimum notifications up the chain of command.																								
SOM/Facility Lead																								
		2.8	ISSUE protective actions as warranted by the type and severity of the emergency.																					
		2.9	ENSURE adjacent facilities are notified of the event, including protective actions issued to EWMO facilities. Note: the EOC may have already accomplished notification of adjacent facilities. <table><tr><td colspan="3">Adjacent facilities for WCRRF:</td></tr><tr><td></td><td>TA55, RLUOB, RLW (includes construction project)</td><td>7-3330 (TA-55 Ops Center)</td></tr><tr><td colspan="3">Adjacent facilities for RANT:</td></tr><tr><td></td><td>TA-54 Bldgs 1001, 1002, 1003, 1004, 1005</td><td>699-7452 (UI Duty Officer)</td></tr><tr><td></td><td>TA-51 Bldgs 11, 12, 23, 25/26/27, 80/81/82</td><td>699-7452 (UI Duty Officer)</td></tr><tr><td colspan="3">Adjacent facilities for TA-54 (except RANT)</td></tr><tr><td></td><td>None</td><td>n/a</td></tr></table>	Adjacent facilities for WCRRF:				TA55, RLUOB, RLW (includes construction project)	7-3330 (TA-55 Ops Center)	Adjacent facilities for RANT:				TA-54 Bldgs 1001, 1002, 1003, 1004, 1005	699-7452 (UI Duty Officer)		TA-51 Bldgs 11, 12, 23, 25/26/27, 80/81/82	699-7452 (UI Duty Officer)	Adjacent facilities for TA-54 (except RANT)				None	n/a
Adjacent facilities for WCRRF:																								
	TA55, RLUOB, RLW (includes construction project)	7-3330 (TA-55 Ops Center)																						
Adjacent facilities for RANT:																								
	TA-54 Bldgs 1001, 1002, 1003, 1004, 1005	699-7452 (UI Duty Officer)																						
	TA-51 Bldgs 11, 12, 23, 25/26/27, 80/81/82	699-7452 (UI Duty Officer)																						
Adjacent facilities for TA-54 (except RANT)																								
	None	n/a																						
		2.10	NOTIFY the Operations Manager of the event and REQUEST the Operations Manager to contact the following as needed: <ul style="list-style-type: none">• Facilities Operations Director (FOD),• Associate Director of Nuclear and High Hazard Operations (ADNHOO), and• Associate Directorate of Environmental Management (ADEM).																					

2.0 IMMEDIATE RESPONSE ACTIONS (continued)

✓	TIME/DATE	#	ACTIONS
		2.11	<p>NOTIFY the following of the event, as applicable, and REQUEST assistance to evaluate the condition:</p> <ul style="list-style-type: none">• Deployed Environmental Safety Health Services (DESHS) Manager• EWMO Engineering Manager• WD Division Leader and WD-WPE, WD-WT, and/or WD-WSS Group Leaders <p>NOTE <i>If responding to an after-hours event, the SOM will use the EWMO On Call list as necessary to make notifications and direct resources.</i></p> <p>DOCUMENT the date/time of the notification and the name of the person contacted on Attachment 1.</p>
		2.12	<p>BRIEF support personnel and the emergency responders upon arrival to incident site.</p>
		2.13	<p>CONDUCT formal transfer of command and control to the Incident Commander.</p>
		2.14	<p>PROVIDE EWMO resources to support the Incident Commander as requested.</p>

3.0 SUBSEQUENT ACTIONS

SOM/Facility Lead			
✓	TIME/DATE	#	ACTIONS
		3.1	ENSURE that a formal transfer of command and control from the Incident Commander is performed once the emergency has been downgraded.
Operations Center			
		3.2	IF actions were developed after transfer from the Incident Commander, THEN IMPLEMENT actions to return area/operations to normal AND DOCUMENT actions in the Narrative/Comments section of Attachment 1.
		3.3	ATTACH any notes or other documentation generated during the performance of this document to Attachment 1 (e.g., photo of the white board).
		3.4	REVIEW Attachment 1 to ensure all necessary information is complete and SIGN and DATE the attachment.
		3.5	IF there was a solid/liquid/gas spilled or released to the environment, THEN PROVIDE a copy of Attachment 1 to the Deployed Environmental Professional (EWMO-DEP).
		3.6	PROCESS the procedure as a quality record in accordance with EP-AP-10003, Records Management.

EWMO Area Emergency Response

Document No.: EWMO-RM-ERP-20200

Revision: 2

Effective Date: 04/12/17

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ATTACHMENT 1

Page 1 of 3

Narrative/Comments for EWMO Area Emergency Response

Notifier's Name/Organization:

Date/Time:

Location of Event:

Assembly Area/Muster Area:

Container ID:

Condition Status Notification: Date:

Time:

Any injuries? NO ☐ YES ☐ If Yes, describe:

Any alarms? NO ☐ YES ☐ If Yes, describe:

Any area contamination? NO ☐ YES ☐ If Yes, describe:

EWMO Area Emergency Response

Document No.: EWMO-RM-ERP-20200

Revision: 2

Effective Date: 04/12/17

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ATTACHMENT 1

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Narrative/Comments for EWMO Area Emergency Response

Any personnel contamination? NO ☐ YES ☐ If Yes, describe:

Describe operations occurring at time of event:

All personnel accounted for? NO ☐ YES ☐ If No, describe:

Notifications

LAFD:	Date:	Time:
EOSC:	Date:	Time:
Shift Operations Manager:	Date:	Time:
Operations Manager:	Date:	Time:
EDESH-EWMS:	Date:	Time:
Emergency Management:	Date:	Time:
EWMO Engineering Manager:	Date:	Time:
WD Division Leader:	Date:	Time:
WD-WPE Group Leader:	Date:	Time:
WD-WSS Group Leader:	Date:	Time:
WD-WT Group Leader:	Date:	Time:
Health Physics Field Coordinator:	Date:	Time:
Industrial Hygienist:	Date:	Time:
FOD:	Date:	Time:
ADNHHO:	Date:	Time:
ADEM:	Date:	Time:
ECP-CP RCRA Compliance:	Date:	Time:
DOE:	Date:	Time:

ATTACHMENT 1

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Narrative/Comments for EWMO Area Emergency Response

Additional Narrative/Comments

[illegible]

Completed By:

Printed Name	Signature	Z#	Date/Time
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EWMO Division Building Emergency Plan (BEP)

Effective Date: April 10, 2017

Next Review Date: April 10, 2020

The Responsible Manager has determined that the following organizations' review is required for initial procedure release as well as subsequent major revisions. Review documentation is contained in the Document History File.

EWMO Shift Operations Managers	Safety Basis
Engineering	Deployed Security Officer
Environmental Compliance Programs	Fire Protection
Industrial Hygiene & Safety	Operations Center Subject Matter Expert
Quality Assurance	Criticality Safety
Radiation Protection	Shift Operations Supervisors
Emergency Management	WD Operations

Classification Review: ☒ Unclassified ☐ UCNI ☐ Classified

Patrice Stevens	/ 106047	/ /s/ Patrice Stevens	/ 04/06/2017
Name (print)	Z#	Signature	Date

Responsible Manager, EWMO Facility Operations Director

Leslie K. Sonnenberg	/ 290408	/ /s/ Leslie K. Sonnenberg	/ 04/07/2017
Name (print)	Z#	Signature	Date

Working Copy / Information Only (circle one)

Initials / Date: _____ / _____

EWMO Division Building Emergency Plan (BEP)

Document No.: EWMO-BEP-20048

Revision: 1

Effective Date: April 10, 2017

Page: 2 of 48

Reference

REVISION HISTORY

A comprehensive log of changes made to this procedure, including superseded documents and complete revision descriptions, is accessible through the Electronic Document Management System (EDMS). The following log is abridged to one page and includes only the latest revisions.

Document/Rev No.	Issue Date	Action	Description
EP-DIV-BEP-20048, R.1	December 10, 2013	Minor Revision	Revise procedure to remove the OUO designation in accordance with SAFE-1. This revision does not introduce any new hazards.
EP-DIV-BEP-20048, R.2	September 22, 2015	Major Revision	Revised to meet PFITS actions 2015-421-3, 2015-421-6, 2015-424-1, and 2015-421-2. Also updated per P1201-4, LANL Emergency Procedures and Protective Actions. Removed all SWANS Radio references including Appendix 2.
EWMO-BEP-20048, R.0	August 29, 2016	Major Revision	Revised plan as part of WCRRF Resumption activities. Changed "Assembly/Muster Area" to "Assembly Area" throughout. Changed "off-normal" to "abnormal" throughout. Made minor editorial changes. The above global changes are not marked with revision bars. Added information on operator response cards in Section 3. Added 375 PermaCon Nitrate Salt Container Abnormal Response procedure to table in Section 5.3.2. Updated titles in response tables in Sections 5.3.1 and 5.3.2. Moved paragraph in Section 8 for consistency. Updated Sections 12 and 13. Updated Appendixes 1, 3, 7, and 9. Added new Appendixes 10–13. This procedure is a complete rewrite; no revisions bars were used. Replaced "EP-DIV" with "EWMO" in procedure number.
EWMO-BEP-20048, R.1	April 10, 2017	Major Revision	Revised Section 5.8 to include after-hours notification process. Revised Assembly Area Accountability Report from Appendix to Attachment. Updated figures in Appendixes. Added applicable channels to Appendix J. Added EOP descriptions where applicable.

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1. PURPOSE

The Environmental and Waste Management Operations (EWMO) Building Emergency Plan (BEP) captures the Site Emergency Management and Response program requirements from Los Alamos National Laboratory (LANL) P1201-4, Emergency Procedures and Protective Actions, and P315, Conduct of Operations Manual. In addition, the EWMO BEP identifies area-specific response requirements for (1) Technical Area (TA)-50-69 Waste Characterization, Reduction, and Repackaging Facility (WCRRF) complex; (2) TA-54 Areas G, H, J, L and TA-54 Administrative Areas; and (3) TA-54 Radioassay and Nondestructive Testing (RANT) Building 54-38 complex.

The plan also addresses the requirements of the LANL Hazardous Waste Facility Permit. Areas covered by this plan include permitted units that are required to have a Contingency Plan in case of an emergency.

2. SCOPE

EWMO BEP requirements apply to all personnel, subcontractors, tenants, and visitors entering TA-54 Areas G, H, J, L, TA-54 Administrative Areas, RANT, and the WCRRF complex.

This plan does not apply to non-occupied locations at TA-21 and Nuclear Environmental Sites (NES). All work performed at TA-21 and NES will be approved by the Shift Operations Manager (SOM)/Operations Manager (OM) and be scheduled on the Environmental Remediation (ER) Plan of the Day. Accountability and communications will be performed in accordance with the ER Standing Order.

Building residents who are assigned and qualified for escorting visitors assume the responsibility for ensuring that visitors possess the appropriate level of area-specific information (e.g., rules, regulations, exits, evacuation routes, Assembly Areas, area-specific alarms, and response procedures) necessary to respond appropriately in the event of an abnormal or emergency situation. Management has the overall responsibility for personnel accountability during an abnormal/emergency event.

The EWMO BEP will be reviewed on an annual basis and updated as necessary for changes that alter the scope of this document, corrections based on internal and audit findings, emergency drill and exercise lessons learned, external changes in governing standards and references, and changes to facility operations and associated hazards.

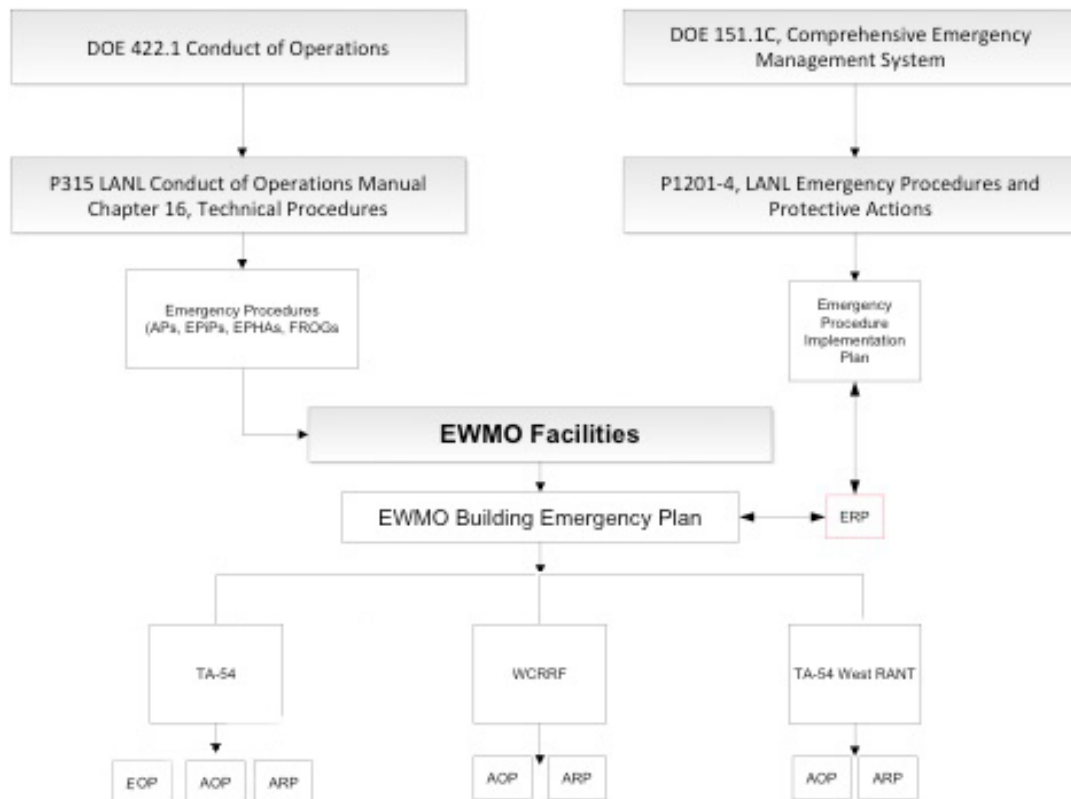
3. OVERVIEW

The EWMO BEP plays a key role in the successful implementation of the Site Emergency Management and Response program, Conduct of Operations, and area-specific response procedures for TA-54, WCRRF, and RANT. This plan also defines roles and responsibilities that are necessary to ensure that the chain of command is established and to ensure that employees respond correctly and consistently in a safe and timely manner when abnormal/emergency situations arise. Section 5, BEP Requirements, provides the requirements, roles, protective equipment, and standardized responses (i.e., Notification, Abnormal, and Emergency) for employees working in EWMO facilities. Sections 6 through 8 provide building/area-specific requirements for WCRRF, TA-54, and RANT.

The standardized responses (Notification, Abnormal, and Emergency) provided in Section 5 are also available in abbreviated format as an operator response card. Appendix I, Abnormal/Emergency Response Card, provides an example of the card that workers may carry with them when working in a EWMO facility.

Figure 1, Emergency Management Process Requirements Flow-Down, illustrates the requirements derived from Department of Energy to LANL and into the EWMO BEP.

FIGURE 1, EMERGENCY MANAGEMENT PROCESS REQUIREMENTS FLOW-DOWN



4. RESPONSIBILITIES

4.1 First Responder at the Awareness Level

The first responder (i.e., first person at the scene of an abnormal/emergency event) at the awareness level has the following responsibilities:

- Stops or suspends work
- Activates the appropriate alarm (i.e., fire alarm; evacuation alarm, where available), as necessary
- Warns others in the immediate area of the abnormal/emergency event
- Secures the incident area to prevent others from entering
- Notifies the Operations Centers, Emergency Operations and Support Center (EOSC) at 7-6211, and/or 911 as appropriate

4.2 Shift Operations Manager/Facility Lead

NOTE *In EWMO facilities, the SOM is the Facility Operations Director (FOD) designee in the field and assumes responsibilities as the Facility Leader (FL). The SOM/FL assumes the role of the FOD in the field. However, an OM may also conduct FL duties as long as the OM is trained, qualified, and knowledgeable of the area operations.*

The SOM/FL is the person in charge of the facility during an abnormal/emergency event and/or up until transfer to the Incident Commander (IC).

The SOM/FL has the following responsibilities:

- Coordinates with the Assembly Area Leader for personnel accountability, conditions, and locations
- Ensures that 911 or EOSC 7-6211 has been called, as necessary
- Updates the OM/designee of the situation
- Evaluates the event and potential hazards and determines whether additional evacuations are necessary
- Works with support personnel to mitigate the event within the EWMO facility

4.2 Shift Operations Manager/Facility Lead (continued)

- Available on-call outside normal working hours including nights, weekends, and holidays when assigned
- Determines appropriate actions for mitigation and notifications during an abnormal event
- Ensures appropriate actions are completed to protect the safety of workers, facility, equipment, records, and the environment
- Authorizes elevation of an abnormal event to an emergency event as necessary
- Makes notifications in accordance with applicable response procedure
- Ensures that employees who may need special assistance are identified and designates personnel to assist these employees
- Ensures accountability of all personnel
- Evaluates the potential hazards and determines the protective actions
- Briefs emergency responders and management personnel during an emergency
- Assists the IC in recovery and reentry efforts
- Transfers command and control to the IC and notifies Operations Center personnel when command and control is transferred, and then becomes a support function to the IC

4.3 Incident Commander

A trained and qualified emergency professional from emergency management, Centerra Los Alamos (the Laboratory's protective force), Los Alamos County Fire Department, Los Alamos County Police Department, or other federal authority having jurisdiction that takes command and control of the event.

- Manages the emergency event until mitigated or transferred back to the SOM/FL
- Authority to call out other response personnel and additional resources
- Assumes the role of IC during an emergency event

4.4 Shift Operations Supervisor (SOS)

- Assists the SOM/FL to determine appropriate actions for mitigation and notifications during abnormal events
- Serves as a resource for the FL/IC and offsite responders during abnormal/emergency events
- Ensures that actions are initiated to protect the safety of site workers, programmatic equipment, records, and the environment
- Ensures that employees who require special assistance during an emergency are supported

4.5 Operations Center Operator

- Notifies personnel through various communication systems (e.g., E-pagers, public address system, land-line, two-way radio, cell phone, and face to face) on initial abnormal/emergency activities at WCRRF, TA-54, and TA-54 West RANT.
- Notifies adjacent facilities of abnormal/emergency events as applicable
- Facilitates command and control functions under the direction of the SOM/FL until turned over to the IC
- Records and logs initial and ongoing notifications in accordance with this plan
- Acts as a liaison between SOM/FL, IC, and the workers
- Coordinates accounting of personnel at the Assembly Areas
- Assists in directing emergency response personnel and equipment to emergency site/areas
- Maintains a written log of abnormal and/or emergency events in the Operations Center log book
- Develops and maintains the Emergency Contact List at the respective Operations Center (Appendices B and D)
- Provides information from the Waste Compliance and Tracking System as needed.

4.6 Support Personnel (Environment, Safety, and Health)

- Receives notification from the Operations Center and/or SOM/FL when an abnormal/emergency event arises as necessary
- Acts as a subject matter expert in their field of expertise (e.g., Industrial Hygiene and Safety) during abnormal/emergency events
- Supports IC or SOM/FL in developing remedial and recovery plans

4.7 Assembly Area Leader

- Assumes command of Assembly Area
- Collects and gathers information from personnel who were at the incident site
- Acts as liaison between the applicable Operations Center and personnel
- Initiates the accountability of personnel
- Makes notification to the applicable Operations Center
- Ensures that personnel who may be radiologically contaminated are segregated from the general population
- Delegates tasks as necessary to employees at the Assembly Area during an emergency event
- Directs vehicle traffic on roadways to ensure emergency response vehicles have an open route to the event area as necessary
- Collects all information from Assembly Area (e.g., rosters, notes generated) and provides to the Operations Center and SOM

4.8 Facility Resident

- Notifies the applicable Operations Center of abnormal/emergency events
- Notifies the applicable Operations Center, EOSC 7-6211, and/or 911 for emergency events
- Responds to abnormal/emergency events in accordance with the requirements of this plan and the facility-specific abnormal/emergency response procedures
- Performs assigned duties from Assembly Area Leader
- Performs escort responsibilities if assigned

4.9 Visitor

- Responds to alarms and notifications in the event of an abnormal/emergency event
- Stays with their designated escort during abnormal/emergency events

5. BEP REQUIREMENTS

5.1 Site Events

The Laboratory has identified the abnormal/emergency events (e.g., chemical, biological, radiological, fire, security, weather, vehicular accident, and personnel injury) that may affect the general Laboratory population, the public, and the environment. These events and their responses are captured in LANL policies and procedures and are listed in Table 1, General Site Events and References.

NOTE *Unless otherwise recommended or directed by EWMO management, events listed in Table 1 are specific events with associated response actions provided in the referenced document.*

TABLE 1, GENERAL SITE EVENTS AND REFERENCES

Event	Reference
Bomb Threat	P1201-4, LANL Emergency Procedures and Protective Actions
Continuity of Operations (COOP)	P1201-4
Fire, Smoke, and Explosion	P1201-4
Flood	P1201-4
Hazardous Substance/Chemical Spill	P1201-4
Lightning	P1201-4
Power Outage	P1201-4
Security Concern	P1201-4
Seismic Event (Earthquake)	P1201-4
SIP/Stay Put	P1201-4
Snow and Ice	P1201-4
Suspicious/Unattended Packages	P1201-4
Unexploded Ordnance	P1201-4
Vehicle Accidents	P101-7, Vehicles and Pedestrian Safety
Work Related Injury, Illness	P102-2, Occupational Medicine
Workplace Violence	P1201-4
Lock Down/Hide Out	P1201-4

5.2 Facility-Specific Procedures

TA-54 and WCRRF Operations Centers maintain controlled copies of the facility-specific response procedures that apply to TA-54, WCRRF, and RANT. Four types of response procedures are used at EWMO facilities in accordance with P315, Conduct of Operations Manual, Section 16, Technical Procedures.

5.2.1 Abnormal Operating Procedure (AOP)

AOPs provide instructions for responding to events that affect several systems, threaten the safety envelope, or require action to mitigate damage.

5.2.2 Alarm Response Procedure (ARP)

ARPs direct the response of personnel to visible and audible alarms.

5.2.3 Emergency Response Procedure (ERP)

ERPs provide instructions for responding to an emergency in progress. ERPs include steps or reference other procedures that define the response to additional casualties that could result from the initial event.

5.2.4 Emergency Operating Procedure (EOP)

Provide instructions for responding to events that result in operation outside the safety envelope.

5.3 Response Actions

EWMO has developed the following three worker response actions.

5.3.1 Notification Response

The notification response is a notification by the worker of an upset condition. Notification response does not require immediately exiting or evacuating. Once the worker has completed the notification response steps, the SOM/FL and/or support team will provide guidance and protective measures for the worker through the applicable Operations Center.

The notification response action is as follows:

1. **NOTIFY** the Operations Center.
2. **WARN** others.
3. **WAIT** for directions from the Operations Center and FL/IC.

5.3.1 Notification Response (continued)

The following events have been categorized as requiring a Notification Response:

TA-54 Area G	RANT	WCRRF
<ul style="list-style-type: none"> • Loss of Electronic Badge Reader • 231 Perma-Con Low D/P Alarm • 375 Perma-Con Low Cell D/P Alarm • Inadequate Fire Department Manning • Severe Weather • Wildland Fire 	<ul style="list-style-type: none"> • Loss of Electronic Badge Reader • Inadequate Fire Department Manning • Severe Weather 	<ul style="list-style-type: none"> • Loss of Electronic Badge Reader • Inadequate Fire Department Manning • WCRRF Loss of Confinement Ventilation System (CVS) • WCRRF Waste Characterization Glovebox (WCG) Fire Suppression Inadvertent Initiation • WCRRF WCG High Pressure Alarms • WCRRF CVS Low Flow Alarms • WCRRF CVS Room 102 High Pressure Alarms • WCRRF CVS HEPA Filter Alarms • WCRRF CVS Glovebox Enclosure High Pressure Alarms • WCRRF TE/TI-001 and 002 Low Temperature Alarms • WCRRF CVS HVA-001 Low Flow Alarm • Severe Weather

5.3.2 Abnormal Response

An abnormal response is an action taken by the worker in a timely manner to ensure she/he backs away from the immediate area (i.e., out of harm's way) until the event can be evaluated and appropriate actions taken to mitigate the situation to prevent it from elevating to an emergency.

The abnormal response steps are:

1. **SUSPEND** work.
2. **WARN** others.
3. **ISOLATE** the immediate area.
4. **MOVE AWAY** upwind from the area of concern.
5. **NOTIFY** the Operations Center.

5.3.2 Abnormal Response (continued)

For Nuclear Criticality Safety Non-Compliance, the following additional response steps **SHALL** be performed by the operator during an abnormal response in accordance with EWMO-RM-AOP-20124, EWMO Nuclear Criticality Safety Requirement Non-Compliance.

1. **DO NOT ATTEMPT** to recover the situation.
2. **CONTROL** access to the area.
3. **MAINTAIN** a minimum distance of at least 15 feet from the incident area.

Management (i.e., Operations Responsible Supervisor and/or Operations Responsible Manager) must work with the Nuclear Criticality Safety Division (NCSD) and other relevant personnel to assess the situation and take no actions until the situation is assessed in accordance with SD130, Nuclear Criticality Safety Program.

Once the worker has performed the abnormal response steps listed above, there are no further actions taken by the worker to mitigate the incident at this time. The SOM/FL and the support team will provide guidance and protective measures to the workers through the applicable Operations Center.

The following list provides events that have been categorized as requiring an abnormal response:

TA-54 Area G	RANT	WCRRF
<ul style="list-style-type: none"> Discovery of an Airborne, Liquid or Solid Material Release or Spill Unplanned Loss of Electrical Power Waste Container Questionable Integrity Nuclear Criticality Safety Non-Compliance Dome 375 Perma-Con and Remediated Nitrate Salt Waste Container Abnormal Conditions 	<ul style="list-style-type: none"> Discovery of an Airborne, Liquid or Solid Material Release or Spill Unplanned Loss of Electrical Power Waste Container Questionable Integrity Nuclear Criticality Safety Non-Compliance 	<ul style="list-style-type: none"> Discovery of an Airborne, Liquid or Solid Material Release or Spill Loss of Glovebox Integrity Unplanned Loss of Electrical Power Waste Container Questionable Integrity Nuclear Criticality Safety Non-Compliance

5.3.3 Emergency Response

An emergency response are actions taken by the operator in the event of an emergency to ensure personnel safety and prompt notification to management and/or Emergency Management. There are no actions taken by the worker to attempt to mitigate the event. Once the worker has performed the emergency response steps listed below, the EOSC, 911, SOM/FL, and the support team will provide guidance and protective measures to the workers through the applicable Operations Center.

The emergency response activities are as follows:

1. **SUSPEND** work.
2. **WARN** others.
3. **ISOLATE** immediate area.
4. **EVACUATE** to an Assembly Area upwind from the incident.
5. **NOTIFY** 911 and the Operations Center.

TA-54 Area G	RANT	WCRRF
<ul style="list-style-type: none"> • EWMO Area Emergency Response <ul style="list-style-type: none"> – Visual observation of fire or smoke – Audible fire alarm – Utility outage or leaks – Chemical reactions such as smoke, fire, or release of a container's internal contents to the atmosphere 	<ul style="list-style-type: none"> • EWMO Area Emergency Response <ul style="list-style-type: none"> – Visual observation of fire or smoke – Audible fire alarm – Utility outage or leaks – Chemical reactions such as smoke, fire, or release of a container's internal contents to the atmosphere 	<ul style="list-style-type: none"> • EWMO Area Emergency Response <ul style="list-style-type: none"> – Visual observation of fire or smoke – Audible fire alarm – Utility outage or leaks – Chemical reactions such as smoke, fire, or release of a container's internal contents to the atmosphere

5.4 **Operations Center Response Protocol**

Upon entering the abnormal or emergency response procedure (i.e., AOP, EOP, or ERP), the SOM will designate roles and responsibilities (record keeping, log keeping, phones, communication systems) to members of the Operations Center. The SOM's primary duty during an abnormal/emergency event is to act as the FL and overall controller of activities and operations in order to maintain attention to the incident. The response procedure is used to document all event activities (e.g., times, dates, actions) and is a quality record. The Operations Center Operator logbook is the official logbook that requires documenting the entry into and exit from the response procedure and other important non-incident specific information. The SOS and SOM are not required to keep logs during the incident. When a facility enters an ARP, the Operations Center will be notified, but other activities at the facilities will continue normal operations, including the Operations Center, unless deemed otherwise by the SOM.

5.5 Assembly Areas

Assembly Areas are designated areas for workers and visitors to gather in the event of an emergency or as directed by the SOM/FL.

The Assembly Areas can be Shelter in Place (SIP) locations, identified in buildings or outside, identified by a large yellow metal box and an orange and white striped wind sock on a pole. Assembly Area maps for WCRRF, TA-54, and RANT are illustrated in the appendices of this procedure. Assembling to a secondary location after initial evacuation, if necessary, is directed by the Operations Center/SOM/FL and/or the IC.

NOTE *Assembly Area equipment and supplies are inspected weekly in accordance with EWMO-DOP-20215, EWMO RCRA Inspections and Notifications.*

Assembly Areas contain at a minimum the following equipment and supplies for use during abnormal/emergency events:

- A clipboard with Assembly Area Accountability Report (see Attachment 1) and two-way radio instructions (Appendix J)
- A copy of this Building Emergency Plan
- Assembly Area lead vest (blue)
- Assembly Area Leader Checklist (instructions for the Assembly Area Leader are shown in Appendix K)
- First aid kit
- Two-way radio
- Wind sock (i.e., orange and white stripes)
- Orange vest (for personnel performing traffic control)

The first person to arrive at the Assembly Area during an emergency who is knowledgeable and willing to perform the duties assigned, acts as the Assembly Area Leader. A checklist is available at each Assembly Area that provides actions to be performed by the Assembly Area Leader. Any rosters, checklists, or other documents completed by the Assembly Area Leader should be turned over to the SOM/FL for records processing after the emergency has ended.

5.6 Accountability

Each worker has the primary responsibility to report to the Assembly Area Leader for accountability.

In EWMO organizations, there are three methods for obtaining personnel accountability during an abnormal/emergency event:

- Badge reader
- Sweep process
- Assembly Area Accountability Reports at Assembly Areas (see Attachment 1)

The electronic badge reader system records and tracks personnel who enter and exit TA-54 Area G, TA-54 Area L, RANT, and WCRRF. If a situation arises where personnel accountability is required, the applicable Operations Center can generate a personnel accountability report from the badge reader system which provides a list of personnel currently logged into a specific area (e.g., TA-54 Areas G, L, RANT, and WCRRF).

The sweep process is used primarily in administration areas and other areas that do not possess an electronic accountability system. When personnel are required to evacuate, each person will perform a visual sweep and verbal communications (e.g., “Is anyone here? The area is being evacuated.”) for personnel in the exit route out of the building. The last person to egress the facility will provide personnel accountability information to the Assembly Area Leader. Once employees assemble at the Assembly Areas, they will complete a sign-in sheet/roster to document their location.

In all three methods, personnel not accounted for will be communicated to the FL/IC.

5.7 Protective Actions

5.7.1 Shelter-In-Place (SIP) Instructions

Employees follow protective actions provided in P1201-4 in additions to the following response at TA-54 Area G:

Personnel in vehicles should roll up windows and close vents that draw in outside air (including heater and air-conditioning vents, if applicable), remain at the location, and notify the Operations Center. Do not leave the location until cleared by IC. Additional instructions for SIP are provided in Appendix L.

The Operations Center will document a call back number for personnel in the buildings and vehicles where SIP is conducted.

5.7.2 Stay Put

Employees follow Stay Put guidance in P1201-4 in addition to the following responses if lightning is sighted:

- Follow the 30/30 rule
- Seek shelter if lightning is within 6 miles (flash to bang count is 30 seconds)
- Move away from any metal objects and grounding system components
- Do not remain upright in an open area or seek shelter near tall, upright objects (e.g., trees), take cover in a vehicle or building
- Shelter for at least 30 minutes after the last lightning strike within 6 miles
- Notify the Operations Center of actions and location

5.8 **Chain of Command Process**

The chain of command is the process that identifies positions, roles, and responsibilities for those individuals who are designated and authorized as the person-in-charge during an abnormal/emergency event.

The FL (e.g., SOM, OM) directs the initial command and control during an abnormal/emergency event. The SOM/FL is a person who possesses the experience and knowledge associated with the area to lead the facility management and workers in an abnormal/emergency response and/or until relieved by the Site IC. An IC will be a designated Emergency Management person who responds as the individual authorized by the institution with the authority and responsibility for command and control at the incident scene.

When the responsibility for command and control is transferred to the IC, the SOM/FL remains available to the IC for area-specific technical support and assistance. A formal transfer of duty from the SOM/FL to the IC is required in a timely manner. Transferring command and control back to the SOM/FL is also a formal process. The level of formality is based upon the severity level of the event.

EWMO utilizes the Operations Center model at WCRRF and TA-54 as part of the EWMO organizational structure. The TA-54 and WCRRF Operations Centers act as a liaison between EWMO management, Facility Lead, IC, Security Emergency and Operations – Emergency Management, and the workers. The TA-54 and WCRRF Operations Centers are staffed during normal operations.

5.8 Chain of Command Process (continued)

The notification process for after-hours is performed through the EWMO on-call list and EOSC 7-6211. EWMO maintains a list of after-hours on-call personnel. On-call personnel include a duty officer (SOM), maintenance coordinator, health and safety professionals, and radiological control technicians (RCTs). EWMO maintains an on-call list of radiation protection supervisors and RCTs who have facility knowledge and access. Requests for after-hours RCT support is managed through the duty officer who coordinates with the RCT supervisor. There are typically 2 or 3 RCTs on call in addition to a supervisor. If the facility RCT resources are not sufficient, additional RCTs may be requested through a central pool managed by radiation protection; however, facility familiarity may be limited.

Additionally, the Emergency Operations Center maintains 24/7 coverage through the EOSC as well as on-call Emergency Managers and other support staff. The County maintains emergency response capability (fire/police department, etc.) which responds 24/7. The protective force also maintains 24/7 coverage and are available to support after-hours emergency response.

FIGURE 2, CHAIN OF COMMAND MODEL

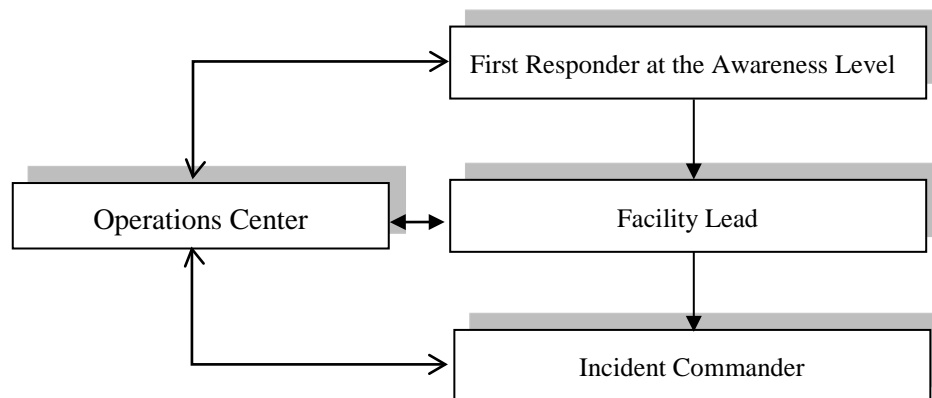
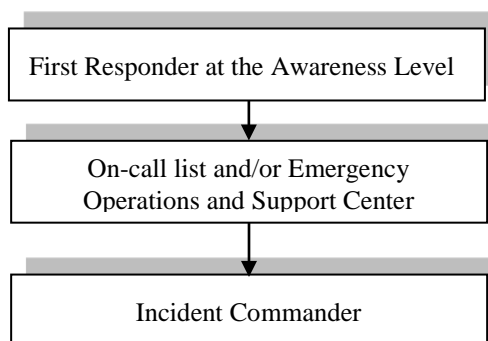


FIGURE 3, CHAIN OF COMMAND MODEL AFTER-HOURS



5.9 EWMO Communication Equipment and Warning Systems

EWMO maintains a variety of communication equipment and warning systems to effectively communicate with personnel and emergency responders when abnormal/emergency situations arise.

Cell Phones – Cell phones may be used for notifying the applicable Operations Center, EOSC 7-6211, and 911. Cell phones may also be set-up to receive emergency text messages, the same as E-Pagers. If cell phones are used to contact 911, callers must communicate their location and the location of the event. Cell phones are a primary means of communication during an abnormal/emergency event.

Conventional Telephones – Conventional telephones and land lines may be used to notify the Operations Center, EOSC, and 911 in the event of an abnormal/emergency event.

Continuous Air Monitor (CAM) – CAMs are used in areas where there is a potential for airborne radioactivity. If airborne radioactivity reaches the alarm set point, the CAM will produce an audible and visual alarm warning personnel that airborne radioactivity is present thus requiring personnel not wearing respiratory protection to exit the area and follow the instructions of a supporting RCT.

E-Pagers – E-pagers are electronic devices set up to receive text messages from a variety of sources (e.g., LANL phone book, LAN line, EOSC) for the purposes of communicating general information to employees. E-Pagers are limited to 140 characters. E-pagers can also be set up to receive broadcast emergency messages from Operations Center and LANL.

Evacuation Alarm – The evacuation alarm provides an audible alarm that can be heard throughout the area to alert workers to evacuate to the nearest upwind Assembly Area. An evacuation alarm system is available at TA-54 Areas G, L, and the Administrative area and an additional independent system for the RANT complex. The evacuation alarm can be activated from several locations as illustrated in Appendix F, TA-54 Areas G and L Evacuation Alarm Button Locations, and Appendix H, RANT Evacuation Alarm Button Locations. Any worker who determines an emergency situation may endanger workers in the area may activate the evacuation alarm. The evacuation alarm is a local alarm and is not connected to Station 7.

5.9 EWMO Communication Equipment and Warning Systems (continued)

Fire Alarms – Fire alarm systems and warning devices are engineered for facilities and a structure’s specific needs (e.g., sprinkler head, heat sensors, and manual pull station). Fire alarms emit an audible long whooping tone that warns personnel in the immediate area to evacuate to the nearest upwind Assembly Area and the alarm transmits and signals to Station 7. See Sections 6, 7, and 8 for area-specific fire system information.

Public Address (PA) System – PA systems are installed in the TA-54 and RANT facilities to provide a means for broadcasting audio communication to employees for abnormal/emergency events. Use of the PA for non-emergency announcements SHALL require approval from the Operations Center and the SOM.

Two-Way Radios – Two-way radios are another method to communicate between Assembly Areas, SOS, Operations Center, SOM/FL and EOSC. Each Assembly Area is equipped with a two-way radio.

Wind Sock – Wind socks are strategically placed throughout LANL site to provide a visual means for employees to determine the wind direction. There are two different colors schemes. Wind socks that are solid orange are placed throughout the site in areas that are populated with workers that would require a reference point to determine wind direction. Wind socks that are orange with white strips denote the location of an Assembly Area. Wind socks are especially important when an abnormal/emergency event occurs which requires employees to quickly determine wind direction for the purposes of staying upwind from the event to prevent unnecessary exposure to potential hazardous materials.

5.10 Support Personnel

Support personnel are subject matter experts in their field who assist the SOM/FL or IC during an abnormal/emergency event as necessary.

The following personnel groups may support the FL/IC in an abnormal/emergency event:

- Industrial Safety and Hygiene
- Radiation Protection

Additional organizations that may provide assistance are below:

- Criticality Safety Analyst*
- Criticality Safety Officer*
- Emergency Management
- Engineering
- Environmental
- Hazardous Waste
- Maintenance
- NCSD*

5.10 Support Personnel (continued)

- On-Site Transportation
- Operations Manager
- Safety Basis
- Security
- Utilities
- Waste Coordinator

* If an abnormal/emergency event that involves a potential or real criticality safety infraction, SOM/FL or IC is required to contact NCSD to provide assistance with development of emergency actions.

5.11 Emergency Access Control

During an emergency, saving life **SHALL** take precedence. Emergency personnel **SHALL** be allowed to enter the area without delay. Personnel **SHALL** not leave the incident area unless directed to do so by the IC.

5.12 Adjacent Facilities

Abnormal/emergency events have the potential to impact adjacent facilities (e.g., response vehicles, road closures). Notification to adjacent facilities will normally be accomplished by the Operations Center, SOM/FL, and/or the EOSC.

5.13 EWMO Abnormal Event Notification Process

The first communication is defined as Initial Notification. During an abnormal/emergency event, the initial notification from the first responder to the Operations Center and/or 911 initiates the process. The Operations Center will in turn notify the SOM.

The SOM/FL is responsible for notifying the OM who in turn will at a minimum notify the FOD; Environmental, Safety, and Health Manager; and the Project Manager.

Communications up the chain of command are required in accordance with P322-3.

5.14 Recovery Plan

The recovery plan is a process to determine actions required to return the facility/area to normal operations. The Recovery Manager will develop the requirements for resuming normal operations. A graded approach to the level of formality should be applied based upon the type of emergency and hazards involved; extent of damage to facility, equipment, and environment; cause of the emergency; and actions required to prevent a re-occurrence. For an abnormal event, the SOM/FL has the authorization to return operations to normal.

If the Duty Emergency Manager has categorized the emergency as an Operational Emergency, reentry and return to normal operations will be at the discretion of the Emergency Director at the EOSC. The FOD will generally be appointed as the Recovery Manager for returning the facility to normal operations.

When an emergency is over, then the IC will declare that the emergency has ended and direct that the “All Clear” be announced.

- Only the IC may declare an emergency is over
- Each Assembly Area may be released individually
- Some Assembly Areas may be released prior to others if the hazards are localized
- Assembly Area **SHALL** be released only if the release will not endanger personnel or present problems for mitigating the situation

Each event will be evaluated independently for reentry and return to normal operation. Under no circumstances are personnel authorized to reenter the affected area in an emergency unless given the “All Clear” by the IC.

An abnormal/emergency event **SHALL** not be considered over when an alarm is silenced or acknowledged.

6. WCRRF SPECIFIC REQUIREMENTS

The WCRRF Operations Center is the access control point for entry to WCRRF Building TA-50-69 and WCRRF 50-69 yard.

Assembly Areas – The Assembly Areas are illustrated on Appendix C, WCRRF Assembly Area Locations.

Fire Alarms – WCRRF Building TA-50-69 is equipped with automatic fire suppression and manual pull stations to notify personnel of a fire. The automatic and manual stations are connected to the Digital Alarm Communication System (DACS) which in turn will communicate the alarm with Station 7. There is one DACS panel for Building TA-50-69: Fire Alarm Control Panel DACS 1522 (-1).

Fire alarm manual pull stations are distinctive red metal boxes mounted on walls inside Building TA-50-69. In the event of a fire or explosion, personnel should activate the manual fire alarm pull stations and call 911 and the WCRRF Operations Center at 665-2797 or the Maintenance on Call (MOC) pager 500-6965 (after-hours). When an automatic or manual fire manual pull station is activated at WCRRF, the Los Alamos Fire Department (LAFD) is automatically notified of the location. The WCRRF Operations Center will notify personnel of the situation using one or more of the communication systems (two-way radio, e-pagers, cell phones, and/or face to face).

Additional requirements when an abnormal or emergency event occurs:

- If wearing a respirator, do not attempt to remove the respirator until given direction by an RCT.
- If working with classified or sensitive material, and the area is established as a Temporary Limited Area, and if safe to do so, cover up the material prior to exiting the facility and inform the Assembly Area Lead and Supervisor of the situation.
- When working in a facility/structure that is designed with a CVS (e.g., TA-50-69) for the purpose of maintaining a negative differential pressure, employees **SHALL** ensure that one set of personnel airlocks remains closed upon exiting.
- If working in a radiological controlled area during an abnormal event, follow the instructions of an RCT.
- During an emergency event, all personnel who may be potentially contaminated, e.g., wearing Anti-C clothing, should not commingle with other personnel at the Assembly Area prior to being surveyed by an RCT.

7. TA-54 SPECIFIC REQUIREMENTS

TA-54 consists of the TA-54 Administrative Area, and Areas G, H, J, and L. RANT complex is known as TA-54 West RANT and is described in Section 8, RANT Specific Requirements.

The TA-54 Operations Center is the access point for Area G and is located at the entrance of the TA-54 Area G Controlled Area TA-54-315, Room 105. The Operations Center is staffed during day shift (0700 to 1730 hours). The Operations Center may be staffed to support after-hour activities as determined by management. The TA-54 Operations Center maintains a phone number for regular business activities at 665-2735. When notifying the TA-54 Operations Center of an abnormal/emergency event, personnel **SHALL** call **665-1288**. The Operations Center will ensure this phone number receives priority over all other calls.

TA-54 maintains a database of the hazardous constituents contained within the waste at TA-54 Area G. The database is accessible from the Waste Services group and the Information Management group. Emergency Planning and Preparedness maintains Building Run Sheets that contain limited information on hazardous material inventories for the FL/IC and emergency responders.

Fire Alarms – The fire alarms are zoned into five areas in TA-54, which operate independently.

TABLE 2, DIGITAL ALARM COMMUNICATION SYSTEMS IN TA-54

Zone 1, Fire Alarm Control Panel DACS 6148(-1) (located in 54-48)	Structures 54-48, 54-229, 54-230, 54-231, 54-232, 54-289
Zone 2, Fire Alarm Control Panel DACS 6146(-1) (located in 54-412)	Structure 54-412
Zone 3, Fire Alarm Control Panel DACS 6149(-1) (located in 54-11)	Structures 54-2, 54-11, 54-33, 54-49, 54-153, 54-224, 54-273, 54-283, 54-321, 54-323, 54-375, 54-491, 54-1027, 54-1028, 54-1030, 54-1041
Zone 4, Fire Alarm Control Panel DACS 6147(-1) (located in 54-51)	Structure 54-215 (Area L), Admin. Bldgs. 54-37, 54-51, 54-60, 54-245, 54-246, 54-247
Zone 5, Fire Alarm Control Panel DACS 6144 (-1), Structure 54-38	Structure 54-38

7. TA-54 SPECIFIC REQUIREMENTS (continued)

Buildings 54-532 and 54-533 do not have fire alarms. Areas J and H do not possess automated fire alarms systems.

Additional TA-54 requirements are followed during an abnormal or emergency event:

- If wearing a respirator, do not attempt to remove the respirator until given direction by the RCT.
- The location of the safe zone may vary depending on whether the event is inside or outside the facility.
- If working in a radiological controlled area during an abnormal event, follow the instructions of an RCT.
- During an emergency event, all personnel who may be potentially contaminated, e.g., wearing Anti-C clothing, should not commingle with other personnel at the Assembly Area prior to being surveyed by a RCT.
- If working with classified or sensitive material, and the area is established as a Temporary Limited Area, and if safe to do so, cover up the material prior to exiting the facility, and/or inform the Assembly Area Lead of the situation.
- When working in a facility/structure that is designed as a contamination control enclosure (e.g., TA-54-412 Tent, TA-54-231 Perma-Con, and TA-54-0375 Perma-Con), employees **SHALL** ensure that all doors to the contamination control enclosure remain closed upon exiting.

Assembly Areas – TA-54 is divided into eight response zones that correspond to locations where the fire alarm was initiated or activated (see Appendix E, TA-54 Zone Borders, Pickup Points, and Assembly Area Locations). Emergency response zones were developed because of the size of the work areas at TA-54, thus allowing the worker to exit to the nearest upwind Assembly Area and to provide pertinent information to the TA-54 Operations Center for the zone in which the alarm was activated.

7. TA-54 SPECIFIC REQUIREMENTS (continued)

Area G Controlled Area	Zones I – IV
Domes	
Buildings	
Structures	
Area G Operations Center	Zone IV
Main Administrative Area	Zone V
Area L Storage Yard	Zone V
Building 54-532 and 54-533	Zone VI
Area between Area J and Building 54-533	Zone VI
Area J and Area H	Zone VII
Radioassay and Nondestructive Testing Facility (RANT)	Zone VIII

Other Alarms – TA-54 Area G maintains additional alarms (such as Tritium, O2, low flow) in certain areas that warn personnel in the immediate vicinity.

8. RANT SPECIFIC REQUIREMENTS

RANT is equipped with an evacuation alarm system that may be activated from several strategic locations in the RANT facility for the purpose of alerting all employees to evacuate to the nearest upwind Assembly Area (see Appendix G, RANT Assembly Area Locations). This alarm is not connected to Station 7.

Fire Alarm System – RANT Building TA-54-38 is equipped with automatic fire suppression and manual pull stations in the event a fire develops. The automatic and manual stations are connected to DACS which in turn will communicate the alarm with Station 7. There is one DACS panel for Building TA-54-38: Fire Alarm Control Panel DACS 6144 (-1).

Fire alarm manual pull stations are distinctive red metal boxes mounted about 4 feet above the ground on walls inside Building TA-54-38. In the event of a fire or explosion, personnel should activate the manual fire alarm pull stations and notify 911 and call either the TA-54 Operations Center at **665-1288** or the MOC pager **500-6965** (after-hours). The TA-54 Operations Center maintains a phone number for regular business activities at extension **665-2735**. When an automatic or manual pull station is activated at RANT, the LAFD is automatically notified of the location. The TA-54 Operations Center will notify personnel of the situation using one or more communication systems (e.g., PA, two-way radio, e-pagers, cell phones, and/or face to face).

Additional RANT requirements are followed during an abnormal or emergency event:

- Workers in a facility/structure that is designed with ventilation (e.g., TA-54-38) for the purpose of personnel comfort (e.g., heating, cooling) **SHALL** ensure that exterior doors of the facility are closed upon exiting during an abnormal event.
- Alarms are considered actual unless notified by TA-54 Operations Center or FL.
- Personnel who are trained and qualified to use fire extinguishers may attempt to mitigate small incipient fires.
- If working in a radiological controlled area during an abnormal event, follow the instructions of an RCT.
- During an emergency event, all personnel who may be potentially contaminated should not commingle with other personnel at the Assembly Area prior to being surveyed by an RCT.

9. TRAINING

Workers will be trained to the information in this BEP as determined by analysis to be commensurate with their job, access, and duty requirements.

10. RECORD PROCESSING

Records generated while performing this procedure must be processed and maintained in accordance with EP-AP-10003, Records Management.

Record Name	QA Record	Non-QA Record
Assembly Area Rosters	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Assembly Area Checklists	<input checked="" type="checkbox"/>	<input type="checkbox"/>

11. REFERENCES

EP-AP-10003, Records Management

EWMO-DOP-20215, EWMO RCRA Inspections and Notifications

LANL Hazardous Waste Facility Permit, Section 2.11, Contingency Plan, and Attachment D, Contingency Plan

P101-7, Vehicle and Pedestrian Safety

P102-2, Occupational Injury and Illness Reporting and Investigation

P201-3, Reporting Known and Potential Incidents of Security Concern

P315, Conduct of Operations Manual

P322-3, Performance Improvement for Abnormal Events

P724, Workplace Violence

P1201-4, LANL Emergency Procedures and Protective Actions

SD130, Nuclear Criticality Safety Program

APPENDIX A
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DEFINITIONS AND ACRONYMS

Definitions

Assembly Areas – A designated rallying point away from the work area equipped with communication equipment and first aid supplies. Personnel evacuate to the upwind Assembly Areas in response to emergency situations.

Chain of Command – The chain of command is the formal process of establishing authority to manage an abnormal or emergency event.

Controlled Area – Any area to which access is controlled in order to limit access of the general public to radiation and radioactive materials. A Controlled Area is an area in which elevated radiation and/or contamination levels may exist as a consequence of routine or non-routine site operations.

Emergency Management & Response – A Laboratory organization tasked with directing and coordinating response actions to emergencies throughout the Laboratory.

Emergency Management Group – A Laboratory organization tasked with directing and coordinating response actions to emergencies throughout the Laboratory.

Emergency Operations and Support Center – LANL's Emergency Operations Center runs the 24/7 EOSC staffed by communications specialists and on-call emergency managers, LANL personnel can call the Center for assistance with or information about all non-life-threatening situations that involve abnormal or unusual circumstances.

Facility Leader – The FL is the Facility person in charge of emergency operations until transferred to the incoming IC.

First Responder at the Awareness Level – The first person to become aware of an abnormal/emergency event.

APPENDIX A
Page 2 of 3

DEFINITIONS AND ACRONYMS

Incident Commander – A trained and qualified emergency professional from emergency management, Centerra Los Alamos (the Laboratory’s protective force), Los Alamos County Fire Department, Los Alamos County Police Department, or other federal authority having jurisdiction that takes command and control of the event.

Shelter-in-Place – A protective action taken by personnel to isolate themselves from a hazard.

Spill – An intentional or unintentional release of oil, polycarbonate biphenyls, liquid hazardous substances, or liquid radioactive substances to the environment that is not permitted under Laboratory, state, or federal permits.

Technical Area 54 – Technical Area 54 comprises process and administrative support areas, which includes Areas G, H, J, L, Administrative Areas, and RANT.

Visitor – Any individual, including Laboratory employees or subcontractors, who requires access to a facility but does not have authorized access to the specific area she/he wishes to enter.

APPENDIX A

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DEFINITIONS AND ACRONYMS

Acronyms

AOP	Abnormal Operations Procedure
ARP	Alarm Response Procedure
BEP	Building Emergency Plan
CAM	Continuous Air Monitor
CVS	Confinement Ventilation System
DACS	Digital Alarm Communication System
EOC	Emergency Operations Procedure
ERP	Emergency Response Procedure
EOSC	Emergency Operations and Support Center
ER	Environmental Remediation
EWMO	Environmental and Waste Management Operations
FL	Facility Leader
FOD	Facility Operations Director
IC	Incident Commander
LAFD	Los Alamos Fire Department
MOC	Maintenance On-Call
NCSD	Nuclear Criticality Safety Division
NES	Nuclear Environmental Sites
OM	Operations Manager
PA	Public Address
RANT	Radioassay and Nondestructive Testing Facility
RCT	Radiological Control Technician
SIP	Shelter in Place
SOM	Shift Operations Manager
SOS	Shift Operations Supervisor
TA	Technical Area
WCG	Waste Characterization Glovebox
WCRRF	Waste Characterization, Reduction, and Repackaging Facility

APPENDIX B

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WCRRF TA-50-69 EMERGENCY CONTACT LIST

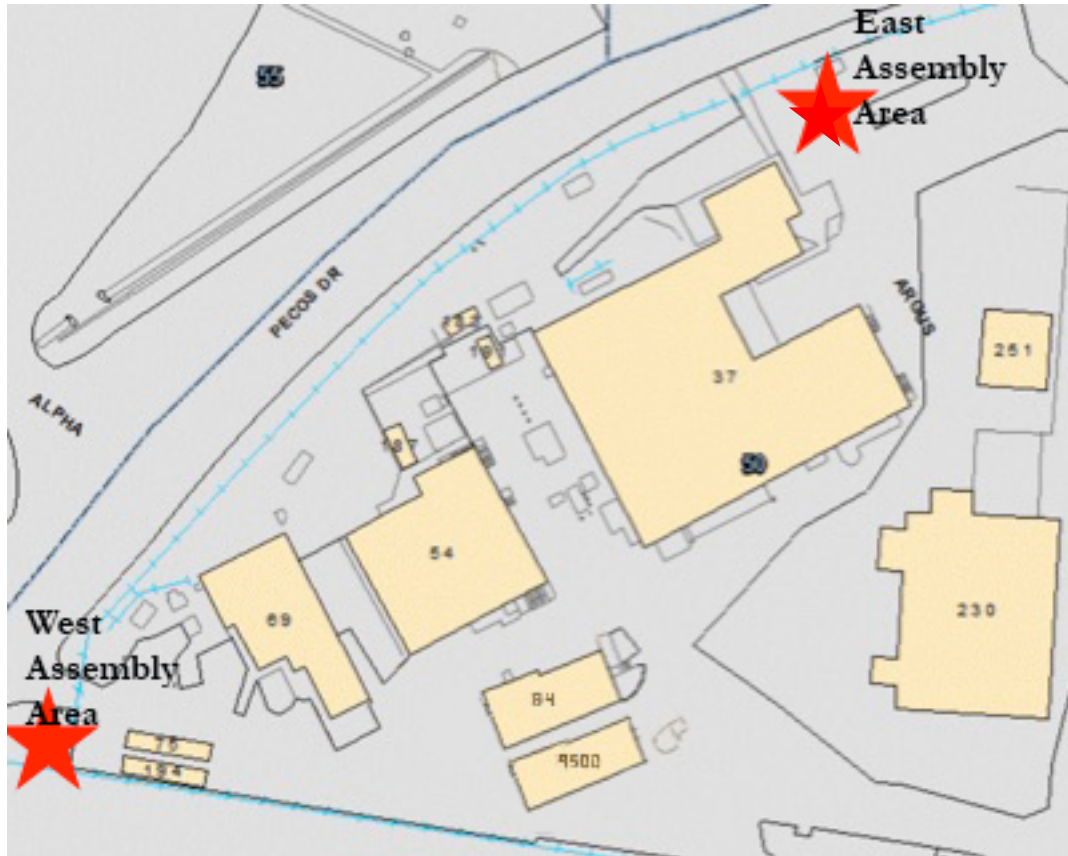
Organizations	Contact(s)	Phone Numbers(s)
Emergency Operations Support Center		7-6211
Engineering		
Deployed Environmental Professional		
EWMO FOD		
Fire/Ambulance		
Fire Protection Engineer		
Health Physics Field Coordinator (HPFC)		
Industrial Hygiene and Safety		
Maintenance Manager		
Nuclear Criticality Safety Division		
Nuclear Criticality Safety Officer		
Nuclear Criticality Safety Analyst		
On-call list		
Occupational Medicine Nurse's Station		
Operations Manager		
Radiation Protection		
Security		
Shift Operations Manager		
Transportation		
Utilities		
Waste Management Coordinator		
*Surrounding facilities contacts		


* Identify surrounding facilities for performing notifications of an abnormal/emergency event

APPENDIX C

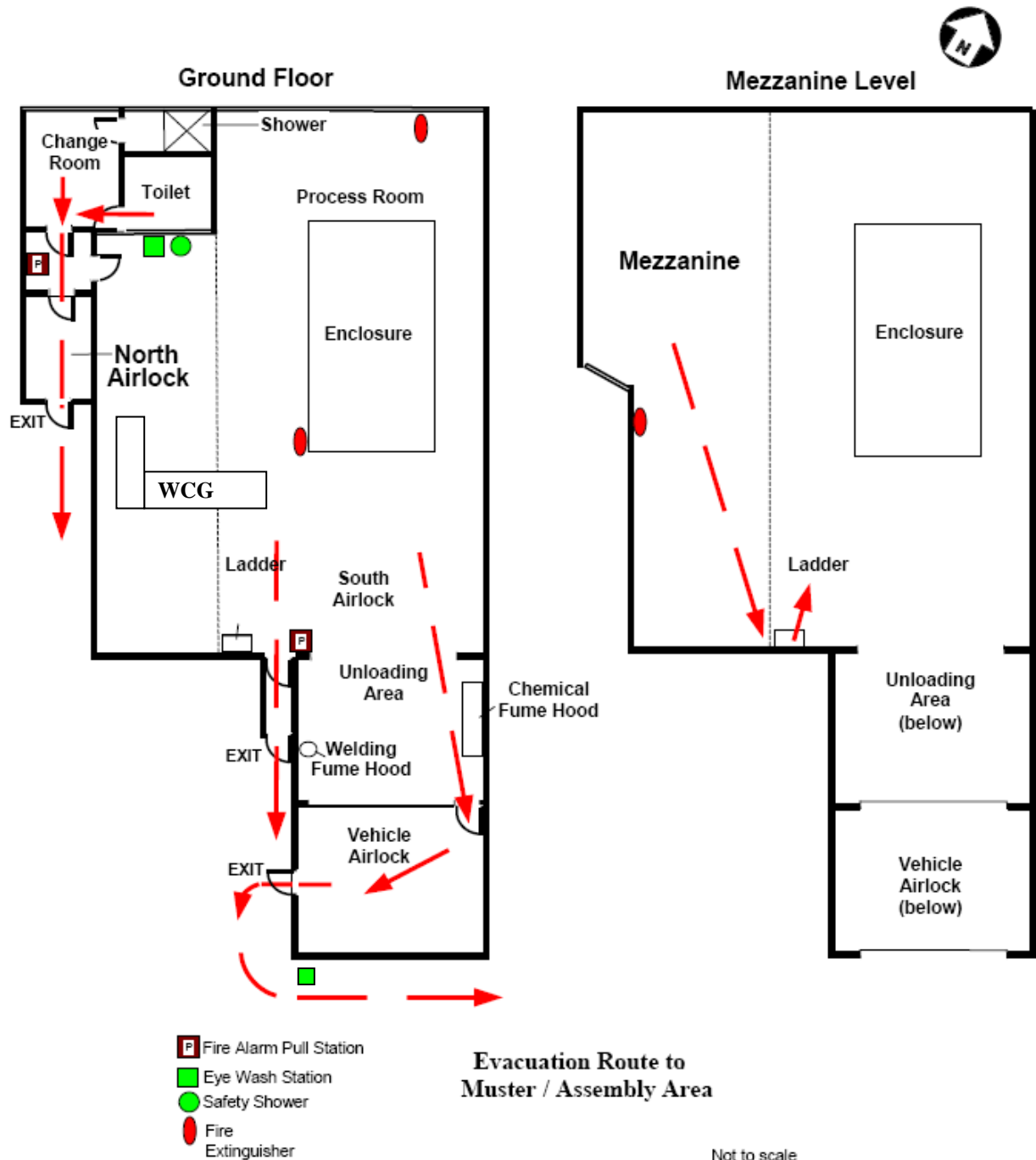
Page 1 of 2

WCRRF ASSEMBLY AREA LOCATIONS AND EVACUATION ROUTES



 Large star denotes Assembly Areas

APPENDIX C
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APPENDIX D

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TA-54 AND RANT EMERGENCY CONTACT LIST

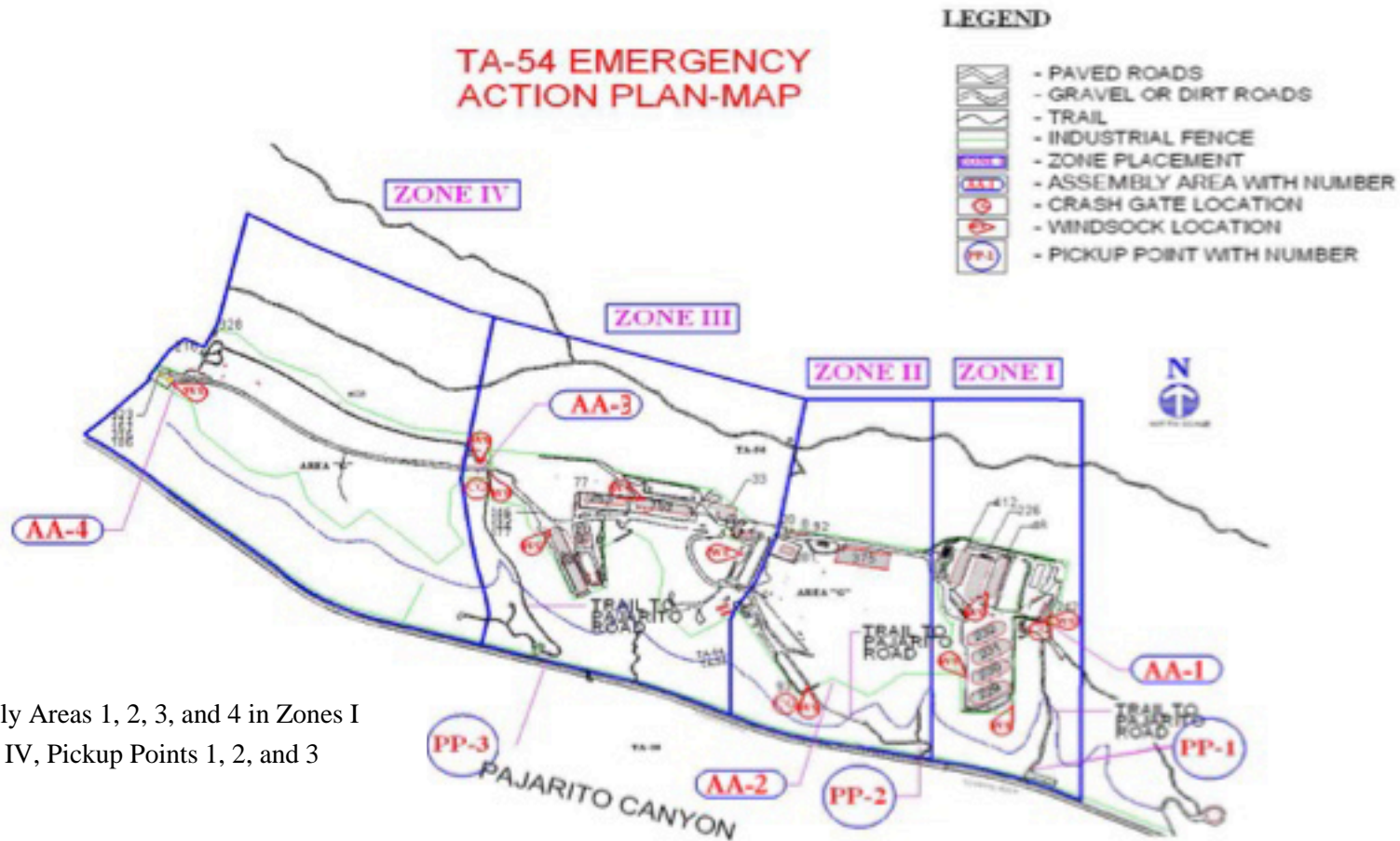
Organizations	Contact(s)	Phone Number(s)
Emergency Operations Support Center		7-6211
Engineering		
Deployed Environmental Professional		
EWMO FOD		
Fire/Ambulance		
Fire Protection Engineer		
Health Physics Field Coordinator (HPFC)		
Industrial Hygiene and Safety		
Maintenance Manager		
Nuclear Criticality Safety Division		
Nuclear Criticality Safety Officer		
Nuclear Criticality Safety Analyst		
On-call list		
Occupational Medicine Nurse's Station		
Operations Manager		
Radiation Protection		
Security		
Shift Operations Manager		
Transportation		
Utilities		
Waste Management Coordinator		
*Surrounding facilities contacts		

* Identify surrounding facilities for performing notifications of an abnormal/emergency event

APPENDIX E

Page 1 of 2

TA-54 ZONE BORDERS, PICKUP POINTS, AND ASSEMBLY AREA LOCATIONS



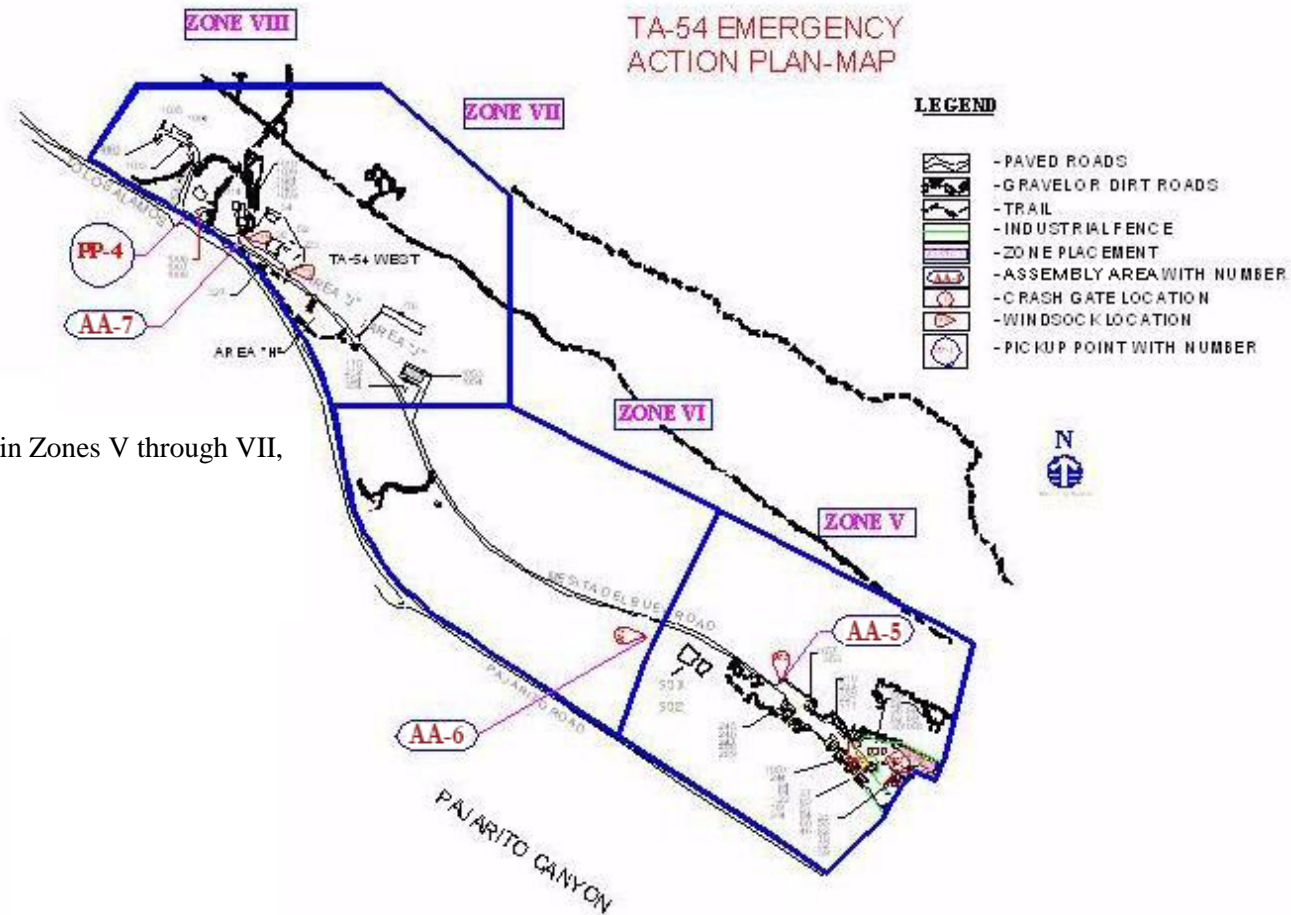
EWMO Division Building Emergency Plan (BEP)

Document No.: EWMO-BEP-20048
Revision: 1
Effective Date: April 10, 2017
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Reference

APPENDIX E

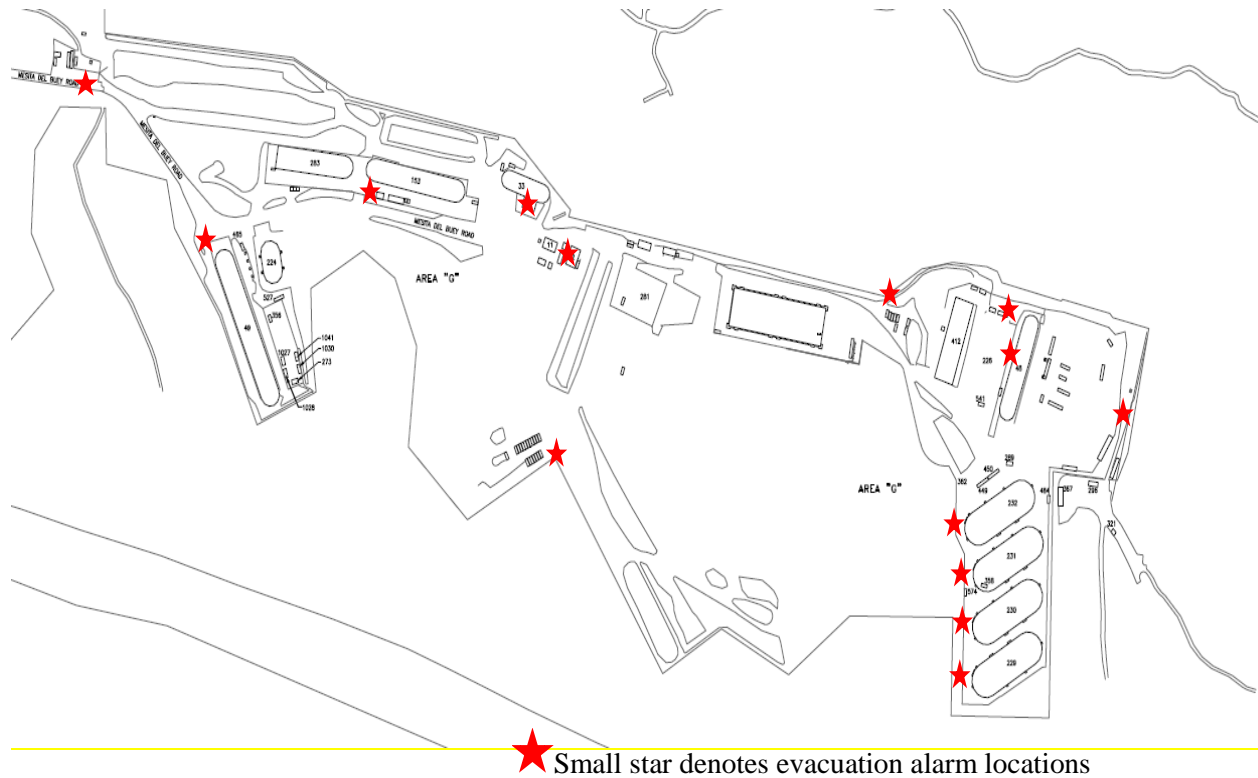
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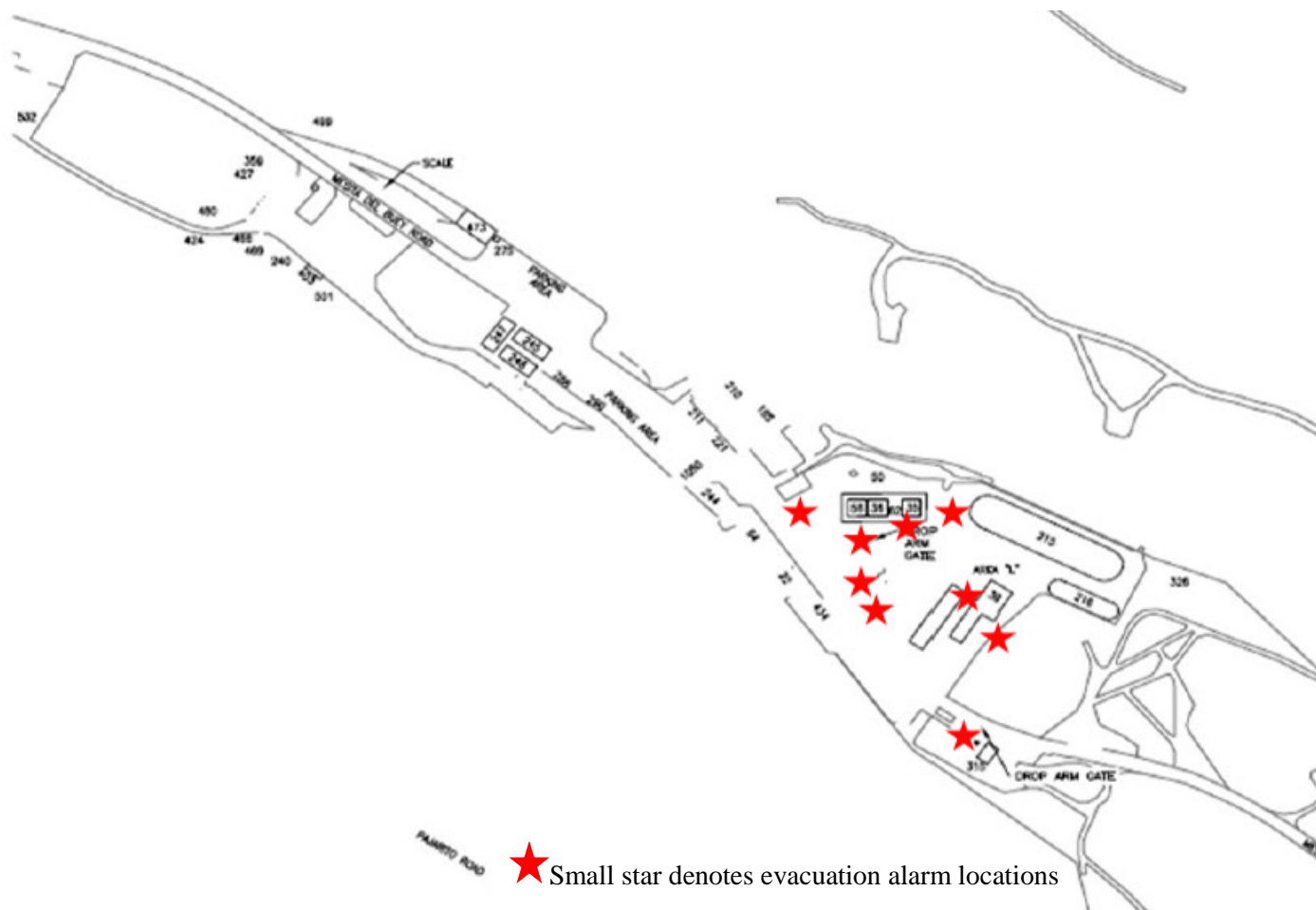
APPENDIX F

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TA-54 AREAS G AND L EVACUATION ALARM BUTTON LOCATIONS



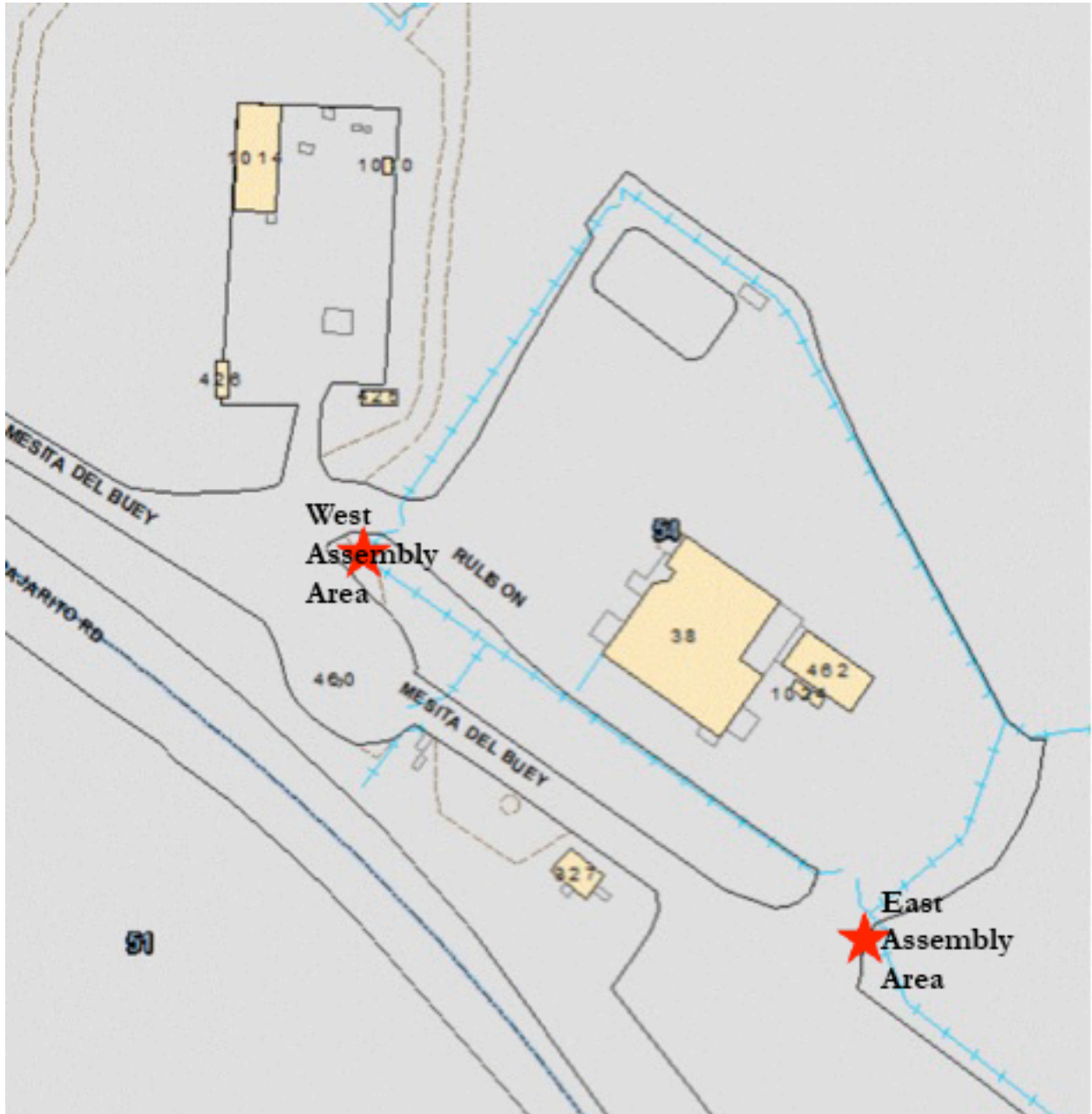
Page 2 of 2




APPENDIX G

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RANT ASSEMBLY AREA LOCATIONS



 Large star denotes Assembly Areas

Page 1 of 1

[illegible]

 Small star denotes evacuation alarm locations

APPENDIX I

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ABNORMAL/EMERGENCY RESPONSE CARD

Front of card:

Abnormal/Emergency Response Immediate Actions		
TA-54 Area G: 5-1288 WCRRF: 5-2797 EOSC: 7-6211		
Notification Event	Abnormal Event	Emergency Event
<ol style="list-style-type: none"> NOTIFY the Operations Center of the event. WARN others. WAIT for direction from the Operations Center and Facility Lead/ Incident Commander. 	<ol style="list-style-type: none"> SUSPEND work. WARN others. ISOLATE immediate area. MOVE AWAY upwind from the area of concern. NOTIFY the Operations Center of the event. 	<ol style="list-style-type: none"> SUSPEND work. WARN others. ISOLATE immediate area. EVACUATE to an Assembly Area upwind from the incident. NOTIFY 911 and the Operations Center of the event.
EWMO-BEP-20048, EWMO Division Building Emergency Plan (BEP) Card		

Back of card:

Examples of Abnormal/Emergency Events		
TA-54 Area G: 5-1288 WCRRF: 5-2797 EOSC: 7-6211		
Notification Event	Abnormal Event	Emergency Event
Severe Weather	Waste Container of Questionable Integrity	Visual Observation of Fire or Audible Fire Alarm
Dangerous Wildlife Sighting	Spill or Release of Airborne, Liquid, or Solid Material	Major Utility Outage or Leak
Unsafe Road Conditions	Criticality Safety Non-Compliance	Explosion
Loss of Badge Reader	Unplanned Loss of Electrical Power	Dangerous Situation
Unsafe Work Observed	CAM Alarm Activation	RNS Container Exhibiting Chemical Reaction
Rev. 4 – 08/29/2016		

APPENDIX J

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ASSEMBLY AREA TWO-WAY RADIO INSTRUCTIONS

When using an Assembly Area two-way radio, repeat-backs are required. A repeat-back consists of the receiving station repeating back the information so that the sender will know that the information has been correctly received. Routine radio traffic is monitored from Operation Centers.

- [1] **TURN** the radio on.
 - [2] **SWITCH** the radio to appropriate Operations Center channel as follows:
 - At TA-54 (including RANT), use Channel 1 (54-OPS)
 - At WCRRF, use Channel 2 (WCRRF)
 - At TWF, use Channel 3 (TWF-OPS)
 - [3] **DEPRESS** the large button on the side of the radio to transmit.
 - [4] **ESTABLISH** communication with the Operation Center. **SPEAK** slowly and clearly.
 - [5] **IF** you do not receive an immediate response,
THEN REMAIN calm and **REPEAT** steps [3] and [4].
 - [6] **WHEN** communication is established,
THEN transmit your name and Assembly Area location and **WAIT** for the Operation Center to ask for additional information.
 - [7] **UPON** request from the Operation Center,
THEN transmit the names and condition of personnel at your Assembly Area (only relevant and essential information should be given; Z# are NOT required to be transmitted unless there is confusion).
- NOTE:** The Operations Center may request shifting to a separate channel to report accountability information. If so, then return to the regular channel when accountability report has been made.

APPENDIX K

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ASSEMBLY AREA LEADER INSTRUCTIONS

NOTE 1 *The first person to arrive at the Assembly Area during an emergency who is knowledgeable and willing to perform the duties assigned, acts as the Assembly Area Leader.*

NOTE 2 *Instructions for using the two-way radio are provided in the Assembly Area box.*

- **DON** the blue vest located in the Assembly Area box.
- **INFORM** personnel that you are the Assembly Area Leader.
- **ENSURE** that potentially contaminated personnel are segregated.
- **RECORD** the name and Z number of all personnel on Attachment 1, Assembly Area Accountability Report.
- **QUESTION** all personnel about personnel accountability and if anyone is believed to be missing.
- **GATHER** information about the emergency event (such as configuration of equipment, smoke, water, medical emergencies, strange odors, etc.) from all personnel.
- **NOTIFY** the applicable Operations Center via landline, cell phone, or radio and **REPORT** the following:
 - Your name
 - Your location
 - Status of personnel (e.g., contamination, injuries)
 - Pertinent information gathered during the evacuation
 - Potentially unaccounted for personnel
 - Wind direction at the Assembly Area
- **MONITOR** the windsock for changes in wind direction.
- **ENSURE** that personnel do not reenter buildings or work areas.
- **ENSURE** that personnel remain at the Assembly Area until the “all clear” is given.
- **TAKE** the Assembly Area Accountability Report to the applicable Operations Center.

Contact Information:

TA-54 Operations Center: **505-665-1288**

WCRRF Operations Center: **505-665-2797**

APPENDIX L

Page 1 of 1

SHELTER IN PLACE INSTRUCTIONS

Shelter in Place

Sheltering is a temporary protective action and should last only a few (1–3) hours at the most.

Upon Notification to Shelter in Place:

- Assign workers to shut all windows (if any) and doors and assemble in a location away from windows and doors (hallway) for Shelter in Place (SIP).
- Turn building thermostats off to stop outside airflow into building. If airflow cannot be stopped, report to the applicable Operations Center/EOSC that airflow is not shut off.
- Isolate workers who enter from the outside at the exits inside the building.
- Do not attempt to relocate unless instructed to relocate by EOSC. (Vehicles in Area G with windows up and air movement turned off are SIP locations.)
- Complete Attachment 1, Assembly Area Accountability Report, and report results to the applicable Operations Center [TA-54 Operations Center: **505-665-1288**; WCRRF Operations Center: **505-665-2797**]/EOSC (7-6211)]. Note: Although Z#'s are recorded for completeness on Attachment 1, only personnel names need to be reported to the Operations Center.
- Follow up with the applicable Operations Center/EOSC every 30 minutes until the event is considered safe.
- Remain in shelter location until the applicable Operations Center/EOSC announces it is safe and the sheltering order has been given the All Clear.

Shelter in Place Order is All Clear:

- Send Attachment 1, Assembly Area Accountability Report, to the applicable Operations Center or SOM/FL.

EWMO Division Building Emergency Plan (BEP)

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Reference

ATTACHMENT 1

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ASSEMBLY AREA ACCOUNTABILITY REPORT

Date:	Time:	Assembly Location:
Assembly Area Leader:		
Reason for Accountability (Fire, SIP, Stay Put, Lock Down/Hide out):		
Print Name	Z number	
1.		
2.		
3.		
4.		
5.		
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Send Roster to the applicable Operations Center

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EWMO-PLAN-20036, R.1

EWMO Snow Removal Plan

Effective Date: 11/17/2017

Next Review Date: 11/17/2020

Hazard Class: ☒ Low ☐ Moderate ☐ High/Complex
Usage Mode: ☒ Reference ☐ UET ☐ Both UET and Reference

The Responsible Manager has determined that the following organizations' review is required for initial procedure release as well as subsequent major revisions. Review documentation is contained in the Document History File.

MSS-EWMFO
TA-54 OM
WCRRF OM
Engineering
TA-54 SOM

WCRRF SOM
IHS
RP
QA

Classification Review: ☒ Unclassified ☐ UCNI ☐ Classified

Teri Tingey / 200975 / /s/ Teri Tingey / 10/31/2017

Name (print) Z# Signature Date

Responsible Manager, Acting Facility Operations Director

Stephanie Griego / 140892 / /s/ Stephanie Griego / 11/7/2017

Name (print) Z# Signature Date

Working Copy / Information Only (circle one)

Initials / Date: /

This document fully satisfies the requirements of P300, Integrated Work Management, in order to systematically describe the work activity, the associated hazards, and the controls that **MUST** be employed to mitigate the risks.

REVISION HISTORY

Document No./Revision No.	Issue Date	Action	Description
EP-DIV-PLAN-20036, R.0	February 14, 2012	New	
EP-DIV-PLAN-20036, R.0 IPC-1	November 22, 2013	IPC	Include in Section 4 the TSRs for Area G.
EWMO-PLAN-20036, R.0	November 18, 2016	Major Revision	Revised procedure to implement changes associated with ABD-WFM-006, R2.4 implementation.
EWMO-PLAN-20036, R.1	November 17, 2017	Major Revision	Revise procedure to implement changes to WCRRF TSRs Rev. 2.6. Updated language in WCRRF SAC 5.10.1.1 in Section 4. Deleted building 46-120 in Section 2 as it no longer exists. Updated "R&G" to "HERG." Deleted (\$) on TSR requirements in Precaution and Limitations section in accordance with Engineering criteria. Made minor editorial changes.

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1. PURPOSE

This plan describes the process for snow removal at Environmental and Waste Management Operations (EWMO)-supported facilities to ensure that snow is safely removed from roadways, parking areas, walkways, and areas identified by the applicable Shift Operations Manager (SOM) or Person-in-Charge (PIC).

2. SCOPE

This plan applies to snow removal operations at EWMO-supported facilities, which include the following:

- TA-50, Waste Characterization, Reduction, and Repacking Facility (WCRRF)
- TA-46, Building 46-326
- TA-54, Radioassay and Nondestructive Testing (RANT)
- TA-54, Administrative Areas and Areas G, J, and L

The Utilities and Institutional Facilities (UI) Directorate is primarily responsible for snow removal at LANL facilities in accordance with UI-PLAN-007, Los Alamos National Laboratory Snow and Ice Control Plan. UI Heavy Equipment Roads and Grounds (HERG) crews are dispatched by the UI HERG Operations Manager when weather conditions require snow and ice removal and are responsible for plowing roadways, parking lots, fire lanes, and sidewalks at LANL facilities.

The Maintenance and Site Services (MSS)–Environmental Waste Management Facility Operations (EWMFO) group provides additional snow removal operations at EWMO-supported facilities in accordance with facility-specific work orders.

Walkways and building entrances may be cleared of snow and/or treated with deicer by EWMO facility personnel, as necessary.

3. RESPONSIBILITIES

3.1 MSS-EWMO Maintenance Manager

- Ensures that snow removal workers (e.g., teamsters and laborers) are current on all required training.
- Ensures that equipment and supplies are available.
- Ensures that equipment is inspected.

3.2 EWMO Operations Manager

- Initiates this plan as necessary due to severe weather conditions.

3.3 Shift Operations Managers (SOM)

- Prioritizes EWMO-supported facilities for snow removal based on conditions, work priorities, and resources.
- Contacts the EWMO-supported facility PICs to initiate snow removal operations.
- Determines the activities that may be performed during snow conditions.

3.4 Persons-in-Charge (PICs)

- Notifies snow removal teams to initiate snow removal operations.
- Coordinates on-site snow removal operations.

4. PRECAUTIONS AND LIMITATIONS

Fuel and/or vehicle restrictions **SHALL** be followed during snow removal operations at WCRRF, RANT, and Area G:

- WCRRF
SAC 5.10.1.1, Vehicle Fuel Restrictions: Propane, gasoline, or diesel-fueled vehicles shall not be used anywhere at the WCRRF when INVENTORY is present at the WCRRF. Exceptions: (1) Emergency vehicles in the case of any emergency. (2) Equipment with less than 5 gallons of fuel may be used for grounds maintenance and for snow and ice removal when INVENTORY is not present in the WCRRF yard (All INVENTORY is within BUILDING TA-50-0069). (3) Transportation vehicle for the delivery and pickup of WASTE CONTAINERS and LLW SHALL be allowed at the WCRRF.

4. PREACUTIONS AND LIMITATIONS (continued)

- RANT

SAC 5.7.3.B, Vehicle Access Control: The outdoor CONTAINER STORAGE AREA is protected by a combination of the Building TA-54-38 location, gates and/or bollards, fencing, and restrictions on vehicles allowed in the RANT SITE. Gates and/or bollards and fencing will control vehicle access into and out of the RANT SITE and will only allow electric forklifts, TRUPACT II tractors, Transportation Safety Documents (TSD) approved vehicles, Department of Public Safety (DPS) vehicles, the diesel jockey, and the MLU crane. Exceptions: (1) Emergency vehicles in the case of any emergency; (2) Equipment with less than 5 gal. of fuel may be used for grounds maintenance and for snow and ice removal; (3) Vehicles or equipment to support non-emergency, off-normal conditions addressed in LCO 3.3.

- Area G

SAC 5.7.6: Vehicles with a combustible/flammable liquid inventory greater than 100 gal are required to follow an escort along a designated route. Due to the increased potential for vehicular accident, the vehicle escort **SHALL** ride along inside the snow removal vehicle. The escort must still meet the requirements dictated in AREAG-FO-AP-1190, Access Control for TA-54 Areas G, L, and J, and the driver must still travel along designated routes.

LCO 3.3.1: Vehicles with greater than 100 gal of combustible/flammable liquid inventory **SHALL not** enter a Combustible Restrictive Area (CRA). Vehicles with less than or equal to 100 gal combustible/flammable liquid inventory may access a CRA in accordance with EP-AREAG-FO-AP-1097, TA-54 Area G Combustible/Flammable Liquid Control.

5. SNOW REMOVAL

5.1 Equipment and Supplies

MSS-EWMFO ensures that the following equipment is available for snow removal operations at EWMO-supported facilities, as required:

- Heavy equipment
- All-Terrain Vehicles (ATVs), snow blowers, and riding tractors
- Snow shovels
- Sand and/or deicer

MSS-EWMFO **SHALL** inspect and maintain snow removal equipment to ensure availability during snow events.

Workers' supervisors will provide stabilicers (or equivalent non-slip ice cleats) to laborers, nuclear operators, and waste operators performing snow removal (shoveling paths/clearing doors).

5.2 Mobilization

Snow removal operations are based on weather observations and notifications that LANL snow removal teams are being mobilized.

The MSS-EWMFO Work Execution Manager deploys snow removal teams as required, prioritizing snow removal in accordance with the SOM.

When a snow event begins during normal working hours, the EWMO Facility Operations Director (EWMO-FOD), Maintenance Manager, Operations Managers, SOMs, and PICs will assess the event and mobilize snow crews as necessary.

At TA-54 Area G, the SOM will authorize MSS-EWMFO plows to enter Area G once the TA-54 Operations Center is staffed and Radiological Control Technicians are on duty. PICs will request MSS laborers, nuclear operators, and waste operators trained in snow removal to clear snow from dome doors and other areas as directed by the SOM.

The SOM will determine what activities may be performed in snowy conditions.

5.3 Priority

HERG crews follow a planned priority level for snow removal in accordance with UI-PLAN-007.

Snow removal priorities within each EWMO-supported facility shall be determined by the SOM depending on work priorities and resources and communicated to MSS.

6. RECORDS

None

7. REFERENCES

ABD-WFM-002, Technical Safety Requirements (TSRs) for Technical Area 54, Area G

ABD-WFM-006, Technical Safety Requirements (TSRs) for Waste Characterization, Reduction, and Repacking Facility (WCRRF)

ABD-WFM-008, Technical Safety Requirements (TSRs) for the Radioassay and Nondestructive Testing (RANT) Site

AREAG-FO-AP-1190, Access Control for TA-54 Areas G, L, and J

EP-AREAG-FO-AP-1097, TA-54 Area G Combustible/Flammable Liquid Control

UI-PLAN-007, Los Alamos National Laboratory Snow and Ice Control Plan

Seasonal Facility Preservation Plan (SFPP)

Effective Date: October 13, 2017
Next Review Date: October 13, 2020

The Responsible Manager has determined that the following organizations' review/concurrence is required for the initial document, and for major revisions a same type and level review is required. Review documentation is contained in the Document History File:

MSS-EWMFO Subject Matter Expert
EWMFO-Operations Manager
Engineering Manager

Quality Assurance
EWMFO Shift Operations Manager

Classification Review: ☐ N/A ☒ Unclassified ☐ UCNI ☐ Classified _____

S.B. Fellows	/ 126075	/	/s/ S.B. Fellows	/09/27/17
Name (print)	Z#	Signature	Date	

Responsible Manager: MSS-EWMFO Maintenance Manager

Mark (Barry) Walker	/ 238501	/	/s/ Barry Walker	/ 10/03/17
Name (print)	Z#	Signature	Date	

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Seasonal Facility Preservation Plan

Reference

Document No.: EM-PLAN-20191

Revision: 1

Effective Date: 10/13/2017

Page: 2 of 49

REVISION HISTORY

Refer to the Electronic Document Management System (EDMS) and Document History File (DHF) for a complete record of revisions aligned with this SFPP.

Document Number	Issue Date	Action	Description
EP-DIV-PLAN-20191, R.1	August 11, 2014	Major Revision	Revise plan to add Nuclear Environmental Sites (NES) to scope in accordance with PFITS issue 2014-643. Updated building list in attachments as needed. Added inspection of nitrogen pressure for applicable fire suppression systems in Appendix C (daily cold weather). Made editorial changes as needed.
EP-DIV-PLAN-20191, R.2	October 1, 2015	Major Revision	Revise plan to incorporate updates to attachments, and add additional lines for Maintenance Coordinator sign off. Made editorial changes as needed.
EM-PLAN-20191, R0	September 22, 2016	Major Revision	Revised plan to incorporate seasonal and procedural updates, inclusive of pagination, and editorial corrections. New document number assigned for Doc Control compliance.
EM-PLAN-20191, R1	October 13, 2017	Major Revision	Revision supports a general cleanup of UET Attachments B, C, D and E for clarification and signature call-out. Added TA-54-0589 to Area G footprint (i.e., Trailer Restroom). Rev bars used. No additional steps were added.

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1. PURPOSE

This Seasonal Facility Preservation Plan (SFPP) is used for identifying required Preventive Maintenance (PM) and Corrective Maintenance (CM) actions to ensure safe facility operations of Structures, Systems and Components (SSC) for the purpose of preventing damage resulting from cold/freezing weather, extreme weather, hot/dry weather, high winds, flooding, and wildfires to buildings, equipment, and Laboratory resources maintained by Environment and Waste Management Operations (EWMO) at Los Alamos National Laboratory (LANL). Noteworthy practices and observations will also be documented.

This SFPP has been developed in accordance with AP-MNT-002, *Seasonal Facility Preservation*, and supports NES-DOP-1001, *Nuclear Environmental Sites (NES) In-Service Inspections*, Operations and Maintenance (O&M) Criterion 401, *Freeze Protection*, AP-341-510, *Walkdown and Data Gathering*, AP-MNT-007, *Measurement, Analysis & Reporting of Maintenance Performance*, and P300, *Integrated Work Management*.

2. SCOPE

The scope of this SFPP is seasonal and should be reviewed and revised biannually (i.e., prior to the winter season and prior to the summer season), or on an as-needed basis.

The scope of this SFPP ensures that cold/freezing weather, extreme hot/dry weather, high winds, flooding, and wildfires protection comply with the facility configuration management procedures and are reviewed by facility operations and safety personnel to ensure the facility is maintained in a safe condition protecting the health and safety of the public.

Nuclear facilities managed by EWMO under this SFPP include the Waste Characterization, Reduction, and Repackaging Facility (WCRRF), Technical Area (TA) 54 Area G, Radioassay and Nondestructive Testing (RANT) facility, and Nuclear Environmental Sites (NES).

Notably, the NES' do not have building structures that require specific action to protect against winterization/freeze protection, extreme weather, hot/dry weather, or defensible space. Each NES has an Inventory Isolation System (IIS) consisting of overburden, which is a Safety-Significant (SS) Design Feature (DF) that protects the buried waste inventory from accidents (i.e., external forces such as natural phenomena or inadvertent intrusions). As an SS DF, the IIS has an associated In-Service Inspection (ISI) requirement that ensures degradation, damage, and other issues do not prevent the IIS from performing its safety function.

Performance of NES-DOP-1001 fulfills the requirements of AP-MNT-002 to the extent it can be applied to the NES. As a result, no record is generated from this SFPP for the NES.

3. DEFINITIONS, ACRONYMS AND ABBREVIATIONS

3.1 Definitions

Checklists:	Attachments A – H [Use Each Time (UET)]
Deficiency:	Checklist item that does <u>not</u> meet the established requirements for acceptance and/or is unacceptable (UNSAT), requiring further action.
Facility:	A building, an area within a building, or a group of buildings that are under the responsibility of a facility manager.
Satisfactory (SAT):	Used in checklist determination (S) to indicate that the inspection meets established requirements and/or is acceptable.
Unsatisfactory (UNSAT):	Used in checklist determination (U) to indicate that inspection resulted in a finding and therefore does <u>not</u> meet established requirements and/or is unacceptable (i.e., deficiency).
Weather Stations (WS): (aka....Weather Machine)	Using the “Weather Machine” link (weather.lanl.gov) click on the TA-54 (primary) and/or TA-53 (backup) WS, which are the approved source-base for compiling temperature readings (°F), both current and projected forecasts facilitating SFPP actions.

3.2 Acronyms and Abbreviations

CM	Corrective Maintenance
EWMO	Environmental and Waste Management Operations
F	Fahrenheit
FOD-5	Facility Operations Director 5
FSR	Facility Service Request
LANL	Los Alamos National Laboratory
LPS	Lightning Protection System
MC	Maintenance Coordinator
MM	Maintenance Manager
NCR	Non-Conformance Reporting
O&M	Operations and Maintenance
PM	Preventive Maintenance
PMI	Preventive Maintenance Instruction
POC	Point of Contact
SE	System Engineer
SFPP	Seasonal Facility Preservation Plan
SSC	Structures, Systems, and Components
UET	Use Each Time
WO	Work Order
WS	Weather Station

4. RESPONSIBILITIES

4.1 Maintenance Manager (MM)

- Ensures development and implementation of SFPP at EWMO supported facilities.
- Ensures personnel are briefed on SFPP implementation/use.
- Ensures personnel receive email notifications of SFPP roles and responsibilities.
- Schedules revisions and reviews of SFPP (i.e., winter, summer, or as-needed).
- Evaluates adverse trends and implement SFPP corrective actions.
- Approves checklists (i.e., Attachments) and submits to Records Management per EP-DIR-AP-10003, *Records Management Procedure for ADEP Employees*.
- Ensures new and pre-existing seasonal preservation CM and PM are completed by required dates.

4.2 System Engineer (SE)

Uses seasonal preservation plan considerations from AP-341-510, *Walkdown and Data Gathering*, as a walkdown aide providing feedback to the MM as follows:

- Performs/documents walkdowns of SSCs
- Identifies Vital Safety Systems (VSS) (e.g., SC, SSCs etc.).
- Reviews Work Orders (WOs), work requests, and issues related for SFPP needs, which should include open items and previously corrected deficiencies.
- Evaluates new and in-process projects to identify SFPP issues.
- Supports Work Control Planners with planning of PM and CM WOs in support of SFPP.
- Verifies acceptable results for post-modification/maintenance testing.

4.3 Maintenance Coordinator (MC)

- Implements SFPP for assigned buildings.
- Develops CM WOs supporting the SFPP.
- Notifies MM and PM Coordinator on seasonal preservation PMs for equipment requiring additional seasonal protection, as identified by SEs.
- Ensures WOs are properly coded against equipment numbers.
- Reports seasonal protection deficiencies to MM.
- Signs/dates seasonal checklists including applicable CM and/or PM closeouts, and submits to MM for signatures/concurrence.
- Obtains 5-day weather forecast at the LANL “Weather Machine” (weather.lanl.gov) at the start of the weekly shift. Review the forecast, paying particular attention to forecasted low temperatures, wind speeds, and possibility of rain/snow.

4.3 Maintenance Coordinator (continued)

- Obtains Fire Danger rating from “Inside Los Alamos National Laboratory” website (int.lanl.gov) at the start of the weekly shift. Evaluate weather forecasts and Fire Danger Rating and provide a determination for the week to the Maintenance Point of Contact.
- Notifies MM and initiates response to any increased threats (e.g., cold/freezing, extreme weather, heat, fire, high winds, etc.).
- Trends issues derived from reviews and walkdowns per AP-MNT-007, *Measurement, Analysis & Reporting of Maintenance Performance*, and forwards adverse trends to the EWMO Facility Operations Director (FOD-5) and MM for corrective actions.
- Initiates tenant email notifications (e.g., LANL approved items, seasonal observations for equipment, etc.).

4.4 Maintenance POC and On-Call POC (after hours)

- Responds to off-normal conditions related to seasonal issues in facilities.
- Addresses after hour’s conditions related to seasonal issues in facilities.
- Maintains up-to-date On-Call list with contact information (list provided by FOD).

4.5 Qualified Inspectors

- Performs annual facility checklists / inspections in support of this SFPP. Initials and dates for completed areas, as inspections progress.
- Performs Winter Preparation Checklist (Attachment B) deficiencies by October 1st.
- Performs daily cold weather checklists/inspections when the actual low temperature is $\leq 35^{\circ}\text{F}$ as listed at WS TA-54 or backup WS TA-53. Initial and date for completed areas as inspections progress.
- Sign and date seasonal checklists upon completion of inspections and provide to MC or MM, as required by checklist.
- Records SFPP deficiencies using checklists, and delivers to MC.

4.6 Work Provider

- Performs seasonal preservation work in accordance with P300, *Integrated Work Management*.

5. SEASONAL FACILITY PRESERVATION REQUIREMENTS

At a minimum every Maintenance Coordinator (MC) or qualified inspector shall ensure the Maintenance Requirements in Section 6.2 of the Operations and Maintenance (O&M) Criterion 401, *Freeze Protection*, and requirements listed in Section 5 of this SFPP are followed for facilities within their areas of responsibility.

Additional requirements for specific facilities are provided in Attachments B through G.

Inspections and self-assessments of cold/freezing weather, extreme weather, hot/dry weather, high winds, flooding, and wildfires protection programs are to be appropriately scheduled to ensure correction of deficiencies and preparation of other compensatory measures prior to the beginning of each seasonal weather condition.

It is difficult to predict high winds or flooding; therefore, the required inspections for those conditions are scheduled when the conditions occur.

Weather Stations (WS): When validating and/or performing SFPP actions, use approved WS (see Section 3.1, *Definitions*).

Checklists: Attachments A – G (see §6, *Records*) shall be completed using a graded approach, and by entering **S** (SAT) or **U** (UNSAT), as applicable (see §3.1, *Definitions*).

No log or checklist included in this SFPP will be signed as completed until all deficiencies are sufficiently addressed, and corrected to the satisfaction of this SFPP.

Scheduling: Inspections and self-assessments of cold/freezing weather, extreme weather, hot/dry weather, high winds, flooding, and wildfires protection programs shall be appropriately scheduled to ensure correction of deficiencies and preparation of other compensatory measures to protect the facilities prior to the beginning of each seasonal weather condition.

Deficiencies: All deficiencies identified during the performance of this SFPP will be recorded (summarized) using Attachment A, *Deficiency Log*. See Section 3.1, *Definitions*.

All deficiencies identified will be reported to the Operations Manager and MM.

If deficiency can be immediately resolved, then a description of actions performed will be included in the resolution field of Attachment A, which should indicate deficiency is fixed.

Deficiency that cannot be immediately resolved will be recorded in Attachment A. The proposed resolution will be identified by a brief description and will reference the applicable Footprints issue number, Work Order (WO) number, Facility Service Request (FSR), Non-Conformance Reporting (NCR) or any other official method for issue tracking used. All identified deficiencies will be prioritized, corrected as required, and tracked to closure.

Deficiency closeout date will be recorded when all corrective actions have been completed.

SFPP Requisites: Ensure §5.1 is addressed prior to performing any inspections.

The following documents are required reading in the performance of this SFPP.

- O&M Criterion 401, *Freeze Protection*
- AP-MNT-002, *Integrated Facility Management Program – Seasonal Facility Preservation*

5.1 Planning and Coordination

- Ensure inspection and self-assessment activities are appropriately scheduled.
- Ensure the current revision of this SFPP is available for use in EDMS.
- Ensure a Radiological Work Permit (RWP) has been issued and inspectors have been briefed.
- Ensure plan-specific equipment detailed in Attachment H, *Plan Specific Equipment Listing* is available for use in completion of Attachments B through G.

5.2 Winter Weather Considerations

($\leq 35^{\circ}\text{F}$ as listed at WS TA-54 or backup WS TA-53)

NOTE *See Attachments B and C for facility specific winter and cold weather responsibilities.*

- Ensure work orders are properly coded against equipment numbers to facilitate subsequent restoration planning.
- Ensure checklists are completed as follows:
 - Attachment B, *EWMO Winter Preparation Checklist*: Review and perform actions by October 1st of each year.
 - Attachment C, *EWMO Cold Weather Daily Checklist*: To be completed each day the actual low temperature is $\leq 35^{\circ}\text{F}$ as listed at TA-54 WS.
 - Attachments B and C checklists have been reviewed for completeness, and signed by both the MM and FOD.
- Ensure CM Work Orders and mitigating actions required for cold weather are executed and completed prior to October 1st.
- Ensure air intakes, windows, doors, and other access ways that could provide abnormal inflows of cold air are secured.
- Ensure a general inspection is performed on wet pipe sprinklers, visually inspect ceiling tiles for water damage, and investigate potential water leaks.
- Ensure the following storage area considerations are addressed:
 - Outside storage pads and unheated storage areas are inspected to verify there are no materials susceptible to freeze damage.
 - Materials susceptible to freeze damage needs to be moved to heated areas.
 - Contact appropriate personnel to relocate subject equipment or materials.
 - MC / MM notified if work orders are necessary.
- Ensure the following heating system(s) considerations are addressed:
 - PMs are completed, deficiencies verified, and the MC / MM notified if work orders are necessary.
 - Facility boiler inspections and PMs are completed prior to cold weather. Verify deficiencies, and notify the MC to initiate a work order for repairs.
 - Power is on and the heating system(s) has been turned on and properly functioning.

5.2 Winter Weather Considerations (continued)

- Areas requiring portable heating units are obtain through the MM.
- Portable auxiliary heaters for emergency / unplanned use have been inspected, tested, and staged. Identified sources to obtain more have been documented, if needed.
- Personnel are trained in the use of portable heaters.
- Ensure main water supply cutoffs for each facility are identified, tested, and readily accessible to emergency personnel responding to a freeze/thaw incident.
- Ensure employees identify and report any suspected problem with heating or other cold weather protection equipment (e.g., un-insulated piping, inoperable/isolated steam tracing, electrical trace heaters inoperable or turned off, broken windows, or holes in exterior walls).
- Ensure heat sources (e.g., heat tape, portable heaters) are installed in areas susceptible to freezing.
- Fire Suppression System considerations:
 - Ensure conditions in fire protection sprinkler equipment rooms are monitored, maintaining a temperature above 40°F.
 - Ensure Drum Drip PMs in TA-54-0033, -0215, -0230, -0231, -0375 and -0412 have been verified, and completed as scheduled.
 - Inspect dry-pipe sprinkler systems requiring proper air pressure check.
- Snow and Ice Removal considerations:
 - Ensure roof drains, canals, gutters and downspouts are free from obstruction.
 - Address snow and ice buildup at each entrance and exit door (e.g., overhanging ice, roofs, doorways, water on floor).
 - Remove obstructions that can hinder snowplow operations (e.g., lumber, barrels, etc.).
 - Identify locations of sand barrels filled with dry sand or snowmelt for applying to walkways.
- Hazardous Material Considerations:
 - Unheated process lines shall be drained and purged to prevent spills (line breakage) due to freezing temperatures during non-production periods.
 - Ensure piping and valves (e.g., check valves and dump valves) are properly insulated.

NOTE *The minimum maintenance requirements in §6.2 of the O&M Criterion 401 are addressed under the facility's Computerized Maintenance Management System program.*

5.3 Cold Weather Considerations

(≤ 35°F as listed at WS TA-54 or backup WS TA-53)

NOTE *See Attachment C, Cold Weather Daily Checklist for facility-specific responsibilities.*

- Prior to cold weather, verify the electrical wall heating units in fire riser rooms and bathrooms are turned on.

5.3 Cold Weather Considerations (continued)

- Walkdown of components inside heated buildings located in isolated/out of the way areas, such as attics, closets and close to exterior walls.
- Maintain extra heating for systems susceptible to freezing, particularly around fire sprinkler piping.
- Identify location of sand barrels filled with dry sand or snowmelt for exterior walkways.
- Ensure personnel have been briefed in the safe use of portable heaters.
- Inspect, test, and stage portable auxiliary heaters.
- Maintain extra heat for sprinkler piping particularly at night.
- Monitor infrequently visited areas and spaces where sprinkler piping is located to ensure drafts or air leaks are minimized.
- Maintain call-in list(s) for maintenance personnel.
- Maintain a small water flow to sink faucets when water lines are susceptible to freezing.
- Ensure adequate cold weather clothing, tools, and equipment is available during inspections for FOD-5 facilities. Contact the MM for approval.

5.4 Extreme Weather Considerations

($\leq 5^{\circ}\text{F}$ as listed at WS TA-54 or backup WS TA-53)

NOTE *Use Attachment C to incorporate the following actions, when applicable ($\leq 5^{\circ}\text{F}$).*

- Increase inspection frequency to twice daily on work days, and once daily on non-work days.
- Inspectors shall draw a line in the boxes provided on the attachment to allow initials for two inspections daily, as needed.
- Sand/ice remover shall be staged in high traffic areas.
- Additional heating capacity shall be provided to systems vulnerable to freeze damage. Consult System Engineering to assist in identifying systems requiring additional heating.
- Ventilation intakes shall be kept clear of snow and ice buildup.

5.5 Summer Weather Considerations

NOTE *See Attachment D, Summer Preparation Checklist for facility-specific responsibilities.*

- Ensure cooling systems are cleaned, serviced, and functionally tested.
- Ensure storage locations for materials susceptible to evaporation and possible explosion due to direct sunlight or extreme heat are evaluated.
- Coordinate with Operations Management:
 - The safe shutdown of equipment vulnerable to extreme hot/dry weather.
 - Possible restriction of certain activities due to extreme heat/humidity.

5.6 Wildfire Prevention Considerations

Requirements for wildfires only apply when a LANL wildfire alert/notification is announced.

NOTE See Attachment E, *EWMO Wildfire Prevention Annual Checklist for facility-specific responsibilities*.

- Where appropriate, secure HVAC and other vulnerable systems to isolate SSCs from soot and smoke damage.
- Ensure safe shutdown of vulnerable equipment.
- Evacuate Laboratory and local areas as appropriate.
- Construct/increase firebreaks around the facility.
- Conduct combustible loading and weed/vegetation control inspections.
- Restrict operations that involve heat (i.e., welding, burning, sparks, etc.).
- Restrict fire hazards (i.e., smoking, etc.).
- Ample supplies of portable fire extinguishers are available.
- All exits are kept clear.

5.7 Flooding Considerations

Attachment F, *EWMO Flooding Annual Checklist* is to be completed annually, prior to June 1.

NOTE See Attachment F, *EWMO Flooding Annual Checklist for facility-specific responsibilities*.

- Storm drains and other drainage paths are free from obstructions.
- Doors and windows are closed.
- Water-vulnerable items are raised above the expected water line.
- Sandbags and dikes used where necessary.
- Vehicles moved to higher ground.

5.8 High Wind Considerations

(Sustained wind speeds >25 mph at WS TA-54 or backup WS TA-53)

NOTE 1 See Attachment G, *EWMO High Winds Annual Checklist for facility-specific responsibilities*.

NOTE 2 The limit of 25 mph is derived from DOE-STD-1090-2004, *Hoisting and Rigging*, which sets this limit for unrestricted operation of mobile cranes. Operations throughout EWMO-supported facilities periodically require cranes and/or forklifts; therefore, this value was determined to be the operational limit for such activities.

- Safe shutdown of vulnerable equipment.
- Emergency evacuation and sheltering policies.
- Identifying emergency evacuation routes and ensuring that personnel are familiar with them.
- Securing outside materials susceptible to becoming missiles. Pay particular attention to job sites, staging and laydown areas.

6. RECORDS

Records generated in the course of performing this Plan must be maintained in accordance with the LANL Records Retention Schedule. When the records are ready for final disposition, the records are transferred to Records Management in accordance with EP-DIR-AP-10003, *Records Managements*.

Record Name	QA Record	Non-QA Record
Attachment A, EWMO Deficiency Log	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attachment B, EWMO Winter Preparation Checklist	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attachment C, EWMO Cold Weather Daily Checklist	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attachment D, EWMO Summer Preparation Checklist	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attachment E, EWMO Wildfire Prevention Annual Checklist	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attachment F, EWMO Flooding Annual Checklist	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attachment G, EWMO High Winds Annual Checklist	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attachment H, Plan Specific Equipment Listing	<input type="checkbox"/>	<input checked="" type="checkbox"/>

7. REFERENCES

- 1) AP-341-510, *Walkdown and Data Gathering*
- 2) AP-MNT-002, *Seasonal Facility Preservation*
- 3) AP-MNT-007, *Measurement, Analysis & Reporting of Maintenance Performance*.
- 4) DOE O 430.1B, *Real Property Asset Management*
- 5) DOE O 433.1A, *Maintenance Management Program for DOE Nuclear Facilities*
- 6) EP-DIR-AP-10003, *Records Management Procedure for ADEP Employees*
- 7) NES-DOP-1001, *NES In-Service Inspections*
- 8) O&M Criterion 401, *Freeze Protection*
- 9) P330-6, *LANL Non-Conformance Reporting*

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ATTACHMENT A

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EWMO DEFICIENCY LOG

Source (Checklist B - G)	TA-Bldg.-Rm	Deficiency (UNSAT Brief Description)	Resolution	Close Out Date	WO# or FSR#

COMMENTS: _____

SIGNATURES:

Deficiency Identifier:	_____ / _____ / _____
	(Print Name) (Signature) (Z #) (Date)
Maintenance Coordinator:	_____ / _____ / _____
	(Print Name) (Signature) (Z #) (Date)
Maintenance Manager:	_____ / _____ / _____
	(Print Name) (Signature) (Z #) (Date)
FOD (or Designee):	_____ / _____ / _____
	(Print Name) (Signature) (Z #) (Date)

ATTACHMENT B

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EWMO WINTER PREPARATION CHECKLIST

- Deficiencies (UNSAT) identified during the performance of this procedure that cannot be corrected immediately will be recorded in Attachment A.
- Proposed resolution for correction of deficiency will be identified by a brief description in Attachment A, and will reference the applicable Footprints issue number, Work Order number, or any other official method for issue tracking used.
- All identified deficiencies will be prioritized, corrected as required, and tracked to closure.

#	Description	SAT / UNSAT	Initials	Date
TA-46, Buildings 0120 and 0326				
1	General inspection of the building, being observant of the following:			
	• Potential sources of cold outside air, such as windows, louvers, etc.			
	• Potential dead legs in water (and/or any liquid) circulation systems that would be at an increased susceptibility to freezing.			
	• Low, shady areas where water could potentially build up and represent an ice hazard.			
	• Exterior door latches, automatic closure mechanisms, and weather stripping.			
	• Identify main building water supply cutoff, and remove any obstructions.			
2	Heating systems will be cleaned, serviced, and functionally tested.			
	• Heating system is energized and thermostats are set between 68°F and 72°F.			
	• <u>O</u> perational check of all radiant space heaters.			
3	Tenants shall receive notification via email of the following:			
	• Portable heaters represent a potential fire hazard to the building. Only approved, LANL authorized portable heaters are to be used. Furthermore, portable heaters represent a significant electrical load to the building and their use should be approved by appropriate EWMO personnel prior to operation.			
	• All window A/C units are to remain secured and diligently observed for cold air intake. If cold air is noticed to be abundantly flowing through any unit, instruct tenants to notify facility personnel immediately.			
	• Any hazards associated with winter (e.g., icy conditions, abundance of snow, cold air sources, heating problems, etc.) should be immediately reported to the on-call Maintenance POC.			
4	Fire Suppression Considerations:			
	• Check restrooms for adequate heat, open lavatory faucets, & flush toilets			
	• TA-46-0326: Check Fire Riser room for leaks.			
	• TA-46-0326: Inspect ceiling sprinkler heads and ceiling tiles for potential water leaks.			

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#	Description	SAT / UNSAT	Date	Initials
TA-50, Building 0069, WCRRF				
1	General inspection of the building, being observant of the following:			
	• Potential sources of cold outside air, such as windows, louvers, etc.			
	• Potential dead legs in water (and/or any liquid) circulation systems that would be at an increased susceptibility to freezing.			
	• Low, shady areas where water could potentially build up and represent an ice hazard.			
	• Exterior door latches, automatic closure mechanisms, and weather stripping.			
	• Any hazards associated with winter, such as icy conditions, abundance of snow, cold air sources, heating problems, etc., should be immediately reported to appropriate EWMO personnel.			
	• Identify main building water supply cutoff, and remove any obstructions.			
	• Check the restroom for adequate heat, open the lavatory faucets, and flush the toilet.			
2	Fire Suppression Considerations			
	• Inspect wet-pipe sprinkler system for leaks.			
	• Boiler PM—Verify Gas Furnaces/Unit Heaters Inspections, Testing, and Maintenance PMI 404-A has been performed.			
TA-50, Building 0084				
1	General inspection of the building, being observant of the following:			
	• Potential sources of cold outside air, such as windows, louvers, etc.			
	• Potential dead legs in water (and/or any liquid) circulation systems that would be at an increased susceptibility to freezing.			
	• Low, shady areas where water could potentially build up and represent an ice hazard.			
	• Exterior door latches, automatic closure mechanisms, and weather stripping.			
	• Identify main building water supply cutoff, and remove any obstructions.			
2	Heating systems will be cleaned, serviced, and functionally tested.			
	• Heating system is energized and thermostats are set between 68°F and 72°F.			
	• Operational check of all radiant space heaters.			
3	Tenants shall receive notification via email of the following:			
	• Portable heaters represent a potential fire hazard to the building. Only approved, LANL authorized portable heaters are to be used. Furthermore, portable heaters represent a significant electrical load to the building and their use should be approved by appropriate EWMO personnel prior to operation.			
	• All window A/C units are to remain secured and diligently observed for cold air intake. If cold air is noticed to be abundantly flowing through any unit, instruct tenants to notify facility personnel immediately.			
	• Any hazards associated with winter, such as icy conditions, abundance of snow, cold air sources, heating problems, etc., should be immediately reported to the on-call Maintenance POC.			
4	Fire Suppression Considerations:			
	• Check restrooms for adequate heat, open lavatory faucets, and flush toilets.			

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#	Description	SAT / UNSAT	Date	Initials
TA-54 Administration Area				
1	General inspection of the building, being observant of the following: <ul style="list-style-type: none">• Potential sources of cold outside air, such as doors, windows, louvers, etc.• Potential dead legs in water (and/or any liquid) circulation systems that would be at an increased susceptibility to freezing.• Low, shady areas where water could potentially build up and represent an ice hazard.• Exterior door latches, automatic closure mechanisms, and weather stripping.• Identify main building water supply cutoff, and remove any obstructions.• Ventilation system/heat is "ON" and working.			
	TA-54-0037			
	TA-54-0051			
	TA-54-0060			
	TA-54-0245			
	TA-54-0246			
	TA-54-0247			
	TA-54-0315			
	TA-54-0532			
	TA-54-0533			
	TA-54-9500			

ATTACHMENT B

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#	Description	SAT / UNSAT	Date	Initials
TA-54 Administration Area (continued)				
2	Heating systems considerations:			
	<ul style="list-style-type: none"> • Heating systems will be cleaned, serviced and functionally tested. • Clean and perform operational test of all radiant space heaters. • Ensure heating system is energized and thermostats are set between 68°F and 72°F. 			
	TA-54-0037			
	TA-54-0051			
	TA-54-0060			
	TA-54-0245			
	TA-54-0246			
	TA-54-0247			
	TA-54-0315			
	TA-54-0532			
	TA-54-0533			
	TA-54-9500			
3	Tenants shall receive email notification(s) of the following:			
	<ul style="list-style-type: none"> • Portable heaters represent a potential fire hazard to the building. Only approved, LANL authorized portable heaters are to be used. Furthermore, portable heaters represent a significant electrical load to the building and their use should be approved by appropriate EWMO personnel prior to operation. 			
	<ul style="list-style-type: none"> • All window A/C units are to remain secured and diligently observed for cold air intake. If cold air is noticed to be abundantly flowing through any unit, instruct tenants to notify facility personnel immediately. 			
	<ul style="list-style-type: none"> • Any hazards associated with winter, such as icy conditions, abundance of snow, cold air sources, heating problems, etc., should be immediately reported to the on-call Maintenance POC. 			
4	Check buildings with restrooms and kitchens:			
	<ul style="list-style-type: none"> • Open lavatory faucets, and flush toilets. 			
	<ul style="list-style-type: none"> • Open kitchen sink faucets. 			

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#	Description	SAT / UNSAT	Date	Initials
TA-54 West				
1	General inspection of the building, being observant of the following: <ul style="list-style-type: none">• Potential sources of cold outside air, such as doors, windows, louvers, etc.• Potential dead legs in water (and/or any liquid) circulation systems that would be at an increased susceptibility to freezing.• Low, shady areas where water could potentially build up and represent an ice hazard.• Exterior door latches, automatic closure mechanisms, and weather stripping.• Identify main building water supply cutoff, and remove any obstructions.			
	TA-54-0038			
	TA-54-1014			
2	Heating systems considerations: <ul style="list-style-type: none">• Heating systems will be cleaned, serviced and functionally tested.• Clean and perform operational test of all radiant space heaters.• Ensure heating system is energized and thermostats are set between 68°F and 72°F.			
	TA-54-0038			
	TA-54-1014			
3	Tenants shall receive notification via email of the following: <ul style="list-style-type: none">• Portable heaters represent a potential fire hazard to the building. Only approved, LANL authorized portable heaters are to be used. Furthermore, portable heaters represent a significant electrical load to the building and their use should be approved by FOD-5 personnel prior to operation• All window A/C units are to remain secured and diligently observed for cold air intake. If cold air is noticed to be abundantly flowing through any unit, instruct tenants to notify facility personnel immediately.• Any hazards associated with winter, such as icy conditions, abundance of snow, cold air sources, heating problems, etc., should be immediately reported to the on-call Maintenance POC.			
4	TA-54-0038 - Check restrooms as follows: <ul style="list-style-type: none">• Check restrooms for adequate heat, open lavatory faucets, & flush toilets.			
5	TA-54-1014 - Check restrooms as follows: <ul style="list-style-type: none">• Check restrooms for adequate heat, open lavatory faucets, & flush toilets.			

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#	Description	SAT / UNSAT	Date	Initials
TA-54, Buildings 0039, Area L				
1	General inspection of the building, being observant of the following:			
	• Potential sources of cold outside air, such as doors, windows, louvers, etc.			
	• Low, shady areas where water could potentially build up and represent an ice hazard.			
	• Exterior door latches, automatic closure mechanisms, and weather stripping.			
	• Any hazards associated with winter, such as icy conditions, abundance of snow, cold air sources, heating problems, etc., should be immediately reported to EWMO personnel.			
	• Identify main building water supply cutoff, and remove any obstructions.			
	• Inspect outside storage pads and unheated storage areas for items/materials vulnerable to freeze damage.			
2	Heating systems will be cleaned, serviced, and functionally tested.			
	• Operational check of all radiant space heaters.			
	• Energize heat-trace insulated piping (for TA-54-0039 only).			
	• Check the restroom for adequate heat, open the lavatory faucets, and flush the toilet (for TA-54-0039 only).			
TA-54, Building 0215, Area L				
1	Inspection of the following:			
	• Ensure radiant heater in Fire Riser Room is working properly.			

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#	Description	SAT / UNSAT	Date	Initials
TA-54, Buildings 0002, 0011, 0367, 0589, Area G				
1	General inspection of the building, being observant of the following:			
	<ul style="list-style-type: none">Potential sources of cold outside air, such as doors, windows, louvers, etc.			
	<ul style="list-style-type: none">Potential dead legs in water (and/or any liquid) circulation systems that would be at an increased susceptibility to freezing.			
	<ul style="list-style-type: none">Low, shady areas where water could potentially build up and represent an ice hazard.			
	<ul style="list-style-type: none">Exterior door latches, automatic closure mechanisms, and weather stripping.			
	<ul style="list-style-type: none">Any hazards associated with winter, such as icy conditions, abundance of snow, cold air sources, heating problems, etc., should be immediately reported to EWMO personnel.			
	<ul style="list-style-type: none">Identify main building water supply cutoff, and remove any obstructions except those clearly placed to prevent tampering.			
	<ul style="list-style-type: none">Inspect outside storage pads and unheated storage areas for items/materials vulnerable to freeze damage.			
	TA-54-0002			
	TA-54-0011			
	TA-54-0367			
	TA-54-0589 (This is a trailer restroom west of Dome 375)			
2	Heating Systems Considerations:			
	<ul style="list-style-type: none">Cleaned, serviced, and functionally tested.			
	<ul style="list-style-type: none">Operational check of all radiant space heaters.			
	<ul style="list-style-type: none">Check restrooms, open lavatory faucets, and flush toilets.			
	<ul style="list-style-type: none">Check water line manifold on the west side (TA-54-0002)			
	TA-54-0011			
	TA-54-0367			
	TA-54-0002			
	TA-54-0589 (This is a trailer restroom west of Dome 375)			

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#	Description	SAT / UNSAT	Date	Initials
TA-54 Heated Areas				
1	General inspection of the building, being observant of the following: <ul style="list-style-type: none">• Potential sources of cold outside air, such as windows, louvers, etc.• Potential dead legs in water (and/or any liquid) circulation systems that would be at an increased susceptibility to freezing, as applicable.• Low, shady areas where water could potentially build up and represent an ice hazard.• Exterior door latches, automatic closure mechanisms, and weather stripping.• Identify main building water supply cutoff, and remove any obstructions, as applicable.• Inspect outside storage pads and unheated storage areas for items/materials vulnerable to freeze damage.			
	TA-54-0008			
	TA-54-0020			
	TA-54-0025			
	TA-54-0033			
	TA-54-0242			
	TA-54-0273			
	TA-54-0289			
	TA-54-0295			
	TA-54-0324			
	TA-54-0325			
	TA-54-0371			
	TA-54-0372			
	TA-54-0545			
	TA-54-0546			

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#	Description	SAT / UNSAT	Date	Initials
TA-54 Heated Areas (continued)				
2	Heating Systems considerations: <ul style="list-style-type: none"> • Heating systems will be cleaned, serviced and functionally tested. • Clean and perform operational test of all radiant space heaters. • Energize heat-trace pipe insulation. • Ensure heating system is energized and thermostats are set between 68°F and 72°F. 			
	TA-54-0008			
	TA-54-0020			
	TA-54-0025			
	TA-54-0025: In addition, verify electric wall heater in Fire Riser Room is operating adequately.			
	TA-54-0033			
	TA-54-0033: In addition, verify electric wall heater in Fire Riser Room is operating adequately.			
	TA-54-0273			
	TA-54-0289			
	TA-54-0295			
	TA-54-0324			
	TA-54-0325			
	TA-54-0371			
	TA-54-0372			
	TA-54-0545			
	TA-54-0546			

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#	Description	SAT / UNSAT	Date	Initials
TA-54 Unheated Areas				
1	General inspection of the building, being observant of the following: <ul style="list-style-type: none"> Potential sources of cold outside air, such as windows, louvers, etc. Potential dead legs in water (and/or any liquid) circulation systems that would be at an increased susceptibility to freezing. Low, shady areas where water could potentially build up and represent an ice hazard. Exterior door latches, automatic closure mechanisms, and weather stripping. Identify main building water supply cutoff, and remove any obstructions. Inspect outside storage pads and unheated storage areas for items/materials vulnerable to freeze damage. Verify electric wall heaters in Fire Riser Rooms are operating adequately. 			
	TA-54-0229 Equipment Room			
	TA-54-0230 Equipment Room			
	TA-54-0231 Equipment Room			
	TA-54-0412 Equipment Room			
	TA-54-0557 Equipment Room			
TA-54 Building 1058 (Equipment Storage)				
1	Ensure the following equipment is available:			
	<ul style="list-style-type: none"> Six electric portable heaters (at a minimum) 			
	<ul style="list-style-type: none"> Two 20-ft rolls of heat tape (at a minimum) 			

Print Name	Signature	Z #	Date
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1

ATTACHMENT C

Page 1 of 6

EWMO COLD WEATHER DAILY CHECKLIST

NOTE *See Section 5.5 for Extreme Weather Considerations ($\leq 5^{\circ}\text{F}$), which if applied, will augment cold weather checklist requirements (i.e., Attachment C).*

Freeze Protection Inspection: Checklists support EWMO-supported facilities Freeze Protection Inspection (FPI) Requirements as follows:

- FPI to be performed on a daily basis while operations are performed. .
- FPI to be performed a minimum of 3 times per week during winter break.

General Inspection: Ensure the following Buildings/Structures are inspected for:

- Potential sources of cold outside air, such as doors, windows, louvers, exterior door latches, automatic closure mechanisms and weather stripping.
- Outside storage pads and unheated areas.
- Removal of items/materials vulnerable to freeze damage.
- Hazards associated with winter, such as icy conditions, abundance of snow, cold air sources, heating problems, etc., should be immediately reported to FOD-5 personnel.

Cold Weather Considerations ($\leq 35^{\circ}\text{F}$): When WS TA-54 or backup WS TA-53 WS at the LANL “Weather Machine” (weather.lanl.gov) reads $\leq 35^{\circ}\text{F}$ for the daily low temperature, perform the following for the locations listed in the table below:

NOTE *It’s recommended the MC review the LANL “Weather Machine” (weather.lanl.gov) weather forecast.*

- Perform a 5-day forecast; if the prediction is low temperatures of $\leq 35^{\circ}\text{F}$ at any point across the 5-day forecast, the MC shall notify the on-call Maintenance POC and inspectors of a cold weather threat.
- Attachment C, page 6 of 6 is to be completed for TA checklist(s). See instructions on page 6 of 6.

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Buildings/Structures	Day of Week / Date						
TA-46							
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
	/ /	/ /	/ /	/ /	/ /	/ /	/ /
WS 54/53 Low Temp (°F)							
• Initial the box when inspection has been performed satisfactorily for the above day/date.							
TA-46-0326							
In TA-46-0326-101D: Record fire riser room temperature ($\geq 40^{\circ}\text{F}$)	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
TA-50							
WS 54/53 Low Temp (°F)							
• Initial the box when inspection has been performed satisfactorily for the day/date above.							
TA-50-0069							
In TA-50-0069, Room 102: Record fire riser room temperature ($\geq 40^{\circ}\text{F}$)	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
Heaters are operable as indicated by green light on east wall of Room 102							
TA-50-0084							

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Buildings/Structures	Day of Week / Date						
TA-54 WEST							
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
	/ /	/ /	/ /	/ /	/ /	/ /	/ /
WS 54/53 Low Temp (°F)							
Initial the box when the inspection has been performed satisfactorily for the day/date above.							
TA-54-0038							
In TA-54-0038-104: Record fire riser room temperature ($\geq 40^{\circ}\text{F}$)	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
Record FSS nitrogen bottle pressure (≥ 500 psig)*	____ psig	____ psig	____ psig	____ psig	____ psig	____ psig	____ psig
TA-54-1014							
TA-54 Administrative Areas							
WS 54/53 Low Temp (°F)							
Initial the box when the inspection has been performed satisfactorily for the day/date above.							
TA-54-0037							
TA-54-0060							
TA-54-0245							
TA-54-0246							
TA-54-0247							
TA-54-0532							
TA-54-0533							
TA-54-9500							

* If FSS nitrogen pressure is < 500 psig, then notify the MC and the Operations On-Call SOM or SOS and request nitrogen bottle be replaced.

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Buildings/Structures	Day of Week / Date						
TA-54 Area L							
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
	/ /	/ /	/ /	/ /	/ /	/ /	/ /
WS 54/53 Low Temp (°F)							
Initial the box when the inspection has been performed satisfactorily for the day/date above.							
TA-54-0039							
TA-54-0215							
Inside TA-54-0215, west side white closet: Record fire riser room temperature ($\geq 40^{\circ}\text{F}$)	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
Record FSS nitrogen bottle pressure (≥ 500 psig)	____ psig	____ psig	____ psig	____ psig	____ psig	____ psig	____ psig
TA-54 Area G							
WS 54/53 Low Temp (°F)							
Initial the box when the inspection has been performed satisfactorily for the day/date above.							
TA-54-0002							
TA-54-0011							
TA-54-0025							
TA-54-0033							
Inside 54-0033, southeast side white closet: Record fire riser room temperature ($\geq 40^{\circ}\text{F}$)	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
Record FSS nitrogen bottle pressure (≥ 500 psig)*	____ psig	____ psig	____ psig	____ psig	____ psig	____ psig	____ psig
TA-54-0229							
Inside TA-54-0229, north side white closet: Record fire riser room temperature ($\geq 40^{\circ}\text{F}$)	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F

*If FSS nitrogen pressure is < 500 psig, then notify the MC and the Operations On-Call SOM or SOS and request nitrogen bottle be replaced.

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Buildings/Structures	Day of Week / Date						
TA-54 Area G (continued)							
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
	/ /	/ /	/ /	/ /	/ /	/ /	/ /
WS 54/53 Low Temp (°F)							
Initial the box when the inspection has been performed satisfactorily for the day/date above.							
TA-54-0230							
Inside 54-230, north side white closet: Record fire riser room temperature (≥40°F)	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
TA-54-0231							
Inside TA-54-0231: Record fire riser room temperature (≥40°F)	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
Record FSS nitrogen bottle pressure (≥ 500 psig)*	____ psig	____ psig	____ psig	____ psig	____ psig	____ psig	____ psig
TA-54-0289							
Inside 54-289: Record fire riser room temperature (≥40°F)	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
TA-54-0315							
TA-54-0367							
TA-54-0412							
Record fire riser room temperature (≥40°F)	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
Record FSS nitrogen bottle pressure (≥ 500 psig)*	____ psig	____ psig	____ psig	____ psig	____ psig	____ psig	____ psig
TA-54-0557							
Record fire riser room temperature (≥40°F)	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
Record FSS nitrogen bottle pressure (≥ 500 psig)*	____ psig	____ psig	____ psig	____ psig	____ psig	____ psig	____ psig
TA-54-0589							

*If FSS nitrogen pressure is < 500 psig, then notify the MC and the Operations On-Call SOM or SOS and request nitrogen bottle be replaced.

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ATTACHMENT C

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COMMENTS:

SIGNATURES:

Qualified Inspector:	/	/	/
	Print Name	Signature	Z # Date
Qualified Inspector:	/	/	/
	Print Name	Signature	Z # Date
MC:	/	/	/
	Print Name	Signature	Z # Date
MC:	/	/	/
	Print Name	Signature	Z # Date
MM:	/	/	/
	Print Name	Signature	Z # Date
FOD (or Designee):	/	/	/
	Print Name	Signature	Z # Date

ATTACHMENT D

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EWMO SUMMER PREPARATION CHECKLIST

- Deficiencies (UNSAT) identified during the performance of this procedure that cannot be corrected immediately will be recorded in Attachment A.
- Proposed resolution for correction of deficiency will be identified by a brief description in Attachment A, and will reference the applicable Footprints issue number, Work Order number, or any other official method for issue tracking used.
- All identified deficiencies will be prioritized, corrected as required, and tracked to closure.

#	Description	SAT / UNSAT	Date	Initials
TA-46 Building 0326				
1	General inspection of the building, being observant of the following:			
	• Storage of materials susceptible to evaporation and possible explosion due to direct sunlight or extreme heat.			
	• All exits shall be kept clear of obstacles.			
	• Combustible materials shall be maintained at a minimum of 15 feet away from the facility structure (includes indigenous vegetation).			
2	Cooling systems will be cleaned, serviced, and functionally tested.			
	• Clean, service and test all facility air conditioning units per PMI 408-A.			
	• Facility heating equipment shall be safely shut down and secured no earlier than May 10.			
3	Tenants shall receive notification via email of the following:			
	• Smoking represents a potential fire hazard to the building.			
	• Smoking is allowed only in designated areas where appropriate waste receptacles have been staged.			
	• NEVER deposit an extinguished cigarette in a standard trash receptacle.			
	• Any hazards associated with extreme hot/dry weather should be immediately reported to the on-call Maintenance POC.			

ATTACHMENT D

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#	Description	SAT / UNSAT	Date	Initials
Building 0050 - 0069, WCRRE				
1	General inspection of the building, being observant of the following:			
	• Storage of materials susceptible to evaporation and possible explosion due to direct sunlight or extreme heat.			
	• All exits shall be kept clear of obstacles.			
	• Combustible materials shall be maintained at a minimum of 15 feet away from the facility structure (includes indigenous vegetation).			
2	Cooling systems will be cleaned, serviced, and functionally tested.			
	• Clean, service, and test all facility air conditioning units, per PMI 408-A.			
	• Facility heating equipment shall be safely shut down and secured no earlier than May 10.			
Buildings 0050 - 0084				
1	General inspection of the building, being observant of the following:			
	• Storage of materials susceptible to evaporation and possible explosion due to direct sunlight or extreme heat.			
	• All exits shall be kept clear of obstacles.			
	• Combustible materials shall be maintained at a minimum of 15 feet away from the facility structure (includes indigenous vegetation).			
2	Cooling Systems considerations:			
	• Clean, service and test all facility air conditioning units, per PMI 408-A.			
	• Energize and test all window AC units.			
	• Safely shut down and secured facility heating equipment no earlier than May 10, including boilers BHW-001 and BHW-002, per PMI 403-A.			
3	Tenants shall receive notification via email of the following:			
	• Smoking represents a potential fire hazard to the building.			
	• Smoking is allowed only in designated areas where appropriate waste receptacles have been staged.			
	• NEVER deposit an extinguished cigarette in a standard trash receptacle.			
	• Any hazards associated with extreme hot/dry weather should be immediately reported to the on-call Maintenance POC.			

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#	Description	SAT / UNSAT	Date	Initials
TA-54 Administration Area				
1	General inspection of the building, being observant of the following: <ul style="list-style-type: none">Storage of materials susceptible to evaporation and possible explosion due to direct sunlight or extreme heat.All exits shall be kept clear of obstacles.Combustible materials shall be maintained at a minimum of 15 feet away from the facility structure (includes indigenous vegetation).			
	TA-54-0037			
	TA-54-0051			
	TA-54-0060			
	TA-54-0245			
	TA-54-0246			
	TA-54-0247			
	TA-54-0315			
	TA-54-0532			
	TA-54-0533			
	TA-54-9500			
2	Cooling Systems considerations: <ul style="list-style-type: none">Cooling systems will be cleaned, serviced and functionally tested, per PMI 408-A.Energize and test all window AC units.Safely shut down and secure all radiant space heaters and facility heating units no earlier than May 10.			
	TA-54-0037			
	TA-54-0051			
	TA-54-0060			
	TA-54-0245			
	TA-54-0246			

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#	Description	SAT / UNSAT	Date	Initials
TA-54 Administration Area (continued)				
	TA-54-0247			
	TA-54-0315, Area G Access Control			
	TA-54-0532			
	TA-54-0533			
	TA-54-9500			
	TA-54-0111			
	TA-54-0156			
	TA-54-0157			
3	Tenants shall receive notification via email of the following:			
	• Smoking represents a potential fire hazard to the building.			
	• Smoking is allowed only in designated areas where appropriate waste receptacles have been staged.			
	• NEVER deposit an extinguished cigarette in a standard trash receptacle.			
	• Any hazards associated with extreme hot/dry weather should be immediately reported to the on-call Maintenance POC.			

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	Description	SAT / UNSAT	Date	Initials
TA-54 West				
1	General inspection of the building, being observant of the following: <ul style="list-style-type: none">Storage of materials susceptible to evaporation and possible explosion due to direct sunlight or extreme heat.All exits shall be kept clear of obstacles.Combustible materials shall be maintained at a minimum of 15 feet away from the facility structure (includes indigenous vegetation).			
	TA-54-0038			
	TA-54-1014			
2	Cooling systems considerations: <ul style="list-style-type: none">Cooling systems will be cleaned, serviced and functionally tested, per PMI 408-A.Safely shut down and secure all radiant space heaters and facility heating units no earlier than May 10.Energize and test all window AC units.			
	TA-54-0038			
	TA-54-1014			
3	Tenants shall receive notification via email of the following: <ul style="list-style-type: none">Smoking represents a potential fire hazard to the building.Smoking is allowed only in designated areas where appropriate waste receptacles have been staged.NEVER deposit an extinguished cigarette in a standard trash receptacle.Any hazards associated with extreme hot/dry weather should be immediately reported to the on-call Maintenance POC.			
TA-54 West Storage Area				
1	General inspection of the building, being observant of the following: <ul style="list-style-type: none">Storage of materials susceptible to evaporation and possible explosion due to direct sunlight or extreme heat.All exits shall be kept clear of obstacles.Combustible materials shall be maintained at a minimum of 15 feet away from the facility structure (includes indigenous vegetation).			
	TA-54-0462			
	TA-54-1024			
	TA-54-1025			

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ATTACHMENT D

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	Description	SAT / UNSAT	Date	Initials
TA-54 Building 0039, 0215 Area L				
1	General inspection of the building, being observant of the following:			
	• Storage of materials susceptible to evaporation and possible explosion due to direct sunlight or extreme heat			
	• All exits shall be kept clear of obstacles.			
	• Combustible materials shall be maintained at a minimum of 15 feet away from the facility structure (includes indigenous vegetation).			
	TA-54-0039			
	TA-54-0215			
2	Cooling Systems considerations.			
	• Cooling systems will be cleaned, serviced and functionally tested, per PMI 408-A.			
	• Safely shut down and secure all radiant space heaters and facility heating units, no earlier than May 10.			
	• De-energize heat-trace insulated piping, no earlier than May 10.			
	TA-54-0039			

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ATTACHMENT D

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#	Description	SAT / UNSAT	Date	Initials
TA-54 Buildings -0002, -0011, -0324, -0325, -0367, -0372, 0589 and Area G				
1	General inspection of the building, being observant of the following:			
	• Storage of materials susceptible to evaporation and possible explosion due to direct sunlight or extreme heat			
	• All exits shall be kept clear of obstacles.			
	• Combustible materials shall be maintained at a minimum of 15 feet away from the facility structure (includes indigenous vegetation).			
	TA-54-0002			
	TA-54-0011			
	TA-54-0324			
	TA-54-0325			
	TA-54-0367			
2	TA-54-0372			
	TA-54-0589 (This is a trailer restroom located west of Dome 375)			
	Cooling systems considerations:			
	• Systems will be cleaned, serviced and functionally tested per PMI 408-A			
	• Safely shut down and secure all radiant space heaters and facility heating units, no earlier than May 10.			
	• Energize and test window AC units.			
	TA-54-0002			
	TA-54-0011			
	TA-54-0324			
	TA-54-0325			
	TA-54-0367			
	TA-54-0372			
	TA-54-0589 (This is a trailer restroom located west of Dome 375)			

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ATTACHMENT D

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#	Description	SAT / UNSAT	Date	Initials
TA-54 Storage Areas				
1	General inspection of the building being observant of the following: <ul style="list-style-type: none">Storage of materials susceptible to evaporation and possible explosion due to direct sunlight or extreme heat.All exits shall be kept clear of obstacles.Combustible materials shall be maintained at a minimum of 15 feet away from the facility structure (includes indigenous vegetation).			
	TA-54-0033			
	TA-54-0048			
	TA-54-0049			
	TA-54-0153			
	TA-54-0224			
	TA-54-0229			
	TA-54-0230			
	TA-54-0231			
	TA-54-0232			
	TA-54-0283			
	TA-54-0289			
	TA-54-0295			
	TA-54-0375			
	TA-54-0412			
	TA-54-0557			
	TA-54-PAD 10			

ATTACHMENT D

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Additional Responsibilities:

- The table below supports specific tasks that are the responsibility of on-call Maintenance POC and MC.
- All personnel who serve as a Maintenance POC or MC shall receive reminder / notifications of additional threats associated with extreme hot/dry weather.

#	Description	√ (performed)	Date	Initials
Additional Maintenance POC and MC Responsibilities:				
1	Specific activities that shall be performed by the Facility Work Coordinator include the following: <ul style="list-style-type: none"> • Daily, obtain Fire Danger Rating from “Inside LANL” website (int.lanl.gov), and 5-day forecast from the LANL “Weather Machine” (weather.lanl.gov). • Evaluate weather forecasts and Fire Danger Rating and provide the on-call Maintenance POC with a determination (see table below for criteria). • Restrict outdoor work involving heat sources as required (see step 2 below for criteria). • If the weather forecast changes mid-week, the Facility Work Coordinator may allow for the resumption of outside activities involving heat sources at any point during the weekly shift. 			
2	Maintenance POC and Facility Work Coordinators shall receive email notification of the following: <ul style="list-style-type: none"> • Maintenance Coordinator shall obtain Fire Danger Rating from Inside “Los Alamos National Laboratory” website (int.lanl.gov) on a daily basis. • The on-call Maintenance POC shall be notified, and all outside activities involving heat sources (e.g., welding, burning, etc.) shall be restricted, if the fire danger rating is listed as: <ul style="list-style-type: none"> √ “Red Flag” <u>or</u> √ “Extreme,” and √ Wind speed are forecasted to exceed 10 mph • Maintenance POC and Facility Work Coordinators 			

Print Name	Signature	Z #	Date
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ATTACHMENT E

Page 1 of 3

EWMO WILDFIRE PREVENTION ANNUAL CHECKLIST

- Deficiencies (UNSAT) identified during the performance of this plan that cannot be corrected immediately will be recorded in Attachment A.
- Proposed resolution for correction of deficiency will be identified by a brief description in Attachment A, and will reference the applicable Footprints issue number, Work Order number, or any other official method for issue tracking used.
- All identified deficiencies will be prioritized, corrected as required, and tracked to closure.

#	Buildings/Structures	SAT / UNSAT	Date	Initials	Comments
1	For buildings listed below, perform a general inspection to ensure the following: <ul style="list-style-type: none">• Combustible loads and weeds/vegetation are maintained at a minimum of 15 ft. from structures.• Personnel exits are maintained and free of obstruction(s).				
TA-46					
TA-46-0326					
TA-50					
TA-50-0069					
TA-50-0075					
TA-50-0084					
TA-50-0194					
TA-54					
TA-54-0002					
TA-54-0008					
TA-54-0011					
TA-54-0020					
TA-54-0025					
TA-54-0033					
TA-54-0037					
TA-54-0038					

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ATTACHMENT E

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Buildings/Structures	SAT / UNSAT	Date	Initials	Comments
TA-54 (continued)				
TA-54-0039				
TA-54-0048				
TA-54-0049				
TA-54-0051				
TA-54-0060				
TA-54-0153				
TA-54-0215				
TA-54-0224				
TA-54-0229				
TA-54-0230				
TA-54-0231				
TA-54-0232				
TA-54-0245				
TA-54-0246				
TA-54-0247				
TA-54-0283				
TA-54-0289				
TA-54-0295				
TA-54-0315				
TA-54-0324				
TA-54-0325				
TA-54-0367				
TA-54-0371				
TA-54-0372				
TA-54-0375				
TA-54-0412				
TA-54-0532				
TA-54-0533				

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Buildings/Structures	SAT / UNSAT	Date	Initials	Comments
TA-54 (continued)				
TA-54-0557				
TA-54-0589				
TA-54-1014				
TA-54-9500				

COMMENTS:

[illegible]**SIGNATURES:**

Qualified Inspector:

Print Name	Signature	Z #	Date
------------	-----------	-----	------

Qualified Inspector:

Print Name	Signature	Z #	Date
------------	-----------	-----	------

MC:

Print Name	Signature	Z #	Date
------------	-----------	-----	------

MC:

Print Name	Signature	Z #	Date
------------	-----------	-----	------

MM:

Print Name	Signature	Z #	Date
------------	-----------	-----	------

FOD (or Designee):

Print Name	Signature	Z #	Date
------------	-----------	-----	------

ATTACHMENT F

Page 1 of 2

EWMO FLOODING ANNUAL CHECKLIST

NOTE Due to the topography around EWMO-supported facilities, flooding ***is not*** considered a viable threat.

- This checklist supports flood prevention minimum requirements and must be completed annually, prior to June 1st.
- Deficiencies (UNSAT) identified during the performance of this procedure that cannot be corrected immediately will be recorded in Attachment A.
- Proposed resolution for correction of deficiency will be identified by a brief description in Attachment A, and will reference the applicable Footprints issue number, Work Order number, or any other official method for issue tracking used.
- All identified deficiencies will be prioritized, corrected as required, and tracked to closure.

#	Description	SAT / UNSAT	Date	Initials
TA-46				
1	Flooding Considerations:			
	• Clear all storm drains and other drainage paths (including building gutters) of obstructions.			
2	Tenants shall receive notification via email of the following:			
	• Any hazards associated with flooding and/or storm-water runoff should be immediately reported to the on-call Maintenance POC.			
TA-50				
1	Flooding Considerations:			
	• Clear all storm drains and other drainage paths (including building gutters) of obstructions.			
2	Tenants shall receive notification via email of the following:			
	• Any hazards associated with flooding and/or storm-water runoff should be immediately reported to the on-call Maintenance POC.			
TA-54				
1	Flooding Considerations:			
	• Clear all storm drains and other drainage paths (including building gutters) of obstructions.			
2	Tenants shall receive notification via email of the following:			
	• Any hazards associated with flooding and/or storm-water runoff should be immediately reported to the on-call Maintenance POC.			

Print Name	Signature	Z #	Date
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ATTACHMENT G

Page 1 of 2

EWMO HIGH WINDS ANNUAL CHECKLIST

NOTE Due to the topography and site characteristics of FOD-5 facilities, high wind is considered a considerable threat (specifically to TA-54, Area G).

- Attachment G supports an annual check for prevention of damage to equipment/facilities due to high wind, and must be completed on an annual basis, prior to May 1.
- Attachment G documents the minimum requirements for minimizing the impact of high winds to operations at FOD-5 facilities.
- Deficiencies (UNSAT) identified during the performance of this procedure that cannot be corrected immediately will be recorded in Attachment A.
- Proposed resolution for correction of deficiency will be identified by a brief description in Attachment A, and will reference the applicable Footprints issue number, Work Order number, or any other official method for issue tracking used.
- All identified deficiencies will be prioritized, corrected as required, and tracked to closure.

#	Description	SAT / UNSAT	Date	Initials
TA-46				
1	High Wind Considerations:			
	<ul style="list-style-type: none"> • Secure outside materials susceptible to becoming missiles. • Pay particular attention to job sites, staging areas, and laydown areas. 			
TA-50				
1	High Wind Considerations:			
	<ul style="list-style-type: none"> • Secure outside materials susceptible to becoming missiles. • Pay particular attention to job sites, staging areas, and laydown areas. 			
TA-54				
1	High Wind Considerations:			
	<ul style="list-style-type: none"> • Secure outside materials susceptible to becoming missiles. • Pay particular attention to job sites, staging areas, and laydown areas. 			

COMMENTS: _____

ATTACHMENT G

Page 2 of 2

Additional Responsibilities:

- The table below supports tasks that are the responsibility of the on-call Maintenance POC, MCs, and Operations Center.
- TA-54 Area G is vulnerable to high winds; therefore, all personnel who serve as Maintenance POC or MCs for TA-54 shall receive reminders/notifications of additional threats associated with high wind conditions.

#	Description	√	Date	Initials
TA-54 AREA G				
1	TA-54 Operations Center shall ensure the following:			
	• Monitor wind reports and forecasts for TA-54 from the LANL “Weather Machine” (weather.lanl.gov) on a daily basis.			
	• Coordinate with the MC to initiate dust control measures immediately upon observation of blowing dust.			
	• Determine which operations and activities may be affected upon sustained wind speeds (not gusts) of 25 mph or greater being reported, providing guidance and protective actions as necessary.			
	• Initiates email notification(s) to maintenance POC and MC of activities.			

COMMENTS: _____

SIGNATURES:

Qualified Inspector:	_____	_____	_____	_____
	Print Name	Signature	Z #	Date
Qualified Inspector:	_____	_____	_____	_____
	Print Name	Signature	Z #	Date
MC:	_____	_____	_____	_____
	Print Name	Signature	Z #	Date
MC:	_____	_____	_____	_____
	Print Name	Signature	Z #	Date
MM:	_____	_____	_____	_____
	Print Name	Signature	Z #	Date
FOD (or Designee):	_____	_____	_____	_____
	Print Name	Signature	Z #	Date

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ATTACHMENT H

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PLAN SPECIFIC EQUIPMENT LISTING

- Ensure plan-specific equipment detailed in this attachment is available for use in completion of Attachments B through G.

EQUIPMENT ID	LOCATION	DESCRIPTION
Winter / Cold Weather Equipment (Attachments B & C)		
Sand/Ice Remover	See Attachment C	Distributed to high traffic areas by the Site Support Service provider.
Boilers (BHW-001 and BHW-002)	(2 ea.) TA-50-0069, OSN	Boilers provide facility heating individually to WCRRF. Maintain per PMI 403-A.
Heaters (HVA-1000 and HVA-2000)	TA-54 Area G Dome 54-0231	Provide heating to the Dome 231 PermaCon and shall be maintained per PMI 408-A.
Heaters (HVA-001, HVA-002, HVA-003)	TA-54 Area G Dome 54-0375	Provide heating to the Dome 375 PermaCon. Maintained per PMI 408-A.
Portable Space Heaters	All EWMO-supported facilities	Deployed to isolated areas & systems identified as vulnerable to freezing. Also used for additional heating during extreme cold periods. Maintained by EWMO Maintenance.
Fluke Precision Digital Infrared Thermometers	Fire riser rooms at EWMO-supported facilities	Instrument used to record daily cold weather temperatures in EWMO-supported building fire riser rooms (as listed in Attachment C).
Summer Weather Equipment (Attachment D)		
Air Conditioning Units	All EWMO-supported facilities	All facility air conditioning units shall be cleaned, serviced, and functionally tested per PMI 408-A, annually.
Window-Mounted Air Conditioning Units	All EWMO-supported facilities	All window-mounted air conditioning units shall be functionally tested annually. Any issues shall be reported to the appropriate MC.
Smoking Waste Receptacles	All EWMO-supported facilities	Smoking specific waste receptacles shall be staged in designated smoking areas.
Dust Control Measures (Water Truck)	TA-54 Area G	Dust control equipment (water truck) shall be maintained and kept available for immediate use upon the observation of blowing dust.
Wildfire Prevention Equipment (Attachment E)		
Fire Protection Water Hydrant Systems	All EWMO-supported facilities	Hydrants in close proximity to EWMO structures. Ownership/PM by LANL Utilities.
Flooding Equipment (Attachment F)		
Gutters/Storm Drains	All EWMO-supported facilities	All gutters and storm drains shall be cleared of debris annually.
Silt Fences/Berms	TA-54, Area G	All silt fences and earthen berms shall be inspected and repaired annually.
High Wind Equipment (Attachment G)		
Water Truck (Dust Control Measures)	TA-54, Area G	Used for dust control. Available for immediate use upon the observation of blowing dust.

EP-DIV-PLAN-20195, R0

Attachment B
Statement of Structural Inspections
(formerly Test and Inspection Plan Template)*

Project: Installation of Enhanced Storm Water Control Measures at F-SMA-2

Location: 36

IBC Code Year: Not Applicable

Primary Design Professionals:

Matt Lindburg, Brown and Caldwell

The special inspections listed herein are conducted by LANL

This SSI encompasses the following disciplines:

- | | |
|--|---|
| <input type="checkbox"/> Structural | <input type="checkbox"/> Mechanical/Electrical/Plumbing |
| <input type="checkbox"/> Architectural | <input checked="" type="checkbox"/> Other: <i>Civil</i> |
| <input type="checkbox"/> Fire | |

The LANL Special Inspectors on the project shall keep records of all inspections and shall furnish interim inspection reports to the the LANL Project Manager. LANL ESM Chapter 16, Section IBC-IP Appendix D – IBC/IEBC Inspection Daily Report shall be used as the basis for the report. Discovered discrepancies shall be brought to the immediate attention of the constructor (e.g., Subcontractor) for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the LANL Chief Inspector (LCI) and DPIRC. The LANL inspection program does not relieve the constructor (e.g., Subcontractor) of their responsibilities.

Interim Report Frequency: *Daily as inspections are performed*

A *Final Report* documenting completion of all required inspections completed by LANL CM-CE, testing and correction of any discrepancies noted in the inspection reports shall be submitted to the LCI prior to issuance of Official Acceptance of Construction. LANL ESM Chapter 16, Section IBC-IP Appendix E – IBC Inspection Final Report shall be used as the basis for the report.

Job site safety and means and methods of construction are solely the responsibility of the constructor (e.g., Subcontractor).

Special Inspections are not required where the work is done on the premises of a fabricator registered and approved by the LBO to perform such work without special inspection in accordance with IBC Section 1704.2.2 and ESM Chapter 16.

In the event of a true conflict between this plan and the Project Specification, the more stringent requirement applies.

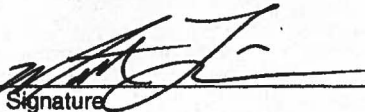
Signature Page

Statement of Special Inspections Prepared By:

Statement of Special Inspections Submitted By:

Matt Lindburg
(type or print name)

Ron Rager
(type or print name)



6/5/2013
Date

Ronald E. Rager
Signature

Digitally signed by Ronald E. Rager
DN: cn=Ronald E. Rager, o=Project Engineer,
ou=ES-PE, email=rrager@lanl.gov, c=US
Date: 2013.07.16 11:32:05 -06'00'

Date

LANL PMFS-DO:
Steve Veenis

Signature

Date

Schedule of Inspection and Testing Agencies

This Statement of Special Inspections includes the following systems:

- ☐ Fabrication of structural load bearing members
- ☒ Soils
- ☐ Seismic Force Resisting Systems
- ☐ Driven Deep Foundations
- ☐ Cast-In-Place Deep Foundations
- ☐ Helical Pile Foundations
- ☐ Concrete
- ☐ Structural Steel
- ☐ Cold-Formed Steel Framing
- ☐ Masonry Level 1
- ☐ Masonry Level 2
- ☐ Wood
- ☐ Spray Fire Resistant Material
- ☐ Mastic and Intumescent Fire-resistant Coatings
- ☐ Exterior Insulation and Finish System
- ☐ Special Cases as required by LBO
- ☐ Smoke Control

Special Inspection Agencies	Firm	Address, Telephone, e-mail
1. Seeding, Riprap, Geosynthetic Slope Protection Agency	N/A	N/A
2. Storm Drainage Utilities and Inlets Testing Agency	N/A	N/A
3. Soils Testing Agency	LANL CM-CE	LANL
4. Other: Riprap/Geosynthetic Slope Protection	LANL ET-ER	LANL

TBD: To be determined

N/A – Not Applicable

Note: The inspectors shall be engaged by the LANL or LANL's Agent, and not by a Subcontractor whose work is to be inspected. The testing agencies shall be engaged by the Subcontractor but must be approved by the LANL Building Official (LBO). Any conflict of interest must be disclosed to the LANL Chief Inspector prior to commencing work.


SSI Tables

SOILS – Special Inspection and Verification (1704.7)

Special Inspection Required Y/N	Verification and Inspection Task	Inspection Frequency		Testing Completed By
		Continuous During Task Listed	Periodically During Task Listed	
Y	1. Submit compaction test results for berm fill. One (1) compaction test is required for each material type (retention basin and polishing basin)		X	LANL CM-CE
Y	2. Berm material In-place density tests during berm fill placement.		X	LANL CM-CE

Other Inspection Tasks

Special Inspection Required Y/N	Verification and Inspection Task	Inspection Frequency		Testing Completed By
		Continuous During Task Listed	Periodically During Task Listed	
Y	1. Field seam efficiency test results for geosynthetic slope protection.		X	LANL ET-ER

 Facilities Maintenance IWD – (Facility Maintenance Activity Specific Information)			
Revision # 0		Activity/Task Title: FY15 TA-50-54 ALL LABOR SUPPORT TO SPRAY MICRO BLAZE	
Work Document: (WO#/Task) 00512757-01		Planner/Preparer (Name/Z#/Date) Robert Maes/088731/1.26.15	
TA: 50/54	Building: All	Room:	Additional Location Description:

11. Training to enter/access TA-50-0069:

- TP – 115, Rad Worker II or qualified escort
- TP – 256, RCRA Hazardous/Mixed Waste Worker or qualified escort
- TP – 9245, WCRRF Non-Res Unescorted Access or qualified escort

GENERAL HAZARDS (*identify hazards and associated controls*)

Exposure to ionizing radiation when working within a radiological controlled area (RCA):

- Follow the requirements of RWP-2011-0042 for entry to posted areas inside Area G such as but not limited to (49, 224, 283, 48, 33, 375, 230, 231, 232, etc.)
- Follow the requirements of RWP-2015-0098 for entry to 50-0069 yard).

The following PPE is required for all work: Additional PPE may be required in a specific work step:

- Safety Shoes
- Safety Glasses with Side shields
- Hardhats (when overhead hazards are present, wear as required)
- Long-sleeved shirt

Hand injury caused from contact work:

- Wear hand protection commensurate to the job task i.e., leather, rubber, mechanic (M-Pact), water proof, puncture resistant, Kevlar, etc. for contact work. Gloves may be removed when manual dexterity is required (i.e., small screws, etc.) as long as injury to the hand is negligible.

Back Strains:

- Utilize the “two person rule” when lifting greater than 50 pounds.

Shock or electrocution during use of electric power tool

- Use GFCI or insulated power tools

Exposure to work hazards by tenants/adjacent personnel or public:

- Control access to work area with caution tape, barricades, and/or signs.

Task #1: Work Execution

HOLD POINT for WCRRF facility:

Authorization from SOM/SOS that WCRRF YARD is in “Warm Standby or Cold Standby” for duration of this work. NOTE: WCRRF consists of the facility and the outdoor transportainer area including the yard.


WCRRF SOM/SOS: Name (Printed) _____ Z# _____ Signature: _____ Date: _____

WCRRF SOM/SOS: Name (Printed) _____ Z# _____ Signature: _____ Date: _____

WCRRF SOM/SOS: Name (Printed) _____ Z# _____ Signature: _____ Date: _____

WCRRF SOM/SOS: Name (Printed) _____ Z# _____ Signature: _____ Date: _____

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TA: 50/54	Building: All	Room:	Additional Location Description:

HOLD POINT for RANT facility:

Authorization from SOM/SOS that 54-38 YARD is in "Warm Standby or Cold Standby" for duration of this work.

RANT SOM/SOS: Name (Printed) _____ Z# _____ Signature: _____ Date: _____

RANT SOM/SOS: Name (Printed) _____ Z# _____ Signature: _____ Date: _____

RANT SOM/SOS: Name (Printed) _____ Z# _____ Signature: _____ Date: _____

RANT SOM/SOS: Name (Printed) _____ Z# _____ Signature: _____ Date: _____

RANT SOM/SOS: Name (Printed) _____ Z# _____ Signature: _____ Date: _____

RANT SOM/SOS: Name (Printed) _____ Z# _____ Signature: _____ Date: _____

RANT SOM/SOS: Name (Printed) _____ Z# _____ Signature: _____ Date: _____

RANT SOM/SOS: Name (Printed) _____ Z# _____ Signature: _____ Date: _____

NOTE:

All combustible material must be accounted for throughout entire job when working at 50-69 and at 54-38. See step 2.2 for controls on combustible material accountability.

Any lubricant material that has a flammability rating greater than 1, then WCRRF and RANT shall be in COLD standby for duration of the job.

- 1.1** Dilute Micro-Blaze concentration formula with water inside the 2 gallon pump sprayer. Utilizing pump sprayer, spray mixture on oil-stained areas throughout TA-50/TA-54 at locations identified by Liz English or RCRA SME. When spraying the mixture on the affected area, spray enough mix onto the surface to make it wet but do not create puddles. DO NOT apply product to soil.

When diluting micro-blaze with water within the 2 gallon pump sprayer, the ratios for spraying are as follows:

NOTE:

Spraying over oils: the ratio shall be 3% which is approximately 8 fluid ounces and the rest of the container shall be water.


Spraying over gasoline: the ratio shall be 6% which is approximately 15 fluid ounces and the rest of the container shall be water.

Chemical Controls

- MSDS Micro-Blaze Emergency Liquid Spill Control
- Mixing of chemical shall be done outside.
- When mixing and spraying mixture, wear safety goggles, gloves and long sleeve shirts.
- Spray-down wind or in cross winds.
- Notify TA-54 or WCRRF Operations Centers, as appropriate, if a spill of Micro-Blaze concentrate occurs.

Waste Controls:

- Contact WMC for proper management of micro-blaze containers when they are no longer needed.

 Facilities Maintenance IWD – (Facility Maintenance Activity Specific Information)			
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TA: 50/54	Building: All	Room:	Additional Location Description:

Task #2: Project Completion.**2.1 NO PMT REQUIRED FOR THIS WORK ORDER TASK.****HOLD POINT for RANT and WCRRF:****2.2** All combustible material must be accounted for throughout entire job. IDENTIFY and DOCUMENT the combustible material that was taken into and removed from the facility/yard.

Material Entered	Facility (i.e. 50-69, 54-38)	Material Released	Date
1. _____	_____	1. _____	_____
2. _____	_____	2. _____	_____
3. _____	_____	3. _____	_____
4. _____	_____	4. _____	_____
5. _____	_____	5. _____	_____
6. _____	_____	6. _____	_____
7. _____	_____	7. _____	_____
8. _____	_____	8. _____	_____
9. _____	_____	9. _____	_____
10. _____	_____		

Verify all combustible material has been removed from the work site prior to releasing the equipment to the facility.

Completed: PIC: _____ Z# _____ Date: _____

Completed: PIC: _____ Z# _____ Date: _____

Completed: PIC: _____ Z# _____ Date: _____

Completed: PIC: _____ Z# _____ Date: _____

Completed: PIC: _____ Z# _____ Date: _____

Completed: PIC: _____ Z# _____ Date: _____

Completed: PIC: _____ Z# _____ Date: _____

Completed: SOM or SOM Designee: _____ Z# _____ Date: _____

Completed: SOM or SOM Designee: _____ Z# _____ Date: _____

Completed: SOM or SOM Designee: _____ Z# _____ Date: _____


Completed: SOM or SOM Designee: _____ Z# _____ Date: _____

Completed: SOM or SOM Designee: _____ Z# _____ Date: _____

Completed: SOM or SOM Designee: _____ Z# _____ Date: _____

Completed: SOM or SOM Designee: _____ Z# _____ Date: _____

2.3 Crafts will DOCUMENT lessons learned on AP-Work-002.11 form, Work Documentation Form.**2.4** NOTIFY MSS-EWMO superintendent of job completion. Complete Post Maintenance Work Package Review for final approvals for this work.

 Facilities Maintenance IWD – (Facility Maintenance Activity Specific Information)			
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TA: 50/54	Building: All	Room:	Additional Location Description:

<i>Insert Rows above for additional Tasks/Steps or attach pages to clearly communicate ESH&Q/S&S hazards and associated controls.</i>	The RLM, and FOD or FOD Representative (if required or recommended by RLM, e.g. high hazard) approval indicates IWM has been applied appropriately, work is authorized, workers are qualified, work will be performed in accordance with ESH&Q/S&S requirements and the IWD, and facility safety basis, aggregate hazards, and collocated hazards were appropriately included in the hazard analysis and acknowledges completion of a peer review.		RLM (Signature/Z#/Date) Required <hr/> FOD or FOD Representative (Signature/Z#/Date) If Required or Recommended by RLM <hr/> SME Review (Signature/Z#/Date) If Required <hr/> ESO Review (Signature/Z#/Date) If Required <hr/>
	IWD Type <input checked="" type="checkbox"/> Moderate-Hazard <input type="checkbox"/> High-Hazard/Complex <input checked="" type="checkbox"/> Standing IWD	Date RLM re-approval is required _____ Other Conditions for Re-Approval _____ _____ (Print) Name/Z# of Primary PIC _____ Name/Z# of Alternate PIC _____ Name/Z# of Alternate PIC _____	Classification review completed, if required. Reviewer Signature/Z#/Date _____

Integrated Work Document (IWD) Part 1, Activity Specific Information

IWD #: DESHS-EWMO-WMC-IWD	Revision #: 4	Activity/Task Title - Waste Management Coordinator daily activities for: waste related inspections, container opening/closing, packaging/repackaging of container contents, weighing, and performing final closure of containers. Supports field sampling, RLWTF pumping activities, and waste/material container movements; i.e., drums, IP-1s, etc.
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Work Document #	Planner/Preparer (Name/Z #/Date) Joseph A. Garcia / 167339 / 04-04-17
TA 54	Other Location(s)(TA) as required TA-54 Admin Area, Areas G, H, J, L; RANT, 54-West, and WCRRF (TA-50)

Activity Description/Overview:

Hazard Analysis (HA) Method Used: ☒ Brainstorming ☐ Other: _____

List Names of HA Team (Attach sheet if necessary): Nancy McAllister, Joseph A. Garcia, and Frank Vish

Date HA Performed: March 06, 2017

The RLM approval indicates Integrated Work Management (IWM) has been applied appropriately, work is authorized, workers are qualified, work will be performed in accordance with Environment, Safety, Health, and Quality (ESH&Q)/Security and Safeguards (S&S) requirements and the IWD, and facility safety basis, aggregate hazards, and collocated hazards were appropriately included in the hazard analysis. RLM acknowledges completion of a peer review.

RLM (Signature/Z#/Date) Required: Paul W. Monte 2nd 205838 4/25/17

The Facility Operator Director (FOD) approval on Form 2100 indicates work is appropriate to be conducted in this facility (the activity is within the Authorization Basis [AB] and the work is appropriate for the facility), and facility safety basis, aggregate hazards, and collocated hazards will be managed.

Work activities in multiple FOD jurisdictions, e.g., additional facility safety envelopes, require FOD or Representative Approval.

FODs or FOD Representatives (Signature/Z#/Date/TA) Required: Charles Helm 153546 4-26-17 TA-54

Charles Helm 114849 4/26/17 TA50

Subject Matter Expert(s) (SME(s)) Review (Signature/Z#/Date) If Required: _____

Work-area information (e.g., entry requirements, work area hazards and controls) Work area information can be obtained from placards, FOD direction, or other documentation (e.g., procedures). Form 2101, IWD Part 2, FOD Requirements and Approval for Entry and Area Hazards and Controls, Non-Tenant Activity Form or Form 2102, IWD Part 2, FOD Requirements and Approval for Entry and Area Hazards and Controls, Tenant Activity Form are optional forms to document work area information when warranted. If Forms 2101 or 2102 are not used the work area information must be documented in the following section of this IWD:

Work Area Information (If necessary, document site hazards, controls, and/or entry requirements under this section)
General site hazards include: Radiological Hazards (Radiation, Contamination), industrial hazards from heavy equipment; i.e., forklifts, pick-up trucks, large transportation trucks; other hazards include weather extremes, wildlife, poisonous snakes, and possible exposure to hanta virus via rodent droppings.

Integrated Work Document (IWD) Part 1, Activity Specific Information

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Hazard Determination by Hazard Grading Table: <input type="checkbox"/> Low-Hazard <input checked="" type="checkbox"/> Moderate-Hazard <input type="checkbox"/> High-hazard/Complex IWD Type: <input type="checkbox"/> Standing IWD <input checked="" type="checkbox"/> Standard IWD	Expiration Date: <u>April 01, 2018</u> RLM and FOD or FOD Representative reapproval is required. Annual Review Completed (RLM Initial/Date): _____ Name of Primary Person in Charge (PIC) (Print): <u>Joseph A. Garcia</u> Name of Alternate PIC: <u>Nancy McAllister</u> Name of Alternate PIC: _____				
Work Tasks/Steps Identify work steps/tasks in sequence when such sequencing contributes to safety, security, and/or environmental protection. Applies to all tasks.		Hazards, Concerns, and Potential Accidents/Incidents Identify both activity and work-area hazards for each task/step. Site specific hazards	Controls, Preventive Measures, and Bounding Conditions Specify preventive measures, controls for each hazard (e.g., lockout/tagout points, specific Personal Protective Equipment (PPE), Tamper Indicating Devices (TIDs), alarms, safes, recycle, and waste minimization). <ul style="list-style-type: none"> At a minimum, wear PPE as required by site specific training. 	Reference Documents List permits, operating manuals, security plans, and other reference procedures. EWMO-AP-20253, EWMO General Site Hazards and Controls	Training List training and qualification requirements. Site specific training or escort Annual Required Reading
Applies to all tasks.	Emergency responses	<ul style="list-style-type: none"> During emergencies, follow the appropriate Emergency Action Plan. Know where the closest Shelter-In-Place location is. If you discover an emergency situation, understand the appropriate actions (e.g., evacuate area, notify the Operations Center, call 911, etc.). 	EWMO-BEP-20048, BEP: EWMO Division Building Emergency Plan (BEP)	Site specific training Annual Required Reading	
Applies to all tasks.	Exposure to thermal stress	<ul style="list-style-type: none"> Wear appropriate clothing for the season and environmental conditions. Be aware of changing conditions. Ensure that you stay hydrated. Contact the deployed IH to plan work/rest schedules for work requiring physical exertion, additional PPE, unusually hot or cold work environments. 	N/A	Curriculum #18649, Thermal Stress Awareness Self-Study	

Form 2100
Integrated Work Document (IWD) Part 1, Activity Specific Information

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Applies to all tasks.	Exposure to ionizing radiation	<ul style="list-style-type: none"> • Ensure that you are briefed to the Radiological Work Permit for work required in radiation areas. Contact the DESHS RP team to ensure you understand PPE and other RP work requirements. • Follow ALARA principles of time, distance, and shielding. • Follow all postings. • TLD 	RWP (when required)	Radiological Worker 2 #12909 Facility Radiation Protection Requirement	
Applies to all tasks.	Exposure to radiological contamination	<ul style="list-style-type: none"> • Ensure that you are briefed to the Radiological Work Permit for work required in contamination areas. Contact the DESHS RP team to ensure you understand PPE and other RP work requirements. • Follow ALARA principles of time, distance, and shielding. • Follow all postings. • TLD 	RWP (when required)	Radiological Worker 2 #12909 Facility Radiation Protection Requirement	
Applies to all tasks.	Exposure to solid or liquid chemical waste	<ul style="list-style-type: none"> • Review SDS for chemical/health hazards, and recommended PPE. • Contact the deployed IH to ensure proper PPE selection (e.g., chemical specific gloves). • Wear safety glasses with side shields or goggles at a minimum to protect eyes. 	Manufacturer's SDS (or MSDS for legacy chemicals).	Hazard Communication #25997 Training Plan WM-QS-003, LANL WMC qual standard; Annual Required Reading	
Applies to all tasks.	Biological Hazards: Wild animals, Feces, remains, insects, rodents, snakes, Hanta virus, plague, molds, etc.	<ul style="list-style-type: none"> • Never approach a wild animal. • Contact the appropriate Operations Center and report sightings of snakes or large wild animals. • Do not disturb nesting material, feces, or remains. Pause work, contact the appropriate Operations Center for Pest Control support. • Report insect bites/stings to your PIC. 	EWMO-AP-20253, EWMO General Site Hazards and Controls		

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Applies to all tasks.	Slips, trips, and falls	<ul style="list-style-type: none"> Prior to moving waste or empty containers, check the route to ensure it is free of obstructions or slip/trip hazards. Maintain awareness for uneven surfaces. Wear proper shoes and be aware of footing. Weather conditions may create a slip/trip hazard, maintain awareness. Low light conditions hide slip/trip hazards, ensure adequate lighting to perform work. 		EWMO-AP-20253, EWMO General Site Hazards and Controls	Annual Required Reading	
Applies to all tasks.	Muscle strains/injury	<ul style="list-style-type: none"> Do not lift more than 50 lbs without a lifting device or a second worker. Plan lifts prior to lifting heavy loads. Consider your physical condition and ask for help when you are unsure that you can manage a load without assistance. 		EWMO-AP-20253, EWMO General Site Hazards and Controls	Annual Required Reading	
Applies to all tasks.	Adverse weather conditions	<ul style="list-style-type: none"> Lightning/Thunder; use the 30/30 rule. Seek shelter in a building or a vehicle. Extreme weather demands correct clothing and working with a buddy system. Consider contacting your PIC prior to starting outdoor work. 		EWMO-AP-20253, EWMO General Site Hazards and Controls	Annual Required Reading	
Inspection Tasks	Leaks, spills – exposure to chemical waste	<ul style="list-style-type: none"> Minimize exposure, determine spill volume if safe to do so. Stop small leaks if safe to do so. Contact the appropriate Operations Center and report leaks immediately. If not safe to approach a leaking container, evacuate immediately, warn others, only allow emergency response personnel to enter. 		N/A	Training Plan WM-QS-003, LANL WMC qual standard	

Integrated Work Document (IWD) Part 1, Activity Specific Information

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Inspection Tasks	Incompatible containers and/or waste	<ul style="list-style-type: none">Visually inspect containers and ensure that waste or product is segregated according to hazard class.	N/A	Training Plan WM-QS-003, LANL WMC qual standard	
Inspection Tasks	Bulging container	<ul style="list-style-type: none">If a container is bulging:<ul style="list-style-type: none">Evacuate and warn others.Immediately contact the appropriate Operations Center.Prevent entry by other personnel.	EWMO-BEP-20048, BEP: EWMO Division Building Emergency Plan (BEP)	Annual Required Reading	
Container Movements: HANDLING/TRANSPORT – includes: Opening, Closing, Packaging, Repackaging, and Pumping/Transfer of Liquids	MATERIAL AT RISK (MAR): LLW, MLLW, TRITIUM WASTE, TRITIUM-CONTAMINATED WASTE, TRU, MTRU	<ul style="list-style-type: none">HANDLING/TRANSPORT of MAR is only performed per applicable procedure by trained and qualified operators.	RWP (When Required)	Site specific training	
All container movement tasks	Pinch points	<ul style="list-style-type: none">Wear cut resistant gloves.Be aware of hand and foot position at all times during movement.Plan movements.	EWMO-AP-20253, EWMO General Site Hazards and Controls	Training Plan WM-QS-003, LANL WMC qual standard Annual Required Reading	
All container movement tasks	Physical injuries	<ul style="list-style-type: none">Wear appropriate PPE as applicable for the given taskWhen working around rotating equipment, control loose fitting clothing, hair, badges/fanyards, do not wear gloves.Call 911 for major injuries. For minor injuries, contact the appropriate Operations Center and have your PIC escort you to the LANL Occupational Medicine Clinic.	EWMO-AP-20253, EWMO General Site Hazards and Controls	Annual Required Reading	

Form 2100
Integrated Work Document (IWD) Part 1, Activity Specific Information

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All container movement tasks	Dropped containers resulting in worker injury, spills, or leaks	<ul style="list-style-type: none"> Plan all movements, check all container openings to ensure that they are closed appropriately. Secure the load before movement. Stop spills/leaks if trained to do so. For large leaks/spills; immediately evacuate, warn others. Contact Appropriate Operations Center for ALL leaks/spills 	EWMO-BEP-20048, BEP: EWMO Division Building Emergency Plan (BEP)	Annual Required Reading	
Container Movement: MANUAL	Muscle strain	<ul style="list-style-type: none"> All movements (e.g., lifting, sliding, or moving) of 55-gallon and larger drums, empty or containing waste, SHALL be performed using mechanical assistance (e.g., pallet jack, drum hauler, forklift). Any manual movement of 55-gal or larger drums, whether empty or container waste, that does not use mechanical assistance SHALL only be performed as a last resort and with written (e.g., e-mail, memorandum) approval from one of the following individuals: <ul style="list-style-type: none"> EWMO FOD LTP Program Manager EWMO Operations Manager. Written approval SHALL contain a description of the activity to be performed, the non-mechanically assisted movement method approved for use, and a reason for not using mechanical assist methods. A copy of the written approval SHALL be maintained in the appropriate Operations Center. The EWMO ESH Manager SHALL be notified and provided a copy of the written approval. 	EWMO-AP-20253, EWMO General Site Hazards and Controls	Training Plan WM-QS-003, LANL WMC qual standard Annual Required Reading	

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Container Movement: FORKLIFT	Equipment breakdown/failure	<ul style="list-style-type: none"> Operator must be qualified and authorized to perform inspections and operate the forklift. Ensure that the forklift has sufficient capacity to handle the load. Do not use the forklift for a purpose not intended or designed to be used. Walk the travel path prior to movement. Use a qualified spotter where movement will be in congested areas. 	N/A	Curriculum 20299, Forklift Classroom Instruction. Curriculum 20300, Forklift Examination.	
Container Movement: DRUM DOLLY/PALLET JACK	Equipment breakdown/failure	<ul style="list-style-type: none"> Conduct visual inspection and perform operational check prior to use. If equipment is damaged or does not function as intended, tag out of service and report it to the appropriate Operations Center. 	Current annual inspection for lifting equipment	N/A	
Container Opening and Closing:	Injuries using hand tools: Pinch points, cuts, abrasions	<ul style="list-style-type: none"> Inspect hand tools prior to use, damaged hand tools must be tagged out of service and replaced. Use the appropriate tool for the job, if the tool is not available pause work and locate the appropriate tool. Wear appropriate gloves when applicable. Be aware of surroundings and maintain good housekeeping. 	EWMO-AP-20253, EWMO General Site Hazards and Controls	Training Plan WM-QS-003, LANL WMC qual standard Annual Required Reading	
Container Opening and Closing:	Uncontrolled pressure release from a drum/container	<ul style="list-style-type: none"> Do not open drums/containers that show deformation from pressure, pause work, evacuate the area and notify the appropriate Operations Center. After evaluation and if approved to do so, Then perform following, as applicable: <ul style="list-style-type: none"> Slowly open bung to relieve pressure. Use appropriate tools. If the drum does not have a bung, apply a lid restraint and slowly loosen the ring bolt or closure device and loosen lid to relieve pressure. 	EWMO-BEP-20048, BEP: EWMO Division Building Emergency Plan (BEP)	Training Plan WM-QS-003, LANL WMC qual standard Annual Required Reading	

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IWD #: DESHS-EWMO-WMC-IWD	Revision #: 4	Activity/Task Title - Waste Management Coordinator daily activities for: waste related inspections, container opening/closing, packaging/repackaging of container contents, weighing, and performing final closure of containers. Supports field sampling, RLWTF pumping activities, and waste/material container movements; i.e., drums, IP-1s, etc.			
Work Tasks/Steps Identify work steps/tasks in sequence when such sequencing contributes to safety, security, and/or environmental protection.	Hazards, Concerns, and Potential Accidents/Incidents Identify both activity and work-area hazards for each task/step.	Controls, Preventive Measures, and Bounding Conditions Specify preventive measures, controls for each hazard (e.g., lockout/tagout points, specific Personal Protective Equipment [PPE], Tamper Indicating Devices [TIDs], alarms, safes, recycle, and waste minimization).	Reference Documents List permits, operating manuals, security plans, and other reference procedures.	Training List training and qualification requirements.	
Container Opening and Closing:	Exposure to corrosive liquid	<ul style="list-style-type: none"> When opening a drum with known corrosives, PPE must include chemical splash goggles, or a face shield and safety glasses, closed toed shoes, long pants, and a lab coat. When opening a drum with unknown liquids, PPE will be consistent with drums with corrosives. Contact the deployed IH to ensure exposures are controlled. Ensure that an eyewash station is immediately available. 	N/A	N/A	
Container Opening and Closing:	Foot injury	<ul style="list-style-type: none"> Always wear sturdy work boots with toe protection. 	EWMO-AP-20253, EWMO General Site Hazards and Controls	Annual Required Reading	
Container Opening and Closing:	Injury due to falling lids, Equipment damage from uncontrolled lid removal	<ul style="list-style-type: none"> Always use two workers to remove lids from large containers and place on ground or appropriate surface. For large containers that have hinged lids or sides, always open completely. If installed, ensure that locking devices or lift pistons are set. If lifting pistons do not have a locking device, ensure that they will hold the lid in an upright position If one or all lift pistons are defective, do not use to hold containers open. Tag out of service, pause work and contact the Waste Disposition – Storage, Remediation, and Shipping (WD-SRS) Group Leader. 	N/A	N/A	
Waste Packaging and/or Repackaging: Adding/removing material, containers, absorbent or packages	Waste incompatibility	<ul style="list-style-type: none"> Only package waste in compatible containers. Separate waste according to hazard class. 	N/A	Training Plan WM-QS-003, LANL WMC qual standard	

Form 2100
Integrated Work Document (IWD) Part 1, Activity Specific Information

IWD # DESHS-EWMO-WMC-IWD		Revision #: 4	Activity/Task Title - Waste Management Coordinator daily activities for: waste related inspections, container opening/closing, packaging/repackaging of container contents, weighing, and performing final closure of containers. Supports field sampling, RLWTF pumping activities, and waste/material container movements; i.e., drums, LP-1s, etc.		
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Waste Packaging and/or Repackaging: Adding/removing material, containers, absorbent or packages	Exposure to containerized solid or liquid chemicals (e.g., closed inner containers, ampoules, bulk containers, etc.)	<ul style="list-style-type: none">Review SDS for chemical/health hazards, and recommended PPE.Contact the deployed IH for guidance and direction, as needed.Ensure that an eyewash is in close proximity to the work area.	N/A	Training Plan WM-QS-003, LANL WMC qual standard	
Waste Packaging and/or Repackaging: Adding/removing material, containers, absorbent or packages	Leaks/spills from containers with compromised integrity	<ul style="list-style-type: none">Visually inspect containers for integrity before handling.Pause work and contact Operations Center if a leak or spill is discovered or occurs.If directed and trained to do so, control leak/spill.Minimize exposure duration.If leak/spill is not controlled, evacuate to a safe location and warn others.	EWMO-BEP-20048, BEP: EWMO Division Building Emergency Plan (BEP)	Training Plan WM-QS-003, LANL WMC qual standard Annual Required Reading	
Waste Packaging and/or Repackaging: Adding/removing material, containers, absorbent or packages	Fire and/or Explosion	<ul style="list-style-type: none">Ground or bond receiving container if waste is flammable.Use non-sparking tools to open and close.	EWMO-BEP-20048, BEP: EWMO Division Building Emergency Plan (BEP)	Training Plan WM-QS-003, LANL WMC qual standard Annual Required Reading	
Waste Packaging and/or Repackaging: Adding/removing material, containers, absorbent or packages	Exposure to containerized liquid chemicals	<ul style="list-style-type: none">When adding absorbent material to uncontained chemicals (e.g., spills), wear appropriate PPE. If needed, contact appropriate SME for guidance. .	N/A	Training Plan WM-QS-003, LANL WMC qual standard	

Form 2100
Integrated Work Document (IWD) Part 1, Activity Specific Information

IWD #: DESHS-EWMO-WMC-IWD	Revision #: 4	Activity/Task Title - Waste Management Coordinator daily activities for: waste related inspections, container opening/closing, packaging/repackaging of container contents, weighing, and performing final closure of containers. Supports field sampling, RLWTF pumping activities, and waste/material container movements; i.e., drums, IP-1s, etc.			
Work Tasks/Steps Identify work steps/tasks in sequence when such sequencing contributes to safety, security, and/or environmental protection.	Hazards, Concerns, and Potential Accidents/Incidents Identify both activity and work-area hazards for each task/step.	Controls, Preventive Measures, and Bounding Conditions Specify preventive measures, controls for each hazard (e.g., lockout/tagout points, specific Personal Protective Equipment [PPE], Tamper Indicating Devices [TIDs], alarms, safes, recycle, and waste minimization).	Reference Documents List permits, operating manuals, security plans, and other reference procedures.	Training List training and qualification requirements.	
Container Closing:	Leak or spill of chemical or radioactive material	<ul style="list-style-type: none"> After packaging waste in container check gasket(s) on lid/door to ensure it is not damaged and replace if necessary. Ensure container is closed properly per manufacturer's instructions. For containers with radioactive waste, follow RCT guidance. 	EWMO-BEP-20048, BEP: EWMO Division Building Emergency Plan (BEP)	Training Plan WM-QS-003, LANL WMC qual standard Annual Required Reading	
Field Sampling and Screening Activities:	Skin, eye, and/or face exposure to sample material	<ul style="list-style-type: none"> Escort WM-SVS Sampling Group personnel. Wear appropriate PPE for activity. 	N/A	Training Plan WM-QS-003, LANL WMC qual standard	
Field Sampling and Screening Activities:	Potential inhalation of non-radioactive particulates, gases, or vapors	<ul style="list-style-type: none"> Avoid unnecessary contact with or disturbance of material to be sampled. Use local exhaust ventilation, a vented glovebox or glovebag, or a fume hood to capture airborne gases, vapors, or particulate. Plan work to minimize exposure. Contact the deployed IH to determine if respiratory protection is required and what type. 	N/A	If RPE is required: Annual physical; Curriculum 40723, Respirators: APR Self Study; Curriculum 3549, Respirators: Air-Purifying Fit Test	
Field Sampling and Screening Activities:	Potential radiological contamination	<ul style="list-style-type: none"> Adhere to the requirements of the Radiological Work Permit (if applicable). Follow the direction of the RCT. Read and follow all postings. Work only in designated areas. Familiarize with the work area and location of hazards before start of activities/work. 	Applicable Facility Radiation Protection Requirements	Required Reading	

Form 2100
Integrated Work Document (IWD) Part 1, Activity Specific Information

IWD #: DESHS-EWMO-WMC-IWD	Revision #: 4	Activity/Task Title - Waste Management Coordinator daily activities for: waste related inspections, container opening/closing, packaging/repackaging of container contents, weighing, and performing final closure of containers. Supports field sampling, RLWTF pumping activities, and waste/material container movements; i.e., drums, LP-1s, etc.
Work Tasks/Steps Identify work steps/tasks in sequence when such sequencing contributes to safety, security, and/or environmental protection.	Hazards, Concerns, and Potential Accidents/Incidents Identify both activity and work-area hazards for each task/step.	Controls, Preventive Measures, and Bounding Conditions Specify preventive measures, controls for each hazard (e.g., lockout/tagout points, specific Personal Protective Equipment [PPE], Tamper Indicating Devices [TIDs], alarms, safes, recycle, and waste minimization). <ul style="list-style-type: none"> • Wear appropriate PPE. • When working around rotating equipment, control loose fitting clothing, hair, badges/lanterns, do not wear gloves. • Call 911 for major injuries. • For minor injuries, contact the appropriate Operations Center and have your PIC escort you to the LANL Occupational Medicine Clinic.
Pumping/Transfer of Liquids from container to tanker truck (RLWF) or to another container – Applies to remaining tasks.	Pump/Hose handling involving lifting and movement – physical injury.	Reference Documents List permits, operating manuals, security plans, and other reference procedures. EWMO-AP-20253, EWMO General Site Hazards and Controls Training Plan WM-QS-003, LANL WMC qual standard Annual Required Reading
	Muscle strains/injury	EWMO-AP-20253, EWMO General Site Hazards and Controls Annual Required Reading
	Leaks/spills	EWMO-BEP-20048, BEP: EWMO Division Building Emergency Plan (BEP) Annual Required Reading
	Damaged and/or incorrect orientation/connection of transfer hoses – leaks/spills.	N/A
	Electrical Shock	EWMO-AP-20253, EWMO General Site Hazards and Controls Annual Required Reading
End of IWD Tasks		

Add as many additional Tasks/Steps as needed to clearly communicate ES&H/S&S hazards and associated controls.



Integrated Work Document (IWD) Part 3, Validation and Work Release

IWD # DESHS-EWMO-WMC IWD

Revision #4 Work Release

By signing below, I verify this activity is compatible with current facility configuration and operating conditions.

FOD designated Ops Mgr or other facility point-of-contact for work area

Signature/Z#/Date (If required by FOD): [Signature] 153846 05-02-17

Note: For Standing IWD, release may be given concurrently with signatures on Part 2.

By signing below, I have verified the following:

- I have verified authorization by ensuring approval signatures of the RLM and FOD.
- I have jointly conducted a validation walkdown with workers to confirm the IWD can be performed as written, required initial conditions and other prerequisites are in-place.
- The assigned workers are authorized and are qualified to perform the work in a safe, secure, and environmentally responsible manner.
- I have conducted the pre-job briefing, and all workers (including support workers) have been briefed.
- I have ensured coordination with any required FOD work-area representatives (e.g., area work coordinators).

Primary PIC (Signature/Z#/Date) Required: [Signature] 167339 05/02/2017

Alternate PIC Signatures acknowledges PIC authority is assumed for the first time (Note: Alternate PICs are required to sign only once, but formal handoff includes conferring with previous PIC to obtain all required information associated with the handoff).

Alternate PIC (Signature/Z#/Date) Required: [Signature] 312160 5.2.17

Alternate PIC (Signature/Z#/Date) Required: _____

Pre-Job Brief Content

- What are the critical steps or phases of this activity?
- How can we make a mistake at that point?
- What is the worst thing that can go wrong?
- What controls, preventive measures, and bounding conditions are needed?
- What work permits are required and how will we meet their requirements?
- What are the handoffs and coordination requirements among workers and multiple PICs?
- Are there hold-points including those that require sign-offs?
- What are the pause/stop work responsibilities and expectations (e.g. for unanticipated conditions or hazards)?
- How would we respond to alarms and emergencies?
- Are there lessons learned from previous similar work?
- Is other information needed to perform this activity in a safe, secure, and environmentally responsible manner?
- Does everyone agree to the work tasks/steps, hazards, and controls and commit to follow them?

Pre-Job Brief Attendance Roster

By signing below as required, I agree to the following:

- I agree to follow the work steps and implement the controls as written as applicable to my work assignments.
- I agree to pause/stop work when conditions or hazards change or when I encounter unexpected conditions during the execution of work, or when work cannot be performed as written, or instructions become unclear during execution.
- I confirm that I am authorized, qualified, and fit to perform the work.

Worker (Signature/Z#/Date)	Worker (Signature/Z#/Date)
Worker (Signature/Z#/Date)	Worker (Signature/Z#/Date)
Worker (Signature/Z#/Date)	Worker (Signature/Z#/Date)
Worker (Signature/Z#/Date)	Worker (Signature/Z#/Date)

Error Precursors

short list

Task Demands	Individual Capabilities
• Time pressure (in a hurry)	• Unfamiliarity w/ task / First time
• High Workload (memory requirements)	• Lack of knowledge (mental model)
• Simultaneous, multiple tasks	• New technique not used before
• Repetitive actions, monotonous	• Imprecise communication habits
• Irrecoverable acts	• Lack of proficiency / Inexperience
• Interpretation requirements	• Indistinct problem-solving skills
• Unclear goals, roles, & responsibilities	• "Hazardous" attitude for critical task
• Lack of or unclear standards	• Illness / Fatigue
Work Environment	Human Nature
• Distractions / Interruptions	• Stress (limits attention)
• Changes / Departures from routine	• Habit patterns
• Confusing displays or controls	• Assumptions (inaccurate mental picture)
• Workarounds / OOS instruments	• Complacency / Overconfidence
• Hidden system response	• Mindset ("tuned" to see)
• Unexpected equipment conditions	• Inaccurate risk perception (Pollyanna)
• Lack of alternative indication	• Mental shortcuts (biases)
• Personality conflicts	• Limited short-term memory

**Integrated Work Document (IWD) Part 4,
Feedback/Post Job Reviews**IWD #: DESHS-EWMO-WMC-IWD Revision #: 4

Feedback of ongoing activities/post job review with the workers and Person in Charge (PIC) should include the following:

- identify inefficiencies, problems during the activity, coordination issues, unanticipated conditions, near misses; and
- develop recommendations for improvement.

A post-job review with the workers and PIC should include the following:

- verify that the activity is complete and make notifications in accordance with Facility Operations Director (FOD) requirements; and
- ensure that follow-through actions (e.g., clean-up, recycle, waste disposal, equipment removal, and secure storage) are completed.

Lessons learned; safety, security, and environmental issues; coordination issues; and unexpected conditions.


Suggested improvements to enter into the Job Hazard Analysis (JHA) Tool, FootPrints, or other Integrated Work Control data bases supported by Lessons Learned.

Other recommendations for improvements to performing this activity. State the positive attributes of this activity.

Completion Statement

Name (print) of PIC/Z #:	Signature	Date
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Attachment D. USQ Screening Form

		UNREVIEWED SAFETY QUESTION SCREENING WORKSHEET							
Facility Identification: EWMO		Facility-Specific USQ Number: EWMO-17-316-S Rev.0							
Change Number: DESHS-EWMO-WMC-IWD, R4		Date: 5/2/2017							
Title: Waste Management Coordinator Daily Activities									
Reviewed for Classification If the documents are classified, follow the requirements contained in the Classified Matter Protection and Control Handbook, P204-2. This document was reviewed to ensure proper classification and is classified as : <input checked="" type="checkbox"/> Unclassified <table><tr><td><u>Art Crawford</u></td><td><u>Art Crawford</u></td><td><u>5/2/17</u></td></tr><tr><td>Derivative Classifier/Organization (printed or typed)</td><td>Signature</td><td>Date</td></tr></table> Note: If this document is OOU or UCNI, add the appropriate markings, distribution limitation statement, and guidance data block(s).				<u>Art Crawford</u>	<u>Art Crawford</u>	<u>5/2/17</u>	Derivative Classifier/Organization (printed or typed)	Signature	Date
<u>Art Crawford</u>	<u>Art Crawford</u>	<u>5/2/17</u>							
Derivative Classifier/Organization (printed or typed)	Signature	Date							
<input type="checkbox"/> Official Use Only (OOU) Official Use Only – May be exempt from public release under the Freedom of Information Act (5 U.S.C. 552). Department of Energy review required before public release. Exemption number and category: <table><tr><td>Derivative Classifier/Organization (printed or typed)</td><td>Signature</td><td>Date</td></tr></table> List exemption and/or guidance used (if applicable): Further dissemination authorized to US government agencies and their contractors.				Derivative Classifier/Organization (printed or typed)	Signature	Date			
Derivative Classifier/Organization (printed or typed)	Signature	Date							
<input type="checkbox"/> Unclassified Controlled Nuclear Information (UCNI) Unclassified Controlled Nuclear Information (UCNI) – Not for public dissemination. Unauthorized dissemination subject to civil and criminal sanctions under section 148 of the Atomic Energy Act of 1954, and amended (42 U.S.C. 2168) UCNI Reviewing Official <table><tr><td>Derivative Classifier/Organization (printed or typed)</td><td>Signature</td><td>Date</td></tr></table> List exemption and/or guidance used (if applicable): Further dissemination authorized to US government agencies and their contractors.				Derivative Classifier/Organization (printed or typed)	Signature	Date			
Derivative Classifier/Organization (printed or typed)	Signature	Date							

	UNREVIEWED SAFETY QUESTION SCREENING WORKSHEET
USQ Number: EWMO-17-316-S	Date: 5/2/2017

Description of Proposed Change:

The proposed change is DESHS-EWMO-WMC-IWD, R4, *Waste Management Coordinator Daily Activities*. This IWD covers the daily activities of the Waste Management Coordinator for: waste related inspections, container opening/closing, packaging/repackaging of container contents, weighing, and performing final closure of containers.

This IWD supports field sampling, RLWTF pumping activities, and waste/material container movements; i.e., drums, IP-1s, etc. This IWD identifies the industrial safety hazards and the controls for these hazards. The IWD does not contain work instructions. All work done under this IWD will be performed using approved procedures.

No Structure, System, and Components (SSCs) are potentially impacted by implementation of the proposed procedure.

There is no interim-state hazard associated with these activities.

Is the change completely enveloped by a previous USQD?	Yes	No
If "Yes", identify the previous USQD and the approval date, and provide a basis below. Check the box indicating that the issue does not require a USQD and sign the form.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
USQD Number: _____ Approval Date: _____		
Does the Proposed change involve:	Yes	No
1. A temporary or permanent change in the facility as described in the existing documented safety analysis?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. A temporary or permanent change in the procedures as described in the existing documented safety analysis?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. A new test, experiment, or operation not described in the existing documented safety analysis?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- ☐ The issue requires a USQ determination.
- ☒ The issue does not require a USQ determination.

Basis:

In accordance with SBP-112-3-R3.1 (C.3) "Guidance for Answering the Questions" the following applicable questions are described:

Does the proposed activity involve a temporary or permanent change in the facility as described in the existing documented safety analysis? No; the proposed change, DESHS-EWMO-WMC-IWD, R4, *Waste Management Coordinator Daily Activities* identifies all of the industrial safety hazards and the controls for these hazards. The IWD does not contain work instructions, therefore, this is not a change to the facility as described in the existing documented safety analysis.

Does the proposed activity involve a temporary or permanent change in the procedures as described in the existing documented safety analysis? No; the proposed change, DESHS-EWMO-WMC-IWD, R4, *Waste Management Coordinator Daily Activities* identifies the industrial safety hazards and the controls for these hazards. The IWD does not contain work instructions and the work done under this IWD will be performed using approved procedures. Therefore, this activity is not a temporary or permanent change in the procedures as described in the existing documented safety analysis.

Does the proposed activity involve a new test or experiment not described in the existing documented safety analysis? No; this is a proposed revision to an IWD to identify the industrial safety hazards and controls for the hazards; therefore, the proposed change is not a new test, experiment, or operation.

 Los Alamos NATIONAL LABORATORY	UNREVIEWED SAFETY QUESTION SCREENING WORKSHEET
USQ Number: EWMO-17-316-S	Date: 5/2/2017

References:

1. DESHS-EWMO-WMC-IWD, R4, *Waste Management Coordinator Daily Activities WCRRF*
2. 08-02-16, ABD-WFM-001, REV. 3.4, Basis for Interim Operation for Technical Area 54, Area G
3. 08-02-16, ABD-WFM-002, REV. 3.4, Technical Safety Requirements (TSRs) for Technical Area 54, Area G

Area G

4. 12-07-11, ABD-WFM-005, R 2.1, Basis for Interim Operation for Waste Characterization, Reduction, and Repackaging Facility (WCRRF)
5. 12-20-16, ABD-WFM-006, R. 2.5.1, Technical Safety Requirements (TSRs) for Waste Characterization, Reduction, and Repackaging Facility (WCRRF)

RANT

6. ABD-WFM-007, Rev. 1.2, Basis for Interim Operation for the Radioassay and Nondestructive Testing (RANT) Facility, TA-54-38

NES

7. 09/01/15, NES-ABD-0101, Rev. 8.0, Documented Safety Analysis for Nuclear Environmental Sites (NES) at Los Alamos National Laboratory
8. NES-ABD-0102, Rev. 8.0, Technical Safety Requirements for Nuclear Environmental Sites (NES) at Los Alamos National Laboratory.

QEV Preparer: Carlo Caimi  5/2/2017
Print name Signature Date

QEV Reviewer: Harry Lord  5/2/2017
Print name Signature Date

Eng AB 08-0070 5/2/17

**Integrated Work Document (IWD) Part 2,
FOD Requirements and Approval for Entry and Area Hazards and Controls**

Non-Tenant
Activity Form

IWD No./Work Request No: DESHS-EWMO-WMC-IWD

Revision #: 4

Facility Operation Director (FOD) must determine the facility entry and coordination requirements and identify the Environment, Safety, Health (ESH)/Security and Safeguards (S&S) hazards and controls associated with the activity location.

FOD 5	TA 54	Bldg. N/A	Room N/A	Other Location All
FOD Designated Facility Point-of-Contact	Name G. Helm / J. Guy	Phone 231-8289	Pager N/A	Email N/A

Entry and Coordination Requirements (Check one or more of the following)

☐ No Entry/Coordination Requirements
☒ Plan of the Day/Plan of the Week (POTD/POTW)
☐ Security Clearance Requirements
☐ Co-located Hazards/Concerns
☒ Check out at End of Work
☒ Escort Required
☐ Other Bounding Conditions: _____

☒ FOD-designated facility Point-of-Contact must sign IWD Part 3
☒ Check in at Start of Work
☒ Work must be Scheduled
☐ Other Security Requirements (ex.: Cellphone, No Foreign Nationals, etc.)
☐ Quality Issues
☒ Review under Authorization Basis (AB)/Safety Basis/Unreviewed Safety Question (USQ)

Additional Comments (refer to Job Hazard Analysis [JHA] Tool Facility Notes)
 Escort required for TA-54 Area G if training requirements for unescorted access is incomplete. Check in/out required for Area-G, H, J, and L activities.

Instructions: In the block below, identify work-area hazards that could potentially affect the worker(s) or others. Specify the facility controls and preventive measures that must be implemented by the worker(s) to protect against the site hazards as well as any special training required.

ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	Work Area Hazard Present	Facility Controls/ Preventive Measures/ Bounding Conditions Specify preventive measures, controls and bounding conditions for each site hazard	Reference Documents List permits, operating manuals, and other reference procedures	Training and Qualification List training requirements (P300, Integrated Work Management, Section 6.1)
<input checked="" type="checkbox"/> No Work Area Hazards				
Ionizing Radiation Work in posted radiological areas, work with radioactive materials, or work on or near radiation producing devices. Specify Hazard:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Area-G is a Radiological Controlled Area. Follow area postings. Dosimetry may be required	Applicable RWP when required	RadWorker II or escort required for entry into Area-G.

ESH/S&S WORK AREA HAZARDS & CONTROLS

Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	Work Area Hazard Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Facility Controls/ Preventive Measures/ Bounding Conditions Specify preventive measures, controls and bounding conditions for each site hazard	Reference Documents List permits, operating manuals, and other reference procedures	Training and Qualification List training requirements (<u>P300, Integrated Work Management, Section 6.1</u>)
Worker Exposure Working near non-ionizing radiation, beryllium, noise, chemicals, hazardous biological materials, lead, asbestos, temperature/humidity extremes, or high explosives. Specify Hazards:				
Energized and Operative Systems Working near energized electrical parts, pressure systems, steam lines; near unprotected belts, pulleys, chains or rotating equipment; fuel fired equipment other than vehicles; or spark or flame producing operations. Specify Hazards:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Confined Spaces Entry into tanks, manholes, cooling towers, sumps, or any other area with potentially low oxygen concentration or other hazards such as toxic vapors or engulfment. Specify Hazards:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Elevated Work Surface Elevated work when fall protection is not provided by conventional handrail systems or required per <u>P101-20, Fall Protection Program</u> Specify Hazards:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Environmental Impact Activities conducted in areas containing potential release site, contaminated soil, sensitive species, watercourse wetlands, floodplain, historical/archeological sites, or other work area condition that can be impacted by or can impact the environment. Specify Hazards:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Security Requirements Specify:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Other Hazards Specify:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			

I have verified that the hazards identified above adequately identify the area hazards and that the IWM process has been applied appropriately.

FOD or Representative (Signature/Z #/Date) Approval Required  153546 05-02-17Date Approval Expires: 04-01-18



Integrated Work Document (IWD) Part 1, Activity Specific Information

IWD #: 001	Revision #: 0	Activity/Task Title
Work Document #		Conduct DEP related activities associated with EWMO compliance.
DESHS-EWMS 08-16		Planner/Preparer (Name/Z #/Date)
		Paul Martin/ 205838/ 05/12/2016
TA	Building	Room
54	Outside	NA
		Other Location(s)(TA) as required
		TA50 WCRRF outside, TA63 TWF outside, and adjacent portions of TA-18, TA-36, TA-51

Activity Description/Overview:

Hazard Analysis (HA) Method Used: ☒ Brainstorming ☐ Other:

List Names of HA Team (Attach sheet if necessary): Paul Martin, David Shrock,

Date HA Performed: 8/14/2016

Conducting DEP related activities associated with EWMO compliance in accordance with the SPCC, MSGP (IP and CGP), RCRA, LANL Hazardous Waste Permit. DEP stormwater activities are limited incidental or emergency activities that can be completed by one or two persons in 30 minutes or less. This work includes Best Management Practices (BMPs) maintenance, installation or repair throughout TA54, TA50 WCRRF, and TA63 TWF. Stormwater BMPs include but not limited to: Berms, Eco-Blok, bar ditches, culverts, swales, rock check dams, ponds (e.g., retention and detention), sediment traps, Turf Reinforcement Mats (TRM), wattle/Pro-wattle, and silt/S-Fencing. Also sediment control activities will be conducted at stormwater outfall locations that extend beyond TA54 into TAs 18, 36, and 51. Work also includes RCRA on-the-spot corrections (e.g., rehang signs and postings) and adding additional BMP examples to the existing stormwater list (sandbags, tarps and covers, debris removal, and tightening/reassembling loose fitting stormwater dissipaters).

The RLM approval indicates Integrated Work Management (IWM) has been applied appropriately, work is authorized, workers are qualified, work will be performed in accordance with Environment, Safety, Health, and Quality (ESH&Q)/Security and Safeguards (S&S) requirements and the IWD, and facility safety basis, aggregate hazards, and collocated hazards were appropriately included in the hazard analysis. RLM acknowledges completion of a peer review.

RLM (Signature/Z#/Date) Required: David Shrock / 205838 / 8/29/2016

The Facility Operator Director (FOD) approval on Form 2100 indicates work is appropriate to be conducted in this facility (the activity is within the Authorization Basis [AB] and the work is appropriate for the facility), and facility safety basis, aggregate hazards, and collocated hazards will be managed.

Work activities in multiple FOD jurisdictions, e.g., additional facility safety envelopes, require FOD or Representative approval.

FODs or FOD Representatives (Signature/Z#/Date/TA) Required: D.A. Souns / 218703 / 8/30/2016Subject Matter Expert(s) (SME[s]) Review (Signature/Z#/Date) If Required: Thomke / 203034 / 8/29/16

Hazard Determination by Hazard Grading Table

☐ Low-Hazard☒ Moderate-Hazard☐ High-hazard/Complex

IWD Type:

☒ Standing IWD ☐ Standard IWDExpiration Date: 8/31/2017
RLM and FOD or FOD Representative reapproval is required.

Annual Review Completed (RLM Initial/Date):

Name of Primary Person in Charge (PIC) (Print): Paul Martin 205838Name of Alternate PIC: Dave Schroek 232597

Name of Alternate PIC: _____

Classification review completed, if required.

Reviewer Signature/Z#/Date

Work Tasks/Steps Identify work steps/tasks in sequence when such sequencing contributes to safety, security, and/or environmental protection.	Hazards, Concerns, and Potential Accidents/Incidents Identify both activity and work-area hazards for each task/step.	Controls, Preventive Measures, and Bounding Conditions Specify preventive measures, controls for each hazard (e.g., lockout/tagout points, specific Personal Protective Equipment [PPE], Tamper Indicating Devices [TIDs], alarms, safes, recycle, waste minimization).	Reference Documents List permits, operating manuals, security plans, and other reference procedures.	Training List training and qualification requirements. (P300 , Integrated Work Management , Section 6.1)
General Field Work – These hazards are common to all or most work tasks.	Unauthorized work and unaccounted for personnel	<ul style="list-style-type: none"> • Contact the SOM for approval and verify if the DEP activity requires merging in the POD. • Personnel shall sign in and out of the TA-54 Operations Center for work inside Area G. • Personnel shall sign in and out of the TA-50 WCRR Facility Operations Center for work outside of WCRR. • Personnel shall sign in and out of the TA-63 TWF Facility Operations Center for work outside of TWF. • For all other areas personnel will sign in and out of TA-62 Building 62 Access Control. • Work shall be authorized in the Plan of the Week, Plan of the Day, or by the Operations Center duty officer amending the Plan of the Day. 	Site access requirements	All site access training requirements
	Personnel injuries, illnesses, and/or inability to summon help	<ul style="list-style-type: none"> • At least one team member shall have a cellular telephone, radio, or other approved communication device and be trained in first aid/cardiopulmonary resuscitation (CPR). • Follow each areas emergency action and response plan • Personnel shall immediately report all injuries, regardless of severity or lack of, to the PIC and CSO • Follow each areas PPE required for entry. • Provide all personnel high visibility safety vests or garments. • Perform daily safety talks. • Emergency procedures: • Should an emergency occur, a responsible person will call 911 or 667-6211 for emergency assistance. • Add Ops center information for each location. i.e. • Inside the TA 50 facility site, call 667-4301 TA 50 Operations Center for all accidents, injuries, spills, and any/abnormal. • All injuries shall be reported to supervisor immediately. Contract Administrator will be contacted immediately. The First Report of Injury will be submitted within 24 hours. 	Contact phone list shall be present at the job site and maintained current.	
	Head, Foot or eye injury	<ul style="list-style-type: none"> • Personnel will wear long pants, sleeved shirts, safety-toed boots/shoes, safety glasses with side shields. • Use appropriate gloves when handling all tools. • When working in areas with other equipment wear safety vests. • If overhead hazards are present, wear a hardhat. 		General PPE training
	Lightning	<ul style="list-style-type: none"> • Cease all operations when lightning is within 6 miles of the operation. • Lightning is more than 6 miles away if more than thirty seconds passes between lightning bolts and thunder. • Wait thirty minutes following the last lightning bolt observation before leaving your refuge location or resuming activities. 	30-30 Rule	

	Hanta Virus	<ul style="list-style-type: none"> Look for and avoid rodent droppings and nests. If dropping or nest must be disturbed to complete work, notify Pest Control at 667-6111 		
	Insect bites or stings	<ul style="list-style-type: none"> If hives, nests, or other established infestation is discovered, no entry into that area shall be allowed. Operations Center shall be notified. 		
	Wild animals	<ul style="list-style-type: none"> If large wild animals are seen avoid contact, notify others in the area, seek shelter, and notify the Operations Center. 		
	Slips, Trips, and falls	<ul style="list-style-type: none"> Be aware of your surroundings and use caution in areas with uneven surfaces, holes, steep slopes, rocks, protruding items, ice, mud, and snow. Site personnel shall take care to keep work area clear of debris, equipment, and materials and other slip/trip/fall hazards. Site Personnel will follow the provisions of OSHA 29 CFR 1926.25 (Housekeeping) for the worksite. During the course of work, the Site Personnel will not allow debris to accumulate on at the worksite area. 		
	Manual Lifting of Heavy Loads	<ul style="list-style-type: none"> All personnel shall use proper lifting techniques. All personnel shall stay within their own personnel limits to prevent injury. Make available back support belts for personnel choosing to use them. When Lifting Loads Greater Than 50 lbs Seek assistance from others. 		
	Potential radiological contamination of personnel	<ul style="list-style-type: none"> Eating, drinking, smoking and chewing are prohibited except in designated areas. When a radiological work permit (RWP) is required, personnel shall adhere to the requirements of the RWP. Personnel shall be frisked (either self-frisk or by a radiological control technician (RCT) out of the work area as required by the RWP, radiological posting, work control documents, or as directed by the RCT. If personnel contamination is detected, personnel must respond as follows: <ul style="list-style-type: none"> If self-frisking, immediately notify a RCT Follow RCT instruction Limit movement Remain in the immediate area if safe to do so. 		Radiation Worker II (RWII)
	Potential radiological contamination of material, equipment, and tools	<ul style="list-style-type: none"> When a RWP is required, personnel shall adhere to the requirements of the RWP. An RCT shall survey material, equipment, and tools as required by the RWP, radiological posting, and work control documents. Tools that have contamination shall be stored in the radiological control area for future use. Items with contamination shall be decontaminated to the extent feasible, and resurveyed with the goal of no detectable contamination or only fixed contamination. Disposition of items released from a posted radiological area is dependent upon activity detected and final destination of the item. Consult with RCT. If contamination levels exceed the RWP action limits, follow directions as given by the RCT. 		

		<ul style="list-style-type: none"> Personnel who do not have RWII training shall not handle contaminated equipment, or tools. Maintain good housekeeping practices and clearly mark and identify hazards that cannot be eliminated. Musculoskeletal injury due to heavy lifting <ul style="list-style-type: none"> Do not lift more than 50 lbs. per individual. Use a handling aid, such as a hand truck or cart, a hand tool, or a jack, to lift and/or move heavy objects, if possible. Before moving or carrying a heavy or bulky object to another location, check the routes to ensure that obstructions and/or slip and trip hazards are removed. Choose an alternate route if clearance is not adequate. Evaluate the load location, task repetition, and load weight to determine if the material can be lifted safely. Inspect materials for slivers, jagged or sharp edges, burrs, and rough or slippery surfaces before handling. Use proper lifting technique to safely lift the load. This includes: <ul style="list-style-type: none"> Place feet close to load and lift mostly by straightening the legs, keeping the load close to the body Get a good grip on the load Do not twist the back or bend sideways Do not lift or lower awkwardly Do not lift with the arms extended Get mechanical help or help from another person if the load is too heavy. 		
Musculoskeletal injury due to heavy lifting				
	Improper use of hand or power tools	<ul style="list-style-type: none"> Inspect tools before use and maintain them in good condition. Tools shall be used for their intended purpose. Wooden handled tools shall be free of splinters or cracks and handle shall be kept tight in the tool. Maintain tool guards and do not modify tools. Power tools shall be plugged into GFCI-protected outlets and shall be UL listed with a three-wire grounded plug. If the plug is not three wired, the tool shall be double insulated. Cords shall be inspected by the user prior to use and protected from unnecessary damage. Cords that show signs of damage or deterioration shall be immediately removed from service. Loose clothing, jewelry, and long hair should be removed or restrained when such items pose a hazard. Use the tool in accordance with manufacturer's operating rules or safe practices. Disconnect tool from power source before changing accessories, cleaning, adjusting, or performing maintenance. Wear proper designated PPE. 		
	Pinch points and crushing hazards	<ul style="list-style-type: none"> Be aware of pinch points and avoid them when possible. Wear work gloves as necessary. Use caution when staging materials next to each other or other objects. 		
	Injury due to high winds and/or airborne debris	<ul style="list-style-type: none"> If sustained wind exceeds 25 mph or wind gusts exceed 30 mph, personnel shall pause outside work as directed by facility operations center. 		

		<ul style="list-style-type: none"> If work cannot continue, suspend activities and shelter in a safe location until winds subside. Personnel shall take precautions when opening or closing car, truck, and trailer doors during high wind conditions. 			
	Cold stress	<ul style="list-style-type: none"> Dress properly and for the weather. Several thinner layers of clothing are better than one heavy layer. Avoid getting your skin or clothing wet. Take breaks as necessary to stay warm. Consult IH Representative about the need for additional protective measures and protocols if equivalent chill temperature is below 20°F. This corresponds to about: <ul style="list-style-type: none"> 20° F - calm conditions 25° F - 5 mph wind speed 30° F - 7 mph wind speed 35° F - 10 mph wind speed 40° F - 17 mph wind speed 45° F - 30 mph wind speed 	ACGIH TLV's		
	Heat stress	<ul style="list-style-type: none"> Take breaks as needed to cool down. Use the buddy system. Beware that PPE increases your heat exposure. Drink plenty of water. Obtain a heat stress evaluation from IH Representative and implement recommended controls if air temperature exceeds 80°F, you are working in direct sunlight, you are wearing coveralls, or other heat exposure exists. IH Representative shall prescribe physiological monitoring and/or work-rest regimen based on outdoor wet-bulb globe temperature, when conditions and activities could result in heat illness or unacceptable heat strain. 	ACGIH TLV's		
	Sunburn	<ul style="list-style-type: none"> Wear sunscreen or clothing that minimizes exposure to the sun, as needed. 			
	Pinch Points	<ul style="list-style-type: none"> Personnel should be aware of items on equipment that can cause pinch points and take care when conducting operations where pinch points hazards exist. Personnel shall wear leather or equivalent work gloves when pinch points are present. 			
	Fall from ladders	<ul style="list-style-type: none"> Position ladder on firm and level surface. Ladder shall be capable of supporting intended loads without failure. Inspect ladder for damage before each use. Keep hands free when climbing ladder. Face ladder and maintain 3 points of contact (hands and feet), while ascending and descending ladders. Only use type 1 or 1A heavy industrial duty fiberglass ladder. Do not exceed the rated capacity or use a metal ladder near any electrical components. If ladder are set up near a door, barricade the door to prevent usage. Ladder shall be kept clean and free of any slippery materials. Use appropriate ladder for the task. 		Ladder Safety	
	Falls from elevated areas over six feet high	<ul style="list-style-type: none"> Use personal fall arrest equipment when working in areas with a potential six foot or greater fall. Ensure 100 % tie-off to an approved designated anchor point. 		Fall Protection	

Noise	<ul style="list-style-type: none"> Wear hearing protection in elevated noise areas, use rule of thumb, if voices need to be raised when talking less than 3 feet from each other. 		

Use Form 2100 Continuation Page for additional Tasks/Steps (if needed) or attach pages to clearly communicate ES&H/S&S hazards and associated controls.

Integrated Work Document (IWD) Part 2, FOD Requirements and Approval for Entry and Area Hazards and Controls

Tenant Activity Form

DESHS-EV7
+ Revision #:

FOD must determine the facility entry and coordination requirements and identify the ESH/S&S hazards and controls associated with the activity location.

FOD EWMO		TA 54; 63; 60; 18; 36; 51	Bldg.	Room	Other Location Outside
FOD Designated Facility Point-of-Contact		Name Gail Helm	Phone 665 8682	Pager	Email gailw@lanl.gov

Entry and Coordination Requirements (Check one or more of the following):

<input type="checkbox"/> No Entry/Coordination Requirements	<input type="checkbox"/> FOD designated facility point-of-contact must sign IWD Part 3
<input checked="" type="checkbox"/> POTD/POTW	<input type="checkbox"/> Check in at Start of Work <input checked="" type="checkbox"/> Work-Area Training Required <input type="checkbox"/> Security Clearance Requirements
<input checked="" type="checkbox"/> Work must be Scheduled	<input type="checkbox"/> Check in Daily <input type="checkbox"/> Escort Required <input type="checkbox"/> Other Security Requirements
<input type="checkbox"/> Co-located Hazards/Concerns	<input type="checkbox"/> Check out at End of Work <input type="checkbox"/> Quality Issues
<input type="checkbox"/> Review under AB/Safety Basis/USQ	<input type="checkbox"/> Check out Daily <input type="checkbox"/> Other Bounding Conditions

Instructions: In the block below, provide facility or work-area information needed by the workers on this activity. (Things to consider include specific work-area hazards and controls, potential conflicts with co-located activities, or any facility restrictions on the activity.) Identify relevant reference documents and any training required.

Facility/Work-Area Information Relevant to this Activity

Reference Documents:

Training Requirements: FOD required trainings controlled by Operations Center

FOD Approval

I have verified that the hazards identified above adequately identify the area hazards and that the IWM process has been applied appropriately.

FOD or Representative (Signature/Z #/Date) Approval Required

Date Approval Expires: 9-12-17



Master
Start: 9-12-16 JPO
End: 9-12-17

Form 2103

Integrated Work Document (IWD) Part 3, Validation and Work Release

IWD # _____ Revision #: _____ **Work Release**

By signing below, I verify this activity is compatible with current facility configuration and operating conditions.

FOD designated Ops Mgr or other facility point-of-contact for work area

Signature/Z#/Date (If required by FOD): _____

Note: For Standing IWD, release may be given concurrently with signatures on Part 2.

By signing below, I have verified the following:

- I have verified authorization by ensuring approval signatures of the RLM and FOD.
- I have jointly conducted a validation walkdown with workers to confirm the IWD can be performed as written, required initial conditions and other prerequisites are in-place.
- The assigned workers are authorized and are qualified to perform the work in a safe, secure, and environmentally responsible manner.
- I have conducted the pre-job briefing, and all workers (including support workers) have been briefed.
- I have ensured coordination with any required FOD work-area representatives (e.g., area work coordinators).

Primary PIC (Signature/Z#/Date) Required: _____

Alternate PIC Signatures **acknowledges** PIC authority is assumed for the first time (*Note: Alternate PICs are required to sign only once, but formal handoff includes conferring with previous PIC to obtain all required information associated with the handoff*).

Alternate PIC (Signature/Z#/Date) Required: _____

Alternate PIC (Signature/Z#/Date) Required: _____

Pre-Job Brief Content

- What are the critical steps or phases of this activity?
- How can we make a mistake at that point?
- What is the worst thing that can go wrong?
- What controls, preventive measures, and bounding conditions are needed?
- What work permits are required and how will we meet their requirements?
- What are the handoffs and coordination requirements among workers and multiple PICs?
- Are there hold-points including those that require sign-offs?
- What are the pause/stop work responsibilities and expectations (e.g. for unanticipated conditions or hazards)?
- How would we respond to alarms and emergencies?
- Are there lessons learned from previous similar work?
- Is other information needed to perform this activity in a safe, secure, and environmentally responsible manner?
- Does everyone agree to the work tasks/steps, hazards, and controls and commit to follow them?

Pre-Job Brief Attendance Roster

By signing below **as required**, I agree to the following:

- I agree to follow the work steps and implement the controls as written as applicable to my work assignments.
- I agree to pause/stop work when conditions or hazards change or when I encounter unexpected conditions during the execution of work, or when work cannot be performed as written, or instructions become unclear during execution.
- I confirm that I am authorized, qualified, and fit to perform the work.

Worker (Signature/Z#/Date) <i>David Williams</i> 284036 9/12/16	Worker (Signature/Z#/Date) <i>Francis M. Vich</i> 211334 9-12-2016
Worker (Signature/Z#/Date) <i>Frank Taylor</i> 203034 9/12/16	Worker (Signature/Z#/Date) <i>[Signature]</i> 7/12/16 312160
Worker (Signature/Z#/Date) <i>P. Dente</i> 270242 9/12/16	Worker (Signature/Z#/Date) <i>[Signature]</i> 232547 9/12/16
Worker (Signature/Z#/Date) <i>[Signature]</i> 167339 9/12/16	Worker (Signature/Z#/Date) <i>[Signature]</i> 072553 9/12/16

No: P409

Revision: 7

Issued: 11/29/17

Effective Date: 11/29/17

LANL Waste Management

1.0 PURPOSE

All waste at Los Alamos National Laboratory (LANL or the Laboratory) is subject to one or more types of regulations and must be managed properly. This document describes LANL requirements for waste generated and managed by waste generators and Treatment and Storage Facilities (TSFs) to ensure compliance with legal mandates and Laboratory requirements as necessary to protect human health, safety, and the environment. This document has been revised as part of a process in which the Laboratory systematically plans, documents, executes, and evaluates its management of regulated waste streams.

This document addresses LANL's waste management requirements for waste generators and TSFs as necessary to safely manage, store, treat, and transport wastes. A waste generator is any person whose actions or processes produce any type of waste. The waste generator owns the waste and must know and document what is in the waste, and TSFs must ensure that the waste characterization meets the requirements of the Laboratory Hazardous Waste Facility Permit ([Laboratory HWFP](#)). TSFs must meet the requirements of the [Laboratory HWFP](#) for waste management, treatment or storage. This document also addresses LANL's Waste Certification and Assessment Programs, in accordance with [DOE Order \(O\) 435.1 Chg 1](#), *Radioactive Waste Management*, to ensure there is a systematic, documented approach for measuring compliance with requirements in this document. This document aligns with the waste management process for transuranic waste as defined in [P409-1](#), *LANL Waste Acceptance Criteria* and the Waste Isolation Pilot Plant (WIPP) Waste Acceptance Criteria (WAC).

The Environmental Protection Agency (EPA) and the New Mexico Environment Department (NMED) have established requirements, which are addressed in this document, for waste generators and TSFs to ensure regulated waste is characterized, managed, stored, treated, and transported compliantly. To ensure compliance with legal mandates, the requirements in this and other requirements documents (i.e., Associate Director for Environment, Safety, and Health [ADESH] documents; [P409-1](#), *LANL Waste Acceptance Criteria*; and Functional Series Documents [FSDs]) are established to be consistent with Department of Energy (DOE) orders, federal and state laws and regulations, the [Laboratory HWFP](#), and reporting requirements.

2.0 AUTHORITY AND APPLICABILITY

2.1 Authority

This document is issued under the authority of the Laboratory Director to direct the management and operation of the Laboratory, as delegated to ADESH as provided in the [Prime Contract](#). This document derives from the Laboratory [Governing Policies](#), particularly the section on Environment, and implements requirements in the [Prime Contract](#), particularly Department of Energy Acquisition Regulation (DEAR) 970.5223-1, *Integration of Environment, Safety, and Health into Work Planning and Execution* (Dec. 2000), Part III, Section J, Appendix B 4.2 and Part III, Section J, Appendix G; [DOE Order \(O\) 435.1 Chg 1](#), *Radioactive Waste Management*; [DOE Manual \(M\) 435.1-1 Chg 1](#), *Radioactive Waste Management Manual*; the [Resource Conservation and Recovery Act \(RCRA\)](#); the [Toxic Substances Control Act \(TSCA\)](#); [New Mexico Special Waste Act](#); [74-9-1 New Mexico Statutes Annotated \(NMSA\) 1978](#), *Solid Waste Act*; and [74-4-1 NMSA 1978](#), *Hazardous Waste Act*.

LANL

P409, Rev. 7

Effective Date: 11/29/17

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- Issuing Authority (IA): Associate Director for Environment, Safety, and Health (ADESH)
- Responsible Manager (RM): Environmental Protection and Compliance (EPC) Division Leader
- Responsible Office (RO): Environmental Protection and Compliance-Division Office (EPC-DO)

2.2 Applicability

This document applies to all workers (e.g., TSF Worker, General Site Worker, Remediation Worker, and Limited Site Worker), including subcontractors to LANL, who generate, manage, treat, transport or store regulated waste at the Laboratory as a waste generator or at a TSF. Regulated waste, as defined in this document, refers to all types of waste including office waste, solid waste, universal waste, hazardous waste, mixed radioactive waste, and radioactive-only waste. Waste generators may be any worker (Laboratory worker [e.g., LANS employee, Lab craft through visiting staff member], affiliate, external, vendor, military, and subcontractor) whose actions or processes generate any type of waste (e.g., hazardous, radioactive, mixed, universal, Polychlorinated biphenyl [PCB] or New Mexico [NM] Special waste) and stores the waste in staging areas, accumulation areas, or storage areas. An RLM may act as the assigned waste generator when responsible for mentoring and overseeing students, visiting scientists/researchers or foreign nationals. In that capacity the RLM must be knowledgeable of the waste generating process, waste management activities and associated accumulation or storage area status. The RLM acting in this manner (e.g., as the waste generator) is responsible for the authorized Waste Compliance and Tracking System ([WCATS](#)) functions.

TSF workers include personnel who manage, treat, transport or store regulated waste under the [Laboratory HWFP](#). All other persons (i.e., subcontractors) working at the Laboratory must follow the requirements as set forth in their contractual agreements or subcontracts. Included in the contractual agreements is a Laboratory document, Exhibit F, *Environment, Safety, and Health Requirements for Subcontractors*; Exhibit G, *Security Requirements for Subcontractors*; and Exhibit H, *Quality Assurance Requirements*. Exhibit F comprises environmental, safety, health, and waste management requirements. Before submittal to the subcontractor, Exhibit F must be reviewed by ADESH Environmental Professional personnel (e.g., Deployed Environmental Professional [DEP], Waste Management Coordinator [WMC], Occupational Health and Safety [OSH], or EPC Core Environmental Professional staff) to ensure that waste is properly characterized, managed, treated, stored, and transported.

3.0 PROCEDURE DESCRIPTION

3.1 Overview

There are two main aspects to this document. First, it establishes specific responsibilities for waste generators and TSFs to manage and store regulated wastes to ensure the protection of human health, safety, and the environment (Sections 3.2 through 3.9). Second, it describes the LANL Radioactive Waste Certification Program defined in [ADESH-AP-TOOL-300](#), *Radioactive Waste Management*, which requires a documented approach to ensure that waste management (treatment, storage, and disposal) of all radioactive waste streams, except for transuranic waste (TRU), which falls under an independent certification program, complies with applicable requirements (Sections 3.7–3.9) before off-site shipment.

Fig. 1 shows the components of the waste management process at LANL.



Fig. 1. LANL Waste Management Components

Waste generators and TSF workers will find more detailed information on waste compliance in the [ADESH](#) FSDs. These FSDs may consist of mandatory requirements, such as administrative procedures (APs) ([ADESH-AP-TOOLS](#)), or guidance information, such as aids and instructions, e.g., instructional guidelines ([ADESH-IG-TOOLS](#)). P409 and the associated tools are the primary guidance documents that address waste management questions at LANL. These FSDs provide LANL with direction regarding waste type and compliance factors and are issued by ADESH in accordance with [PD311](#), *Requirements System and Hierarchy*, and [ADESH-AP-007](#), *Document Control*.

Every procedure for LANL project- or task-level work that may involve generating or otherwise managing a waste must be reviewed by environmental staff at the time the procedure is developed or revised. This is a mandatory requirement, regardless of whether the work is being performed according to local-level procedures or Integrated Work Documents (IWDs). Those local procedures (and/or IWDs), and changes thereto, must be coordinated through and/or reviewed by the ADESH DEP and WMC, as appropriate. ADESH provides DEPs upon request to facility Responsible Associate Directors (RADs) or Facility Operations Directors (FODs). Environmental Protection and Compliance–Compliance Programs ([EPC-CP](#)) establishes criteria and manages the procedure reviews executed by the ADESH staff. The Responsible Line Manager (RLM) should to provide advance notification of waste-planning activities to the DEP and/or WMC. Work activity procedures may be subject to review in accordance with *Safety Basis Procedure* (SBP) [SBP-112-3](#), *Unreviewed Safety Question (USQ) Process*, and [P315](#), *Conduct of Operations Manual*.

Project Management (PM) projects, Environmental Remediation (ER), or Decontamination and Decommissioning (D&D) projects must notify EPC, in writing, of upcoming waste generation projects and provide pertinent planning documentation and characterization documentation for evaluation. EPC-DO must review and approve submitted characterization methodologies, as well as any treatment and/or processing methodologies planned for use in preparation of the waste for packaging and disposal (see [ADESH-AP-TOOL-704](#), *Construction and Demolition Debris*). Use of the Permits and Requirements Identification (PRID) system is required (see [SD400](#),

Environmental Management System). LANL subcontracts that include waste management scope such as characterization, packaging, storage, shipping, and/or disposal must be approved by LANL Waste Certification Official (WCO) or ADESH designee.

Before generating regulated waste or commencing waste characterization activities, a waste generator must consult with the designated WMC. TSFs must comply with the [Laboratory HWFP](#) and their local-level procedures.

Waste generators and TSFs must also meet the requirements of the LANL Pollution Prevention Program, which implements pollution minimization goals through Pollution Prevention Opportunity Assessments and other tools. The LANL Pollution Prevention Program requires waste generators and TSFs to identify potential alternatives to the generation of waste including use of less toxic materials, alternative processes, waste minimization techniques, and following the requirements of [DOE O 435.1 Chg1](#), *Radioactive Waste Management Manual*, [DOE M 435.1-1 Chg 1](#), *Radioactive Waste Management Manual*, and [DOE O 436.1 Chg 1](#), *Departmental Sustainability*.

In the event of a product or waste release (e.g., fire, spill, discharge or similar) or identification of unknown or unstable material that may pose “an imminent and substantial endangerment” to human health or the environment (the “situation”), the Laboratory invokes a formal process where local staff, the Los Alamos Fire Department (LAFD), and/or LANL Security and Emergency Operations - Emergency Response (SEO-ER) personnel provide mitigation. The process includes evaluation of the situation, addressing immediate hazards, and putting the situation into a safe configuration.

Once the immediate risk has been addressed, an evaluation of the actions needed to properly manage the material(s), resulting byproduct or residue, or impacted surrounding materials is performed by Associate Directorate of Mission Assurance, Security, and Emergency Response-Security and Emergency Operations (ADMASER-SEO), and EPC-CP. Depending upon several factors (e.g., materials, location of the release, proposed clean-up actions, etc.) these actions may include one or more of the following: implementation of the LANL RCRA Permit Contingency Plan, notifications, and reporting. If required, EPC-CP may request an emergency treatment permit from NMED.

EPC-Waste Management Program (WMP) established and implemented the Waste Characterization and Processing Review, as documented in [WM-AP-0005](#), *Waste Characterization and Processing Review*, to provide the framework for Subject Matter Experts (SMEs) to participate in reviews of complex waste management issues for safety and compliance. The Waste Characterization and Processing Review is chartered to enhance [RCRA](#) compliance, reduce hazards, improve safety, and for the review and development of compliant resolution of complex waste issues associated with waste processing and management. The Waste Characterization and Processing Review is invoked when a complex waste management and/or processing issue surfaces and is best resolved with multi-discipline SMEs from within and potentially external to LANL. At a minimum, the Waste Characterization and Processing Review will be applied to waste characterization, waste management procedures, waste compatibility analyses, and other complex waste issues. All waste generators can raise complex waste issues to EPC-DO and participate in the Waste Characterization and Processing Review.

3.2 Identifying Waste

Solid waste is defined as any discarded material, either abandoned, recycled, or inherently waste-like. Solid waste can be hazardous, non-hazardous, radioactive, simply solid, special or mixed waste ([ADESH-IG-TOOL-101](#), *Waste Management Glossary*). A waste generator “is any person, by site, whose act or process produces hazardous waste identified or listed in [40 CFR 261](#), *Identification and Listing of Hazardous Waste*, or whose act first causes a hazardous waste

to become subject to regulation” ([ADESH-IG-TOOL-101](#), *Waste Management Glossary*). A waste generator may be LANL or subcontractor personnel. The waste generator responsibilities and the [WCATS](#) authorities are the same, regardless of employee status. Subcontractor staff access to the LANL Internal or Yellow computer network must be coordinated through the LANL Subcontract Technical Representative to enable access to [WCATS](#). Waste generators must correctly identify characterize their waste through waste characterization steps listed in Section 3.2.1. Waste generators must consult with their WMCs to start the waste characterization process, including when working with a new process that may create a new regulated waste stream, or when an existing waste process has been modified. If a LANL worker or subcontractor discovers a waste stream with no identifiable waste generator, the worker must contact the designated WMC. See [ADESH-AP-TOOL-213](#), *No Owner Waste*.

RLMs may act as the assigned waste generator when responsible for mentoring and overseeing students, visiting scientists/researchers or foreign nationals. In that capacity the RLM must be knowledgeable of the waste generating process, waste management activities, and associated accumulation or storage area status. The RLM acting in this manner (e.g., as the waste generator) is responsible for the authorized [WCATS](#) functions.

“Office waste” refers to wastes generated in an office environment and can include solid waste (e.g., office paper, food waste, trash), recyclables (e.g., paper, cardboard, plastics), universal waste (e.g., batteries, fluorescent light bulbs, and aerosol cans), and hazardous waste (e.g., acetone). [ADESH-AP-TOOL-114](#), *Office Waste*; [ADESH-AP-TOOL-111](#), *Waste Characterization*; and if in a radiological area, [ADESH-AP-TOOL-314](#), *Radioactive Characterization of Waste*, help waste generators identify their regulated waste types and describe additional tools that address requirements for their regulated waste types.

When working in a radiological area, the requirements for requesting Authorized Release Limits (ARLs) for industrial landfill disposition of materials meeting the 1-mrem annual dose limit in compliance with [DOE O 458.1 Chg 3](#), *Radiation Protection of the Public and the Environment*, resides with the EPC-WMP. The waste generator provides existing data that adequately characterizes the material proposed for disposition under an ARL, and provides the data to EPC-WMP for evaluation. If EPC-WMP determines the data are adequate, the ARL owner prepares and submits the final ARL proposal in accordance with [ADESH-AP-TOOL-317](#), *Authorized Release Limits Proposal Process*.

3.2.1 Waste Characterization

Waste generators and TSFs are required to ensure that waste characterization is accurate, complete, and up-to-date. Waste generators must make a waste determination and characterize regulated waste by appropriate analytical testing or use of acceptable knowledge, e.g., Safety Data Sheets (SDSs), product labels, and historical data. TSFs and TSF workers must meet waste analysis plan requirements under the [Laboratory HWFP](#) before acceptance of the generator's waste for treatment or storage. If a waste generator does not supply complete and adequate waste characterization information, the TSF or off-site Treatment, Storage, and/or Disposal Facilities (TSDF) may not accept the waste, resulting in a Nonconformance Report (NCR), in accordance with [P330-6](#) *Nonconformance Reporting*. Waste generators and TSFs must ensure that waste characterization documentation is maintained, protected, controlled, and available for internal and/or any third-party reviews.

Note: TSF workers become “waste generators” when activities at the TSF (e.g., repackaging, sorting, and segregation) lead to the generation of regulated waste or trigger re-characterization of the waste stream as described within this section.

As owners of the waste stream, waste generators must consult with their WMCs to start the waste characterization process, including when working with a new process that may create a new regulated waste stream, or when an existing waste process has been modified. At a minimum, waste generators should consult [ADESH-AP-TOOL-111](#), *Waste Characterization*, and [ADESH-AP-TOOL-314](#), *Radioactive Characterization of Waste*, for guidance in documenting and characterizing regulated wastes. These two tools address requirements for waste generators and their regulated wastes. The waste generator must sign a Waste Stream Profile (WSP) certification statement in [WCATS](#), assuring that waste characterization is correct and meets applicable waste acceptance criteria. This certification attests to the accountability and legal defensibility of the waste characterization for internal or external third-party reviews.

As part of the requirement to characterize regulated waste, the waste generator must

- submit a waste stream profile in [WCATS](#) for each waste stream;
- upload all waste characterization documentation into [WCATS](#) and ensure that all documentation is referenced in [WCATS](#) with a unique identifier; and
- sign the WSP certification statement assuring accurate and complete characterization of the waste.

After waste has been identified and entered into [WCATS](#), the waste characterization is reviewed by EPC-WMP before a new waste stream identification number is activated. EPC-WMP screens documentation for LANL facilities that characterize waste streams by acceptable knowledge, (e.g., process knowledge, historical data, etc.) Depending on the type of waste, additional EPC-CP screening may be necessary. Waste generators maintain the characterization process by performing the following:

- Annually re-evaluating waste characterization for each WSP to verify accuracy of the documented waste characterization. For compliance purposes, this annual period is defined as less than one year since the original waste characterization or the last re-characterization;
- Ensuring that actively generated waste streams or containers are never assigned to void or expired WSPs; and
- Submitting a waste stream profile annual update for each active waste stream in [WCATS](#) prior to reaching its term limit.

Note: If waste with no disposal path must be generated (see [ADESH-AP-TOOL-300](#), *Radioactive Waste Management*), the waste generator must contact EPC-WMP in writing and request prior authorization.

3.2.1.a *Re-characterization by the Waste Generator*

Waste generators must re-characterize and update waste characterization if any of the following conditions apply:

- there is any change to waste characterization information, including changes to the waste-generating process or operations;
- analytical results indicate a change in the waste stream;
- new characterization information becomes available;
- a waste container is opened and secondary material is added to the container;
- waste is repackaged and secondary material is added during this process;

- there is a change in the ownership of a WSP; or
- the waste generator is notified that waste received at an off-site facility does not match a preapproved waste analysis certification or accompanying shipping documentation.

Note: TSF workers become waste generators when waste processing includes any of the activities described above.

Waste generators must contact EPC-WMP in the event that updates to waste characterization information are required as described above. EPC-WMP will work through appropriate SMEs to assess the identified changes in the waste characterization and recommend actions.

3.2.1.b *Recharacterization at Treatment and Storage Facilities (TSFs)*

Under the [Laboratory HWFP](#), TSF workers must update their waste characterization when the following occurs:

- a waste generator determines one or more of the conditions in Section 3.2.1.a has occurred, or
- TSF workers have reason to believe that the process or operation generating/processing the waste has changed.

3.2.2 **Waste Containing Potential Radioactive Contamination**

Potentially radioactive wastes (e.g., the waste or waste item was generated in a radiologically contaminated area) are summarized in [ADESH-AP-TOOL-306](#), *Potentially Radioactive or Mixed Investigation-Derived Waste*. The waste generator must meet the requirements specified in the tool.

If radioactive contamination is reasonably suspected to be present at a site (e.g., in wastes from potential release sites or poorly documented D&D sites), the waste must be characterized. See [ADESH-AP-TOOL-314](#), *Radioactive Characterization of Waste*. The Authorized Release Limits Process is defined in [ADESH-AP-TOOL-317](#), *Authorized Release Limits Proposal Process*, and is applicable only to materials that

- have residual radioactivity below the dose limits specified in [DOE O 458.1](#) Chg 3, *Radiation Protection of the Public and the Environment*; and
- do not contain constituents identified in the [74-4-1 NMSA 1978](#), *Hazardous Waste Act*, and [RCRA](#).

Note: For release of potentially activated metals previously stored in Radiation Control areas, see [RP-SOP-077.004](#), *LANSCE Metals Clearance Process*, and [RPSVS-RIC-TBD-03](#), *Technical Basis Documentation Regarding Health Physics Measurements for the Unrestricted Release of Metals from LANSCE*.

3.2.3 **Waste Verification**

To verify compliance with DOE directives; federal and state laws and regulations; [P409-1](#), *LANL Waste Acceptance Criteria*; and reporting requirements, EPC-WMP completes a verification checklist in accordance with [WM-PROG-QP-236](#), *Waste Certification Program Waste Verification*, and must verify accurate and thorough waste characterization. This verification includes a random or selected waste stream and can include the following (if applicable):

- a review of radiological assay;

- a visual examination of the waste;
- a sampling and chemical analysis of the waste;
- a verification that the waste has been properly characterized in accordance with applicable procedures, acceptable knowledge documentation, non-destructive assay records, chemical analysis documentation, and, if applicable, documentation of past visual examinations of the waste;
- a review of past verification results to determine the nature of any pre-existing problems; and
- a review of facility waste processes and procedures to verify operations meet radioactive waste certification requirements.

Note: The [Laboratory HWFP](#) requires an annual verification of the hazardous waste characterization of one percent of the total number of hazardous waste streams characterized solely by acceptable knowledge and managed at Technical Area 54 (TA-54) in the previous calendar year.

3.3 Packaging Waste

To prepare for waste disposition, the waste generator should refer to the [600 Series](#) FSDs (*Transport of Waste*) and review [WM-SVS-TP-10](#), *Preparing and Shipping Waste Off-Site*, to understand the input needed and steps taken by their WMC, EPC-WMP and EPC-WMS to ship their waste. All information regarding waste disposition must be documented in WCATS and a disposal request must be submitted through the [WCATS](#) system by the WMC. This disposal request will prompt EPC-WMS to initiate a waste shipment. EPC-WMP must be consulted on all specific waste issues as EPC-WMP and EPC-WMS are responsible for compliance with safe packaging and transportation requirements for off-site receiving facilities. Waste packaging and transportation must be performed by HMPT trained personnel, see Section 6.7 for LANL course references. Low-Level (LLW) and Mixed Low Level (MLLW) radioactive waste must meet waste package certification requirements before the waste is shipped and disposed. Refer to [ADESH-AP-TOOL-316](#), *LLW/MLLW Procurement Requirements*, for procurement of LLW/MLLW items or services.

Generators of LLW and MLLW have two options in meeting the waste package certification requirements. For either option, the waste generator, supported by the assigned WMC, must make a request in writing to the [WCO](#) to arrange for waste package certification for the Nevada National Security Site (NNSS). For radioactive waste destined for the NNSS, requirements outlined in the [LANL Off-Site Waste: Nevada National Security Site procedures](#) must be met. For wastes destined for a non-NNSS facility, the requirements of this policy's associated FSDs and applicable WAC must be met. If there are specific waste issues regarding LLW and MLLW, the waste generator/WMC must contact the [WCO](#). For NNSS destined waste, the WCO will rely on established waste disposition requirements that are consistent with NNSS WAC requirements, to ensure compliance with federal and state laws, regulations, and reporting requirements (see [ADESH-AP-TOOL-316](#), *LLW/MLLW Procurement Requirements*, for procurement of LLW/MLLW items or services).

3.4 Storing Waste

Waste generators and TSFs will store their waste in accordance with the requirements listed below.

3.4.1 Waste Areas

Waste generators are responsible for ensuring that on-site waste accumulation and temporary storage of their waste (e.g., Central Accumulation Areas [CAAs]) are conducted in [registered waste areas](#). For more detailed instruction see the following:

- [ADESH-AP-TOOL-206](#), *Management of Hazardous Waste by Generators*,
- [300 Series Tools](#), (*Radioactive Waste*),
- [500 Series Tools](#), (*NM Special Waste*), and
- [ADESH-AP-TOOL-712](#), *Polychlorinated Biphenyl (PCB) Waste*.

TSFs can meet the waste storage requirements in the [Laboratory HWFP](#) by operating to the [800 Series Tools Treatment and Storage Facility \(TSF\)](#).

The WMC must also certify waste protection and storage by evaluating the waste and using [ADESH-AP-TOOL-300](#), *Radioactive Waste Management*, and [P409-1](#), *LANL Waste Acceptance Criteria*.

3.4.2 Site Treatment Plan for Mixed Transuranic and Mixed Low-Level Waste at TSFs

In accordance with the Site Treatment Plan (STP), LANL must report to NMED all Mixed Transuranic (MTRU) waste and MLLW that will be stored at the Laboratory after one year of its accumulation start date. For STP waste containers, the start date refers to the date of receipt for storage at the LANL TSF. The STP summarizes the status of the current inventory, describes the progress being made to dispose of the waste, identifies treatment and disposal options for addressing the STP inventory, and provides overall schedules for management and disposition of mixed waste to demonstrate compliance with Land Disposal Requirement storage prohibitions under [RCRA](#) and demonstrates compliance with the Federal Facility Compliance Order issued by NMED under the New Mexico Hazardous Waste Act.

To meet these compliance requirements, waste generators must notify the [STP manager](#) in writing at least 3 months before the waste exceeds its one-year accumulation start date that their waste must be added to the STP. The waste generators must provide the following:

- For MLLW and MTRU waste, an explanation as to why the waste will exceed its one-year accumulation start date.
- For MLLW only, compliance milestone dates when waste will be shipped off-site for treatment and disposal.

3.4.3 Radioactive Waste Management Basis

In accordance with [DOE O 435.1-1](#) Chg 1, *Radioactive Waste Management*, LANL must identify LLW, MLLW, TRU and MTU when it is generated, when there are changes in facility status (i.e., adding storage area, increasing waste volumes, etc.), and when the LLW/MLLW waste is about to exceed the one-year storage limit. LANL meets this requirement using [Form 2107](#), *Radioactive Waste Management Basis Report Form* (hereinafter referred to as [RWMB](#)). It is required that the waste generator (e.g., Waste Generator, or RLM, not the WMC) submit the new or updated RWMB and attachments to EPC-WMP upon waste generation, when there are changes in facility operations or waste status. For assistance in completing the RWMB, contact [EPC-WMP](#). Tasks associated with preparing a LANL RWMB are described below.

3.4.3.a Preparing an Original Radioactive Waste Management Basis

The original RWMB must include the following:

- Identification of the generating process owner (reporting organization),
- Identification of every technical area where radioactive waste is generated,
- Reference to documents that support the RWMB, including safety or facility documents, institutional documents applicable to waste management, and waste authorization basis documents pertinent to the waste-generating facility,
- Waste and activity by building and destination including TA-building-room and waste categories,
- Waste categories generated, (LLW, MLLW, TRU, and MTRU),
- Estimated annual volumes of waste generated, and waste matrix (solid or liquid),
- DOE O/M 435.1 Chg 1 facility/organization-specific summaries,
- Facility scope—activities and operations,
- Life-cycle waste management—waste management processes and proposed disposition for each waste,
- Characterization—characterization methods for each waste stream,
- Packaging and transportation—how waste certification is protected when waste is transported,
- Staging/storage—how waste certification is protected during waste storage,
- Quality assurance program—how the waste management quality assurance program protects waste certification,
- Training and qualification—how qualification standards are met, and
- Waste minimization and pollution prevention—what programs are in place before generation of waste.

After completing the RWMB, the FOD submits the RWMB to EPC-WMP and the RWMB is then reviewed, edited, and forwarded by EPC-WMP, to the DOE field element manager for review and approval. EPC-WMP monitors compliance and is responsible for reporting the status of compliance to the DOE field element manager.

3.4.3.b Preparing an Updated or Revised Radioactive Waste Management Basis

The FOD must submit an updated/revised RWMB when there are changes in facility operations or waste status. An “updated” RWMB means that a new RWMB (including [Form 2107](#), *Radioactive Waste Management Basis Report Form*), must be written and approved by the FOD and then re-submitted to [EPC-WMP](#) and DOE for review and approval. If EPC-WMP identifies radioactive waste activities that were not included in the RWMB, EPC-WMP will notify the FOD or RLM to submit an updated RWMB with a description of the newly identified activities. DOE will not approve radioactive waste management activities that were not included in the RWMB and may terminate any unreported activities.

EPC-WMP may allow facilities to generate radioactive waste without continuous updates to the RWMB for special projects (e.g., remediation, Superfund projects, D&D projects, etc.) if the following conditions are met:

- The facilities (1) are performing work in accordance with this document and associated tools, where appropriate (e.g., [ADESH-AP-TOOL-704](#), *Construction and Demolition Debris*), and (2) have provided EPC-WMP a completed and signed *Waste Characterization Strategy Form* ([WCSE](#)) before commencing waste generation activities, and

- EPC-DO has received DOE concurrence for the work proposed.

3.4.3.c *Preparing Radioactive Waste Management Basis Storage Extension Requests*

If it is foreseen that LLW/MLLW cannot be shipped for final disposition within one year of waste generation, the FOD or FOD designated RLM (e.g., facility Point of Contact [POC]) must submit a request for storage extension to EPC-WMP at least three months before exceeding the one-year expiration of the date the container was sealed so that the DOE field element manager receives and approves storage extension before the one-year waste expiration. Tentative shipping dates are subject to change pending DOE approval. The storage extension request must be submitted in writing as an updated RWMB, as described below.

- Inform EPC-WMP when it is identified that an RWMB storage extension needs to be processed.
- Fill out a new RWMB [Form 2107](#), *Radioactive Waste Management Basis Report Form*, as follows. The new RWMB should reference the same information as the current RWMB (unless the RWMB is noted as an update in addition to a storage extension request):
 - Mark the “Extension Request” box (top left-hand corner of page 1),
 - Change the revision number (contact EPC-WMP for assistance),
 - Add the new report date,
 - Summarize the LLW/MLLW exceeding the one-year storage limit,
 - Fill out the table which provides specific details about the waste needing extension, and
 - Obtain FOD, report preparer, and the EPC-WMP waste certification specialist review and signatures.
- Submit the RWMB storage extension request to EPC-WMP.

After approving the request, the ADESH Associate Director will send a letter to the DOE field element manager at least 60 days before the storage expiration requesting DOE approval for continued storage. If DOE approval has not been received and the waste is nearing the storage expiration, the waste generator must notify [EPC-WMP](#) in writing at least three days before the expiration date that DOE approval has not been received. If approval for extension is not granted, DOE will provide direction back to ADESH-Associate Director.

Note: If EPC-WMP discovers that an extension request was never submitted, EPC-DO will initiate an Issues Management Tool (IMT) issue in accordance with [P322-4](#), *Issues Management*.

3.4.4 *Processing Waste at Treatment and Storage Facilities*

Waste processing at TSFs is conducted within storage units and includes all activities that require opening of a container after it has been characterized and sealed, including but not limited to sorting, segregating, repacking, and resizing of waste. TSFs cannot engage in any sorting, segregating, repackaging, or resizing activities that involve the addition of any new material (e.g., sorbents, inert materials, secondary waste) or an activity that could potentially change the chemical or physical composition of the waste (i.e., that could constitute “waste treatment”). These activities at TSFs must be permitted in the [Laboratory HWFP](#); otherwise, a permit modification is required. If processing will require a change to the physical, chemical, or biological character or composition of the waste, or any secondary material will be added to the waste, a permit modification may be required and [EPC-CP](#) must be contacted in writing. Waste processing activities are conducted in the areas outlined in [ADESH-AP-TOOL-810](#), *Waste Processing at LANL Hazard Waste Permitted Units*.

3.4.5 Treating Waste

Waste generators and TSFs cannot engage in waste treatment activities unless one of two conditions exist:

- the waste treatment is authorized under the [LANL HWFP](#), or
- the waste treatment is exempt from permitting requirements.

Waste treatment, as broadly defined, includes “any method ... or process ... designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste nonhazardous; less hazardous; (or) safer to transport, store, or dispose of” ([40 Code of Federal Regulations \[CFR\] Section 260.10](#), *Hazardous Waste Management System: General, Definitions*). Waste treatment may be conducted under the Laboratory [HWFP](#) or interim status documents as outlined in the following:

- [ADESH-IG-TOOL-903](#), *LANL Hazardous Waste Facility Permit: TA-55 Storage in Tanks and Treatment by Stabilization*,
- [ADESH-IG-TOOL-904](#), *Treatment by Open Burning*,
- [ADESH-IG-TOOL-905](#), *Treatment by Open Detonation*, and
- [ADESH-AP-TOOL-907](#), *Stabilization in Containers*.

All other requirements that treatment units must comply with are in the Laboratory [HWFP](#) and can be implemented by operating to the [800 Series Tools Treatment and Storage Facilities](#) (TSF). All LANL workers and subcontractors must contact EPC-CP before engaging in an activity that may constitute waste treatment (e.g., addition of sorbents, or neutralization). Refer to [ADESH-AP-TOOL-901](#), *Elementary Neutralization*, and [ADESH-AP-TOOL-902](#), *Sorption without a Permit*, for guidance on other limited permit-exempted treatments that do not have specific location requirements (i.e., waste generator areas or TSFs). Additionally, refer to [ADESH-AP-TOOL-906](#), *Treatment by the Waste Generator*.

3.5 Shipping Waste

Once the waste is ready for shipment, EPC-WMS serves as the LANL POC for the off-site receiving facility and the DOE Los Alamos Field Office. EPC-WMS reviews and records the appropriate documentation pertaining to the off-site receiving facility and/or the Los Alamos Field Office, such as the TSDF waste profiles, DOE profiles, subcontracts, etc. (see [ADESH-AP-TOOL-601](#) *Waste Container Closure for Transportation* and associated 600 Series Tools). All off-site waste shipments must be signed by a LANL authorized waste shipper.

Specific details for the packaging and shipment of waste to an approved off-site disposal facility are provided in [WM-SVS-TP-10](#), *Preparing and Shipping Waste Off-Site*. The document provides guidance on planning and coordination with LANL facilities and support services, necessary tools and measuring test equipment, package requirements, and required documentation (e.g., shipping task creation, manifest requirements, land disposal restriction certifications, packing slips, driver package requirements, pre-shipment approval process/requirements, and container marking and labeling).

3.5.1 Shipments of Radioactive Waste to Non-Department of Energy (DOE) Treatment, Storage, and/or Disposal Facilities (TSDFs)

[DOE O 435.1 Chg 1](#), *Radioactive Waste Management*, requires an exemption if waste is not shipped to a DOE-owned or -operated facility. For a waste generator to send waste to a facility

that is not owned or operated by DOE for treatment, storage, or disposal, the Laboratory must submit an Exemption Request for Direct Off-Site Shipment of Radioactive Waste to Non-DOE TSDFs ([DOE O 435.1 Chg 1](#) exemption request). To obtain this exemption, the waste generator must contact EPC-WMP in writing, identifying

- the specific waste stream with background description (including radioactivity),
- the exact location and volume of waste to be generated or placed in a container, and
- the time needed to complete the project's waste disposition.

EPC-WMP reviews the request and notifies EPC-WMS. EPC-WMS coordinates the shipment request with appropriate LANL workers, organizations, and subcontractors. EPC-WMP and LANL's shipping subcontractor prepare the [DOE O 435.1 Chg 1](#) exemption request, which includes a cost analysis and description of the waste generator's request. EPC-WMP then submits the final [DOE O 435.1 Chg 1](#) exemption request to the DOE Los Alamos Field Office.

The DOE Los Alamos Field Office will review the [EPC-WMP](#) submittal and evaluate the request. If approved, the DOE Los Alamos Field Office will forward the request to DOE Headquarters. [EPC-WMP](#) will be notified if the request has been approved by DOE, and an approval letter distribution will follow. If notification is not received within 15 working days from EPC-WMP's submittal to the DOE Los Alamos Field Office, [EPC-WMP](#) will contact the DOE Los Alamos Field Office for a documented response. Approval letters, along with the referenced [DOE O 435.1 Chg 1](#) exemption requests, must be uploaded with the waste documentation to [WCATS](#). Approved [DOE O 435.1 Chg 1](#) exemption requests are posted on the [LANL Waste](#) web page.

3.6 Disposing Waste

LANL does not have on-site disposal capacity for solid waste, hazardous waste, TRU, or MLLW wastes. LANL retains limited capacity for on-site disposal for LLW under special circumstances and with prior approval from EPC-WMS. EPC-WMS will determine the optimal disposal path for each waste stream in consultation with its disposal subcontractor(s) and DOE and based on a cost-benefit analysis of available options. Primary consideration will be given to off-site DOE TSDFs, commercial TSDFs approved by DOE, and on-site disposal respectively.

All waste shipments (on-site and off-site) must be coordinated through EPC-WMS. This process supports waste certification to final TSDF destination.

3.7 LANL's Oversight of Waste Management

Compliance oversight at LANL occurs throughout the life-cycle of waste planning, minimization, generation, characterization, accumulation, packaging, management, and disposition. EPC-CP provides guidance on DOE directives and state regulatory requirements. Waste management operations, including waste certification, are conducted by EPC-WMP. Internal assessments and external inspections are performed to verify institutional waste management compliance is met and waste certification is maintained. The [WCO](#) is notified by the originating organization when a Nonconformance Report (NCR) or an IMT issue is entered into the system regarding LLW/MLLW. WCO concurrence for corrective actions must be obtained through the Performance Feedback and Improvement Tracking System (PFITS)/IMT and/or the NCR tracking system before closure. See [P322-4](#), *Issues Management*.

3.7.1 Waste Assessments

To certify that facility waste operations are in accordance with this document, [WM-PROG-QP-250](#), *Waste Assessments*, and [ADESH-AP-TOOL-300](#), *Radioactive Waste Management*, EPC-WMP performs compliance assessments at a facility level. Radioactive waste

assessments are performed to verify that operations meet applicable requirements of [DOE O 435.1 Chg 1](#), *Radioactive Waste Management*; [DOE M 435.1-1 Chg 1](#), *Radioactive Waste Management Manual*; and RCRA regulations and requirements. These assessments are documented in an independent assessment report in accordance with [P328-2](#), *Independent Assessment*, and distributed to the FOD, RLM, and participants after the assessment has been completed. If EPC-WMP discovers discrepancies, EPC-WMP will initiate an IMT issue in accordance with [P322-4](#), *Issues Management*.

Assessments include, but are not limited to the following:

- an evaluation of [registered waste areas](#) (e.g., radioactive waste storage areas, SAAs, CAAs, and permitted TSFs) for waste compliance. [RCRA](#) and radioactive waste area corrective actions and opportunities for improvement must be reported to EPC-WMP.
- an inspection of the [registered waste area](#) and review of the inspection records.
- a tracking and review of past corrective actions resulting from independent assessments conducted by LANL, other organizations, DOE, or their contractors, where applicable.
- a review of nonconformance and corrective action documentation and, when appropriate, a corrective action plan to monitor facilities to ensure appropriate corrective actions are being taken.
- an effectiveness evaluation to determine the nature of any pre-existing problems. When pre-existing problems are found, the assessment team reviews corrective actions that have been taken and determines whether the corrective actions are effective for continuous quality improvement.

Evaluations may include sites outside registered areas (see the ADESH FSDs for requirements on various [registered waste areas](#) including TSF requirements, [P328-2](#), *Independent Assessment* and [P328-3](#), and *Management Assessment*). EPC-WMP must notify the FOD and RLM in advance of upcoming site visits and assessments and any issues are tracked in the IMT (see [P322-4](#), *Issues Management*). [Registered waste area](#) information will be recorded and tracked in a database managed by ADESH.

3.7.2 LANL Waste Assistance

LANL provides waste generator support for waste management and facility compliance (see ENV-CP-QP-115 *Compliance Technical Assistance Program [CTAP]*). EPC-CP waste generator assistance may include accumulation and [registered waste areas](#), LANL inspection forms, containers or tanks, labels, time limits, worker health and safety practices, and the waste generator's process or acceptable knowledge documents and training records.

3.8 Radioactive Waste Certification

LANL develops and implements [DOE O 435.1 Chg 1](#), *Radioactive Waste Management* certification oversight and compliance support programs to assure that the waste acceptance requirements of facilities receiving waste for storage, treatment, and disposal are met. In addition, the Central Characterization Program (CCP) characterizes and certifies TRU and MTRU waste destined for the WIPP in accordance with the WIPP Waste Analysis Plan (WAP) and the WIPP WAC. The CCP is a Nuclear Waste Partnership, LLC, program contracted through the National TRU Program at the DOE Carlsbad Field Office. Program interfaces and roles, responsibilities, authorities, and accountability (R2A2) are described in the CCP-PO-012, *CCP/Los Alamos National Laboratory (LANL) Interface Document*. CCP provides services related to characterization and certification of waste to the WIPP WAC that consist of acceptable knowledge compilation and reporting, data generation, project level validation and verification, records management and document control. LANL TRU and MTRU waste generators must comply with

P409 for all aspects of LANL cradle-to-grave management of waste leading up to its transfer to CCP for final certification and WIPP disposition.

Waste certification is a process by which a waste generator affirms that waste meets P409, the [DOE O 435.1 Chg 1](#) certification criteria, and the WAC of the facility to which the waste generator intends to transfer the waste for treatment, storage, and disposal. This affirmation encompasses generation to disposition (cradle-to-grave) for all regulated wastes. A waste generator identifies and characterizes waste with a WSP. Interim management of the waste includes segregation, storage inspections, packaging, labeling, and maintenance of operating records. Final disposition is initiated with a Waste Disposal Request (WDR). Waste shipping and acceptance of waste at an on-site TSF or off-site TSDF complete the waste management life cycle. EPC-WMP assures compliance through waste verification, storage area inspections, packaging certification, data management, and STP and RWMB reporting. Finally, EPC-WMP conducts facility assessments and surveillance to evaluate LANL compliance with [DOE O 435.1 Chg 1](#) and LANL policy and procedure. Fig. 2 illustrates key components of LANL's compliance program for waste management.



Fig. 2. Key Components of the LANL Waste Certification Program

Failure to comply with P409 and associated Functional Series Document requirements, [P409-1](#), *LANL Waste Acceptance Criteria*, [DOE O 414.1D](#), *Quality Assurance*, or a specific component of the generator's program may result in one or more of the following actions:

- Facility waste operations shut down;
- Denial of waste shipment to an off-site TSDF or other approved waste facilities;
- Initiation of IMT (see [P322-4](#), *Issues Management*). IMT actions may include conduct of a causal analysis and preparation of a corrective action plan, at WMP discretion;
- The facility must complete real-time corrective actions that will be verified by WMP; or
- Inclusion as nonconformance reporting item(s) (see [P330-6](#), *Nonconformance Reporting*)

4.0 Responsibilities

4.1 Facility Operations Directors

- Establish and maintain the environmental compliance envelope.
- Understand and implement the appropriate requirements of all applicable permits at their facilities.
- Confirm that accepted facility-related corrective and preventive actions arising from internal and external assessments relating to the assigned facilities are corrected in a timely manner.

- Issue local-level procedures for waste-management activities, in accordance with Section 3.3.
- Route local-level procedures through the review and approval process managed by ADESH.
- Verify completion and management of the assigned facility's RWMB report ([Form 2107](#), *Radioactive Waste Management Basis Report Form*).
- Request and ensure that FOD support personnel with waste management responsibilities have appropriate training and qualifications.
- Review and release all facility waste management activities.
- Understand operating limits for hazardous material within each facility and notify facility tenant(s) and RLM(s) of these limits.
- Ensure that hazardous material inventories do not exceed facility operating limits.
- Notify Security Emergency Operations – Emergency Response Organization (EO-ERO) before the start of a new activity that will cause a change in the hazardous material inventory in the facility.
- Notify EO-ERO in the event that hazardous material inventories exceed the facility operating limits.
- Work with EO-ERO when changes occur in security or building access, building configuration, or operations, or if significant changes are planned or have occurred in hazards, material operations, or inventories.
- If an Emergency Planning Hazard Assessment (EPHA) is required, ensure that the facility has a current EPHA.
- Ensure that an EPHA is prepared or updated by EO-ERO before operating a facility or a changed process that involves hazardous materials that exceed the facility operating limits.

4.2 Responsible Line Managers

- Understand and implement the appropriate requirements of all applicable permits for their operations, activities, and facilities.
- Ensure appropriate management of program owned waste generation, accumulation and storage sites.
- Participate, encourage, and document SME participation in EPC-WMP's assessments.
- Assist in the management and implementation of corrective actions, issues, and opportunities for improvement regarding their facilities.
- Require waste management compliance on their projects.
- Verify all new and modified work is evaluated for environmental risks and controls using the PRID according to [SD400](#), *Environmental Management System*.
- Verify that all workers are trained, qualified, and authorized to perform their assigned work in accordance with [P781-1](#), *Conduct of Training*.
- Establish effective controls to reduce risks (environmental compliance or waste management, industrial safety and/or personnel health) and document them in IWDs or alternative work control documents so that the workers can understand when and how they are to be used.

- Verify that at any given time there is a single person-in-charge for work execution who is identified to all workers on the activity.
- Determine the competence and commitment of workers to perform specific work assignments in a safe, secure, and environmentally responsible manner and authorize them as appropriate.

4.3 EPC Division Leader (EPC-DL)

- Ensures waste management and compliance oversight are implemented across the Laboratory.
- Chairs or assigns delegates to lead the Waste Characterization and Processing Review for communication of waste management and/or processing issues.
- Interfaces with the transuranic waste generators to review and comment on CCP waste documentation and characterization.
- Documents compliance or noncompliance with characterization/certification requirements and reports to DOE Los Alamos Field Office and DOE-Environmental Management (EM) Los Alamos Field Office.
- Documents waste certification status resulting from internal (e.g., authorization authority) audits and responds to external (e.g., DOE) audits and assessments, tracking corrective actions and reporting observations to management.
- Provides notification and reporting to client and regulatory oversight bodies.

4.4 EPC Waste Management Program (EPC-WMP) Group Leader

- Maintains the LANL Waste Stream Characterization process including [WCATS](#).
- Initiates the review of waste characterization documentation when new information or discrepancies in waste characterization are discovered.
- Supports the monitoring for work in progress and conducts effectiveness evaluations (i.e., through independent assessment and waste verification) in accordance with Section 3.7.1.
- Maintains the WMC qualification and training program.
- Determines whether waste management facilities and systems are adequate to maintain waste certification until shipment and for continuous waste generation.
- Provides support for waste with no disposal path.

4.5 EPC-WMP Waste Certification Official (WCO)

- Verifies NNSS-destined LLW/MLLW waste containers are certified by a qualified Waste Package Certifier (WPC).
- Maintains LANL facility operations certification and off-site receiving facility certification.
- Provides WCO disposition approval for final off-site TSDF destination.
- Identifies the facility's waste management quality assurance program and how it protects waste certification and the proposed disposition for each waste stream.
- Verifies that the WCO and designees certify waste for disposition to off-site TSDFs.
- Provides NNSS notification and reporting to regulatory oversight bodies.
- Evaluates corrective actions regarding waste management.

- Verifies waste personnel (such as Alternate Waste Certification Official [AWCO] and Waste Packaging Certifiers [WPCs]) have appropriate training, evaluates and documents qualification to support waste management activities.

4.6 EPC Waste Management Services (EPC-WMS) Group Leader

- Reviews and approves EPC-WMS procedures and verifies EPC-WMS personnel are adequately trained to procedures.
- Provides support for the annual verification of the waste characterization of one percent of the total number of hazardous waste streams characterized solely by acceptable knowledge in the previous calendar year.
- Serves as the final authority for approving the shipment and disposal of waste.
- Verifies completion of the receiving facility documentation and notifications for LANL.
- Determines whether waste management facilities and systems are adequate to maintain waste certification until shipment and for continuous waste generation.
- Implements the WMC qualification and training program.
- Verifies waste personnel have appropriate training and qualification to support waste management activities.

4.7 EPC Compliance Program (EPC-CP) Group Leader

- Ensures waste personnel (such as compliance support personnel) have appropriate support to adequately perform waste management activities.
- Coordinates information and compliance requests and activities with regulators.
- Manages the ADESH Functional Series Document (FSD) collection.
- Assists EPC-WMP by providing regulatory information and institutional guidance on waste compliance requirements.
- Maintains the [Laboratory HWFP](#) and is responsible for developing permit modification requests.

4.8 Waste Management Coordinators

- Assist waste generators in the implementation of cradle-to-grave controls for generation, handling, storage, and disposal of facility and process waste.
- Provide guidance to generators in characterizing waste, developing Acceptable Knowledge documentation, and preparing WSPs.
- Serve as the Primary Facility (FOD) POC on waste management compliance issues.
- Validate that waste meets LANL registered storage area requirements.
- Verify waste containers or tanks meet the requirements for storage at their facility or transfer to a TSF or off-site TSDF.
- Validate that waste characterization and acceptable knowledge documentation is accurate, defensible, complete and current.
- Verify packaged waste meets accepting facility WAC and follows the ADESH FSD processes.

- Interact with the generator to validate that the generator knows the data in the WSP and understands WSP certification, and that the WSP is accurate and complete. Verifies that the WSP process is complete in [WCATS](#).
- Ensure waste containers are closed in accordance with manufacturer's instructions before shipment.
- Ensure compliant waste container or tank usage.
- Support waste generator in completing waste compatibility evaluations.
- Maintain familiarity with waste-generating processes. Be familiar with scopes of work (e.g., work documents) to ensure that waste management is properly addressed.
- Verify the waste generator is aware of all activities contributing to the WSP.
- Ensure the waste generating procedures and waste generation processes are documented in the WSP within [WCATS](#).
- Validate WSP extensions with generators, and enter/update waste volumes.
- Disseminate waste management information to generators in their facilities.
- Ensure compliant labeling, packaging, and storage of waste.
- Coordinate waste shipments, as needed.
- Support the completion and implementation of Waste Certification Programs, and assist with pollution prevention and waste minimization opportunities.
- Manage facility or Generator-owned regulated areas (i.e., Treatment and Storage Facility [TSF], radioactive waste areas or less-than-ninety day waste storage areas) in accordance with Laboratory requirements.
- Assist operating groups and property custodians in minimizing accumulation or storage of excess materials and recommend reuse, recycle, or disposition of expired materials.
- Serve as POC during waste management inspections and assessments, providing support to the Waste Generator.
- Coordinate with the FOD and waste generators to implement Waste Certification Programs for radioactive waste.
- Provide review and recommendations for all generator requests for No Path Forward waste before submittal to DOE for formal approval, and ensure that no waste is generated until DOE approval is received (see [P409-1](#), *LANL Waste Acceptance Criteria*).
- Report events related to the improper generation, handling, storage, and disposal of waste, including spills, releases, leaks, or discharges, to the RLM, FOD, EPC-WMS and EPC-WMP.

4.9 Deployed Environmental Professionals

- Support implementation of institutional compliance policies and strategies at assigned facilities.
- Act as the Primary Facility (FOD) POCs on environmental requirements, non-waste management compliance, and stewardship issues.
- Participate in procedure and work document reviews, serving as the first screen for potential compliance issues.
- Provide customers with onsite guidance and programmatic support regarding the wide spectrum of requirements related to solid waste, hazardous waste, water quality, air quality

laws, regulations and permits, EMS program; National Environmental Policy Act, Biological and Cultural Resources Management, Pollution Prevention/Waste Minimization, and EPC Project Planning Review.

- Coordinate with core organizations (EPC-DO, EPC-CP, EPC-WMP, and EPC-WMS) on compliance requirements on behalf of the customer.
- Coordinate site-specific waste Compliance Assessments/Audits/Reviews.
- Perform walk-arounds to assist EPC personnel with identification of waste compliance issues.

4.10 Waste Generators

- Comply with the requirements in this document and other requirements documents referenced herein.
- Characterize waste pursuant to the requirements in this document and the ADESH FSDs, consulting with the WMC on any questions or uncertainties.
- Before waste is generated and/or packaged, conduct waste avoidance or minimization analysis in consultation with the WMC.
- Implement the cradle-to-grave controls for generation, handling, storage, and disposal of waste.
- Validate and certify that all planned, generated, or actively managed waste is assigned a WSP in WCATS.
- Ensure adequacy (e.g., accurate, defensible and complete) of the documentation used for waste characterization (acceptable knowledge and physical/chemical analysis).
- Implement Waste Certification Program requirements for facility and programmatic operations.
- Maintain ownership of [registered waste areas](#) within their span of control.
- Verify controls are in place to ensure WSP parameters are met.
- Validate and certify WSP extensions with the WMC.
- Notify the STP manager in writing, at least 3 months before the waste exceeds its one-year accumulation start date that their waste must be added to the STP.
- Minimize waste to continually improve the facility waste management program.
- If the WMC and EPC management agree a “no path” waste stream must be generated, work with the WMC to prepare a “Waste with No Disposal Path” approval package. Note: No waste may be generated prior to receipt of DOE approval. See [P409-1](#), *LANL Waste Acceptance Criteria*.
- Minimize waste generation and/or segregate waste streams to reduce the costs of waste management and meet the off-site TSDF waste acceptance criteria.
- Notify the FOD or designees—or, if unavailable, notify Emergency Management and Response—and responsible WMCs of a release of waste or wastewater into the environment or of an accidental discharge to a wastewater treatment facility.

5.0 IMPLEMENTATION

The requirements in this document are effective on the issue date. All ADESH FSDs that are referenced in this document have been updated in accordance with [ADESH-AP-007](#), *Document*

Control, and [PD311](#), *Requirements System and Hierarchy*. New FSDs are issued as needed and existing FSDs are updated on a routine schedule. The FSDs will be reviewed and updated on a 3-year schedule beginning with the issue date of P409, Rev. 5.

6.0 TRAINING

The training courses listed in this section are required for all workers who generate waste (except office trash) and workers who manage waste or work at TSFs. Workers must notify their managers of expired training. Unless specified, there is no grace period for the training requirements below; this training must be completed and kept current.

Note: Site-specific training may be required and directed by RLMs.

6.1 Waste generators and WMCs must complete the following:

- [Course #23263](#), *Waste Generation Overview–Live*, and
- [Course #21464](#), *Waste Generation Overview Refresher SS*, every 12 months.

The following course is suggested:

- [Course #8504](#), *WCATS: Waste Documentation*

6.2 Persons who work in, or are owners of, Radioactive Waste Areas must complete the following:

- [Course #20301](#), *Radiological Worker II Classroom Training and Examination*
- Facility Site-Specific access training

6.3 Persons who work in, or are owners of, CAAs must complete the following:

- [Course #7488](#), *RCRA Personnel Training*, and
- [Course #28582](#), *RCRA Refresher (Self-Study)*, every 12 months.

Note: The [RCRA](#)-related training listed above must be completed within 6 months of employment or new assignment; during this period, workers must work under the supervision of a trained worker.

6.4 Persons who work in TSFs must complete the following:

- [Course #7488](#), *RCRA Personnel Training*,
- [Course #28582](#), *RCRA Refresher (Self-Study)*, every 12 months,
- [Course #23263](#), *Waste Generation Overview–Live*, and
- [Course #21464](#), *Waste Generation Overview Refresher SS*, every 12 months.

Note: The [RCRA](#)-related training listed above must be completed within 6 months of employment; during this period, workers must work under the supervision of a trained worker.

6.5 Remediation Workers must complete the following:

- [Course #23263](#), *Waste Generation Overview–Live*,
- [Course #21464](#), *Waste Generation Overview Refresher SS*, every 12 months.
- [Course #4464](#), *HAZWOPER: General Site Worker*, or [Course #4465](#), *HAZWOPER: Limited Site Worker*,

- [Course #28652](#), HAZWOPER: Refresher, every 12 months,
- [Course #7488](#), RCRA Personnel Training,
- [Course #28582](#), RCRA Refresher (Self-Study), every 12 months, and/or
- Other courses as assigned by the supervisor.

6.6 Emergency Responders must complete the following:

- [Course #31514](#), HAZWOPER: CSTI Emergency First Responder, Initial instructor-led course,
- [Proctored Test #25068](#), HAZWOPER: First Responder Awareness Level Examination, and
- [Course #23263](#), Waste Generation Overview–Live, and
- [Course #21464](#), Waste Generation Overview Refresher SS, every 12 months.

6.7 Shippers of waste must complete the following:

Hazardous Materials, Packaging and Transportation (HMPT) Course Courses:

- HMPT: *Introduction* – Live, [Course #27916](#) and [Exam #27917](#)
- HMPT: *Identification of Hazardous Materials*, [Course # 27918](#) and [Exam #27919](#)
- HMPT: *Preparing Shipments* – Live, [Course #27920](#) and [Exam #27921](#)
- HMPT: *Movement by Highway* – Live, [Course #27922](#) and [Exam #27923](#)
- HMPT: Core Courses – Equivalency, [Curriculum #36784](#);

Equivalency provides credit for all of the above courses when taken offsite and approved by OS-PT.

- HMPT: *Driver Training* – Live, [Course #27930](#) and [Exam #27931](#)
- HMPT: *Driver Training* –Live, Equivalency [Curriculum #36786](#)

Equivalency provides credit for Driver Training – Live course when taken offsite in OS-PT approved course.

- HMPT: *Hazardous Waste Transportation* [Course #27928](#) and HMPT: *Hazardous Waste Transportation* – [Test #27929](#)
- HMPT: *Hazardous Waste Transportation Course*, [Equivalency Curriculum #36820](#);

Equivalency provides credit for Hazardous Waste Transportation Course and exam ([Courses #27928 and 27929](#)) when taken offsite in OS-PT approved course.

- HMPT: *Basic Radioactive material [RAM] Transportation* – Live ([Course #30462](#)) and HMPT: *Basic RAM Test* ([Course #30463](#))
- HMPT: *Basic RAM Equivalency* ([Course #36819](#))
- HMPT: *Advanced RAM* – Live ([Course #30464](#)) and HMPT: *Advanced RAM Test* (Course #30465)
- HMPT: *Advanced RAM Equivalency with Test* ([Course #36773](#))
- *Federal Motor Carrier Safety Regulations Introduction*, Self-Study [Course #27005](#)

7.0 EXCEPTION OR VARIANCE

Changes in the processes conducted at the TSF or changes to the TSF structure must be reviewed by EPC-CP for necessary permit modifications. Hazardous waste treatment activities that are not authorized by the [Laboratory HWFP](#) or interim status documents must be reviewed by EPC-CP for regulatory compliance.

8.0 DOCUMENTS AND RECORDS

8.1 Office of Record

The Policy Office is the Laboratory Office of Record for this institutional document and maintains the administrative record.

8.2 Waste Management Records

EPC-WMP and EPC-CP work with waste generators, FODs, and RLMs to ensure that the following records and documentation are kept in accordance with [PD1020](#), *Document Control and Records Management*:

- [WCATS](#) for waste characterization
- [Form 2107](#), *Radioactive Waste Management Basis Report Form*
- *RWMB Storage Extension Request*
- [DOE O 435.1 Chg 1](#), *Exemption Request*
- STP plan and correspondence to and from NMED
- Independent assessment reports
- Trend analysis on waste management data
- ADESH database containing [registered waste areas](#)
- Inspection forms
- Facility operating records generated under ADESH FSD implementation

9.0 DEFINITIONS AND ACRONYMS

9.1 Definitions

See LANL [Definition of Terms](#) and [ADESH-IG-TOOL-101](#), *Waste Management Glossary*.

9.2 Acronyms

See LANL [Acronym Master List](#).

ADESH	Associate Director for Environment, Safety, and Health
AP	Administrative Procedure
EPC-DO	Environmental Protection and Compliance-Division Office
CCP	Central Characterization Program
CFR	Code of Federal Regulations
D&D	Decontamination and Decommissioning
DEAR	Department of Energy Acquisition Regulation
DEP	Deployed Environmental Professional

DOE	Department of Energy
EM&R	Emergency Management and Response
EPA	Environmental Protection Agency
EPC-CP	Environmental Protection and Compliance—Compliance Program
EPC-DO	Environmental Protection and Compliance—Division Office
EPC-WMP	Environmental Protection and Compliance—Waste Management Program
EPHA	Emergency Planning Hazard Assessment
ER	Environmental Restoration
FMCSR	Federal Motor Carrier Safety Regulations
FOD	Facility Operations Director
FSD	Functional Series Document
HMPT	Hazardous Materials Packaging and Transportation
HRCQ	Highway Route Controlled Quantity
HWFP	Hazardous Waste Facility Permit
IA	Issuing Authority
IATA	International Air Transport Association
IG	Instruction Guideline
IWD	Integrated Work Document
IWM	Integrated Work Management
LANL	Los Alamos National Laboratory
LLW	Low-Level Waste
MLLW	Mixed Low-Level Waste
MSDS	Material Safety Data Sheet
MTRU	Mixed Transuranic
NCR	Nonconformance Report
NMED	New Mexico Environment Department
NMSA	New Mexico Statutes Annotated
NNSS	Nevada National Security Site
OSH	Occupational Safety and Health
PCB	Polychlorinated Biphenyl
PFITS	Performance Feedback and Improvement Tracking System
PM	Project Management
POC	Point of Contact
PRID	Permits and Requirements Identification
RAD	Responsible Associate Director
RAM	Radioactive Material
RCRA	Resource Conservation and Recovery Act
RLM	Responsible Line Manager
RM	Responsible Manager
RO	Responsible Office
RWMB	Radioactive Waste Management Basis
SBP	Safety Basis Procedure

SEO-ERO	Security and Emergency Operations-Emergency Response Organization
SME	Subject Matter Expert
SOP	Standard Operating Procedure
STP	Site Treatment Plan
TA	Technical Area
TP	Technical Procedure
TRU	Transuranic
TSCA	Toxic Substances Control Act
TSDF	Treatment, Storage, and/or Disposal Facility
TSF	Treatment and Storage Facility
USQ	Unreviewed Safety Question
WAC	Waste Acceptance Criteria
WAP	Waste Analysis Plan
WCATS	Waste Compliance and Tracking System
WCO	Waste Certification Official
WCSF	Waste Characterization Strategy Form
WIPP	Waste Isolation Pilot Plant
WM	Waste Management (Division)
WMC	Waste Management Coordinator
WPC	Waste Package Certifier
WSP	Waste Stream Profile

10.0 HISTORY

Revision History		
03/27/08	P409, Rev. 0	Initial Issue. This document and its linked Waste Management Tools replaces and cancels the Laboratory Implementation Requirements (LIRs) and Laboratory Implementation Guidance (LIG) listed below. The LIRs will remain in force and effect for each nuclear facility until that facility completes the Unreviewed Safety Question (USQ) or Unreviewed Safety Issue (USI) review determinations. <ul style="list-style-type: none"> ▪ LIG 404-00-02, <i>Acceptable Knowledge Guidance</i> ▪ LIR 404-00-02, <i>General Waste Management Requirements</i> ▪ LIR 404-00-03, <i>Hazardous and Mixed Waste Requirements</i> ▪ LIR 404-00-04, <i>Managing Solid Waste</i> ▪ LIR 404-00-05, <i>Managing Radioactive Waste</i> ▪ LIR 404-00-06, <i>Managing Polychlorinated Biphenyls</i>
05/22/08	P409, Rev. 1	Section 6.0 Training: Changed Waste Profile Form Signers to Waste Generators and removed Waste Documentation Forms from the Waste Generators list.
06/04/10	P409, Rev. 2	Extensive revision: Clarified training requirements and responsibilities, corrected links to tools, clarified tool creation process, and simplified the document.

Revision History		
03/19/12	P409, Rev. 3	<p>This document cancels RN0808, <i>Requirements for Recycling Metal from Areas posted for Radiological Hazards</i>.</p> <p>Section 6.0: Separated the third bullet into two bullets, reflecting the separate training requirements for persons who work in Treatment, Storage, and/or Disposal Facilities (TSDFs) and Remediation Workers, to align with the Laboratory's Hazardous Waste Permit. Added Course #23263, <i>Waste Generation Overview Live</i>, as a training requirement for persons who work in TSDFs and Remediation Workers.</p>
04/10/13	P409, Rev. 4	<p>Removed references to cancelled Form 1346, <i>Waste Profile Form</i>, which has been replaced by the Waste Stream Profile (found in the Waste Compliance and Tracking System (WCATS)).</p> <p>Section 5.0: Updated to reflect effective date of May 28, 2013 for applicable nuclear, high- and moderate-hazard facilities and accelerators.</p> <p>Performed three year review in accordance with PD311, <i>Requirements System and Hierarchy</i>.</p> <p>Updated links, titles, and acronyms.</p>
07/30/15	P409, Rev. 5	<p>Performed three-year review in accordance with PD311, <i>Requirements System and Hierarchy</i>.</p> <p>This document cancels P930-2, <i>Radioactive Waste Certification Program</i> and P930-3, <i>Off-Site Shipment of Chemical, Hazardous, or Radioactive Waste</i>. Although this is not "a new document," it is a complete re-write of P409, Rev. 4 as the requirements from P930-2 have been merged with this document. P409 title has also changed to "LANL Waste Management."</p>

Revision History		
04/21/17	P409, Rev. 6	<p>Clarified several sections and consolidated requirements. Replaced ENV and WM with EPC throughout document.</p> <p>Section 3.1: Corrected Deployed Environmental Professional (DEP) responsibility, separated waste characterization and processing review responsibilities, clarified FSD tool types, and added FSD references for ADESH-AP-TOOL-704, <i>Construction and Demolition Debris</i>; and ADESH-AP-TOOL-316, <i>LLW/MLLW Procurement Requirements</i>.</p> <p>Section 3.2.1b: Added reference to ADESH-AP-TOOL-906, <i>Treatment by Waste Generator</i>.</p> <p>Section 3.3: Clarified packaging requirements for NNSS and non-NNSS waste.</p> <p>Section 3.4.3: Clarified language and process.</p> <p>Section 4.0: Clarified responsibilities and incorporated roles, responsibilities, authorities, and accountability (R2A2s) listed in P313, <i>Roles, Responsibilities, Authorities and Accountability</i>.</p> <p>Section 11.1: Deleted all references to ADESH-AP-TOOLS and replaced with reference to P409 <i>Waste Management Tools</i> http://int.lanl.gov/org/padops/adesh/environmental-protection/quality-assurance/p409-tools.shtml.</p>
11/29/17	P409, Rev. 7	<p>Section 1.0: Clarified LANL's waste management requirements for waste generators.</p> <p>Section 2.0: Defined the term 'Worker' and removed reference to ADESH-AP-TOOL300, Radioactive Waste Management.</p> <p>Section 3.0: Edited and revised language throughout Section 3.0 and moved paragraphs within Section 3.0 to help with readability.</p> <p>Section 6.1, 6.4 and 6.5: Clarified existing training frequency requirements.</p> <p>Sections 6.2 and 6.3: Clarified requirements for <90-day radioactive waste areas and for CAAs.</p> <p>Section 6.6: Edited and revised language to Include existing Emergency Responder's training.</p> <p>Section 6.7: Edited and revised language of Waste Shippers [existing] training requirements.</p> <p>Section 11.0: References updated.</p> <p>Updated Acronyms and hyperlinks.</p>

11.0 REFERENCES

Prime Contract:

- DEAR 970.5223-1, Integration of Environment, Safety, and Health into Work Planning and Execution (Dec. 2000)
- Part II, Section H-83 (DEAR 5223-1)
- Part III, Section J, Appendix B 4.2
- Part III, Section J, Appendix G

LANL

P409, Rev. 7

Effective Date: 11/29/17

- Appendix B, Statement of Work: §1.0 General
- [DOE O 414.1D](#), *Quality Assurance*
- [DOE O 435.1](#) Chg 1, *Radioactive Waste Management*
- [DOE M 435.1-1](#) Chg 1, *Radioactive Waste Management Manual*
- [DOE O 436.1](#), *Departmental Sustainability*
- [DOE O 458.1](#) Chg 3, *Radiation Protection of the Public and the Environment*
- [DOE O 430.1B](#) Chg 1, *Real Property Asset Management*

11.1 Other References

- [LANL Hazardous Waste Facility Permit](#)
- [P409-1](#), *LANL Waste Acceptance Criteria*
- [Resource Conservation and Recovery Act \(RCRA\)](#)
- [Toxic Substances Control Act \(TSCA\)](#)
- [New Mexico Special Waste Act](#)
- [74-9-1 NMSA 1978](#), *Solid Waste Act*
- [74-4-1 NMSA 1978](#), *Hazardous Waste Act*
- [PD311](#), *Requirements System and Hierarchy*
- [ADESH-AP-007](#), *Document Control*
- [SBP-112-3](#), *Unreviewed Safety Question (USQ) Process*
- [P315](#), *Conduct of Operations Manual*
- CCP-PO-012, *CCP/Los Alamos National Laboratory (LANL) Interface Document*
- [P409 Waste Management Tools](#) at <http://int.lanl.gov/org/padops/adesh/environmental-protection/quality-assurance/p409-tools.shtml>
- [P322-4](#), *Issues Management*
- [WM-AP-0005](#), *Waste Characterization and Processing Review*
- [SD400](#), *Environmental Management System*
- [P781-1](#), *Conduct of Training*
- [P322-3](#), *Performance Improvement from Abnormal Events*
- [Waste Compliance and Tracking System \(WCATS\)](#)
- ADESH-AP-TOOL-317 *Authorized Release Limits Proposal Process*
- [RP-SOP-077.004](#), *LANSCE Metals Clearance Process*
- [RPSVS-RIC-TBD-03](#), *Technical Basis Documentation Regarding Health Physics Measurements for the Unrestricted Release of Metals from LANSCE*
- [WM-PROG-QP-236](#), *Waste Certification Program Waste Verification*
- [LANL Off-Site Waste: Nevada National Security Site procedures](#)
- [Registered Waste Areas](#)
- [EP-DIR-SOP-10021](#), *Characterization and Management of Environmental Programs Waste*

- [40 CFR 260.10](#), *Hazardous Waste Management System: General, Definitions*
- [WM-PROG-QP-250](#), *Waste Assessments*
- [P328-2](#), *Independent Assessment*
- [P328-3](#), *Management Assessment*
- [PD1020](#), *Document Control and Records Management*
- [ENV-CPQP-115](#), *Compliance Technical Assistance Program (CTAP)*

12.0 FORMS

[Form 2107](#), *Radioactive Waste Management Basis Report Form*

13.0 ATTACHMENTS

There are no attachments associated with this document.

14.0 CONTACT

Environmental Protection and Compliance-Division Office (EPC-DO)

Telephone: (505) 667-2211

Website: <http://int.lanl.gov/org/padops/adesh/waste-management/index.shtml>

IMPORTANT

If you wish to receive credit for the preceding document you **must** enter the course through [UTrain](#) **not** the Policy Office website.

No: P101-14

Revision: 7

Admin. Chg. 3

Issued: 10/16/17

Effective Date: 10/16/17

Chemical Management

1.0 PURPOSE

The purpose of this document is to:

- define the chemical management requirements for the Los Alamos National Laboratory (LANL or the Laboratory) Chemical Lifecycle Management Program,
- define processes to ensure protection of workers from health hazards associated with hazardous chemicals, and to keep exposures below Occupational Exposure Limits (OELs),
- provide direction to ensure that work with hazardous chemicals is conducted in a safe and responsible manner that protects workers, the public, and the environment, in accordance with Laboratory Integrated Work Management (IWM) and Environmental Management Systems,
- provide direction in the development and application of the hierarchy of controls (i.e., elimination, substitution, engineering, administrative, and Personal Protective Equipment [PPE]) that will protect workers and the environment, and
- promote consistency in hazardous-materials-related Integrated Work Documents (IWDs) and other procedures across the Laboratory.

2.0 AUTHORITY AND APPLICABILITY

2.1 Authority

This document is issued under the authority of the Laboratory Director to direct the management and operation of the Laboratory, as delegated to the Associate Director for Nuclear and High Hazard Operations (ADNHHO) as provided in the [Prime Contract](#). This document derives from the Laboratory [Governing Policies](#), particularly the section on Safety.

- Issuing Authority (IA): Associate Director for Nuclear and High Hazard Operations (ADNHHO)
- Responsible Manager (RM): Operations Support (OS) Division Leader
- Responsible Office (RO): Operations Support-Division Office (OS-DO)

2.2 Applicability

This document applies to all Laboratory workers. Subcontract workers are expected to follow the requirements set forth in their contractual agreements (i.e., Exhibit F) with the Laboratory.

This document applies to all work areas where chemicals including gases (compressed and cryogenic fluids) are procured, acquired, manufactured, machined, handled, received, distributed, transported, used, stored, or disposed. Activities that are subject to the requirements contained in this document are maintenance, construction, facility categorization, Research and Development (R&D), emergency planning, environmental restoration, and Decontamination and Decommissioning (D&D). This document applies to Laboratory facilities and equipment that involve current or past use of hazardous chemicals. Offsite work by LANL workers, where chemicals are used, should follow the specific guidelines and protocols of the host facility within

the context of the guidelines provided herein. Minimum requirements are adherence to the Federal Regulations cited in this document.

3.0 PROCEDURE DESCRIPTION

This document sets forth practices for managing industrial hygiene, safety, and environmental concerns associated with hazardous chemicals.

Note: Every Laboratory organization that procures, acquires, manufactures, machines, handles, receives, distributes, transports, uses, stores, or disposes of hazardous chemicals is required to follow the safety plan found in Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan*. Requirements identified in Attachment A are specific to [29 Code of Federal Regulations \(CFR\) 1910.1200](#), *Labor, Occupational Safety and Health Standards, Hazard Communication (e)*, [29 CFR 1910.1450](#), *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories (e)*, and [29 CFR 1926.59](#), *Labor, Safety and Health Regulations for Construction, Hazard Communication (e)* (identical to .1200). The processes found in Attachment A, and any associated IWDs and organization-specific procedures that address hazardous chemicals, must be communicated to the workers in the organization. The plan is applicable to all activities whether chemicals are used in industrial applications (Hazard Communication [HAZCOM]) or small-scale laboratory R&D (Chemical Hygiene Plan [CHP]). Where it is mutually beneficial, the plan is applicable to all activities. Where procedures are specific to HAZCOM or CHP, the delineation is made in the text of the plan.

Note: Engineered nanomaterials are addressed in [P101-29](#), *Working with Nanotechnology Materials and Processes*. Biological materials are addressed in [P101-15](#), *Biological Safety*. Explosives are addressed in [P101-8](#), *Explosives Safety*. Radiological materials are addressed in [P121](#), *Radiation Protection*. Chemical disposition is addressed in [P409](#), *LANL Waste Management*.

3.1 Chemical Management and Chemical Safety Program Elements

Table 1. Chemical Management Program Elements

Chemical Management Program Element	Main Document Section	Attachment A Section
A list of the hazardous chemicals known to be present, i.e., an inventory	3.3	1.3
Hazard identification and analysis	Attachment A	All
Acquisition	3.2	NA
Chemical inventory management and tracking, including management of extremely hazardous chemicals, and Material Safety Data Sheets/Safety Data Sheets (MSDS/SDSs)	3.3	1.4 (MSDS/SDS only)
Chemical transportation	3.8	NA
Chemical storage	3.7	NA
Hazard control	3.6	1.6
Pollution prevention and waste minimization	3.4	NA
Chemical emergency management	3.9	NA
Chemical disposition	3.7	NA
Training	6.0	1.15

The LANL chemical management program addresses elements from both [29 CFR 1910.1200](#), *Labor, Occupational Safety and Health Standards, Hazard Communication*, and [29 CFR 1910.1450](#), *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories*.

Table 2. Chemical Safety Program Elements

Chemical Safety Program Element	Main Document Section	Attachment A Section
A list of the hazardous chemicals known to be present, i.e., an inventory	3.3	1.3
Access to MSDS/SDSs for procured or acquired hazardous chemicals	3.3	1.4
Container labeling and other forms of warning	NA	1.5
Employee information and training	6.0	1.15
Methods used to inform employees of hazards of non-routine tasks or chemicals in unlabeled piping, precautionary measures for protection of employees during normal operating conditions and foreseeable emergencies, and the circumstances under which a particular laboratory operation, procedure or activity will require prior approval from the employer or the employer's designee before implementation	NA	1.6
Standard operating procedures relevant to safety and health considerations to be followed when laboratory work involves the use of hazardous chemicals	NA	1.6
Criteria that the employer will use to determine and implement control measures to reduce employee exposure to hazardous chemicals including engineering controls, the use of Personal Protective Equipment (PPE) and hygiene practices; particular attention will be given to the selection of control measures for chemicals that are known to be extremely hazardous	3.6	1.6
A requirement that fume hoods and other protective equipment are functioning properly and specific measures will be taken to ensure proper and adequate performance of such equipment	NA	1.8
Designation of personnel responsible for implementation of the Chemical Hygiene Plan (CHP) including the assignment of a Chemical Hygiene Officer (CHO), and, if appropriate, establishment of a Chemical Hygiene Committee	4.2	1.9
Provisions for additional employee protection for work with particularly hazardous substances, i.e., carcinogens, reproductive toxins, and substances that have a high degree of acute toxicity, including as appropriate: establishment of a designated area, use of containment devices such as fume hoods or glove boxes, procedures for safe removal of contaminated waste; and decontamination procedures	4.2	1.11
Compliance with 29 Code of Federal Regulations (CFR) 1910.119 , <i>Labor, Occupational Safety and Health Standards, Process Safety Management of Highly Hazardous Chemicals (Occupational Safety and Health Administration [OSHA] PSM Rule)</i> , Appendix A	4.7	NA
Hazardous chemical spill response	3.9	NA

3.2 Chemical Acquisition

Acquisition includes procurement, onsite synthesis, blending of chemicals, individuals or organizations bringing chemicals onsite, and other mechanisms. Chemicals are purchased by trained and authorized chemical workers.

Before a decision is made to purchase a chemical through LANL procurement, chemical owners will determine whether:

- The proposed quantity of the chemical is within the evaluated safety basis limits, fire protection limits, and fire hazard analysts limits for the facility. **Note:** The FOD is responsible for providing this information.
- There is a less hazardous or non-hazardous chemical available.
- There is a suitable surplus chemical available from another chemical owner.
- There is a current need for the chemical.
- There are unique hazards of the chemical that would require special assessment and controls.
- The quantity is limited to a specific project or maintenance need.
- There are stability or shelf life issues that need to be tracked.
- Storage facilities are suitable.
- There is an appropriate safe and environmentally acceptable means for the final disposition of environmentally sensitive chemicals, products, and byproducts.
- The required safety documentation MSDS/SDS is uploaded to the LANL [MSDS/SDS electronic binder](#). Contact Occupational Safety and Health-Industrial Safety and Hygiene (OSH-ISH) for a listing of MSDS Online administrators who can add SDS/MSDSs to the LANL Electronic Binder.

All gas will be procured from the Gas Facility for those maintained as stock items, or as a LANL iProcurement Non Catalog request choosing Compressed Gas as the category. Gases cannot be purchased on a Pcard. All chemical/gases transported as a Hazard Class 2 material must be delivered to the Gas Facility at TA-3, Building 170. The SM-30 warehouse is not allowed to accept the delivery of gas.

Note: Non-gas chemical requests for purchase by purchase card must be submitted for approval via email to ChemDB@lanl.gov. Include the TA, building, and room where the chemical will be stored, the Z# and name of the chemical requestor, the chemical or product name, total amounts requested, the manufacturer and catalog number, and an SDS/MSDS for the chemical or product.

3.3 Chemical Inventory Management and Tracking

- LANL is required to maintain a list of the hazardous chemicals known to be present using an identity that is referenced on the appropriate MSDS/SDS. The listing of hazardous chemicals is maintained in the [LANL institutional chemical inventory](#) database application. This inventory is overseen by ADNHHO Operations Support (OS) Division. For [LANL institutional chemical inventory](#) database requirements, contact the help desk at 667-9242, or e-mail ChemDB@lanl.gov.
- Primary hazardous chemical containers are barcoded, entered, and tracked in the [LANL institutional chemical inventory](#) database in accordance with guidance documents found under the "Support and Resources" tab in the [LANL institutional chemical inventory](#) database application.

- The [LANL institutional chemical inventory](#) database will be updated when a primary hazardous chemical container is acquired; is transferred to a new owner and/or a new location; or is disposed.
- Physical inventories of primary hazards chemical containers will be performed annually to verify the accuracy of the [LANL institutional chemical inventory](#) database. Workers must have access to the MSDS/SDS for all procured hazardous chemicals. See [29 CFR 1910.1200](#), *Labor, Occupational Safety and Health Standards, Hazard Communication* (g) (6) (iii) and (8) and [29 CFR 1910.1450](#), *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories* (f) (3) (v). MSDS/SDSs must be maintained as stated in Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan*, Section 1.4.

3.4 Chemical Elimination, Substitution, Pollution Prevention, and Waste Minimization

Elimination of a hazardous chemical or substitution of a hazardous chemical with a less hazardous chemical is the preferred method to control hazards in accordance with the IWM process. Process change to a system for pollution prevention or waste minimization is another recognized control for chemical usage. Whenever possible, chemical workers will consider eliminating hazardous chemical usage or substituting less hazardous chemicals for highly hazardous chemicals, according to [29 CFR 1910.1450](#), *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories*, and [10 CFR 1021](#), *Energy, National Environmental Policy Act Implementing Procedures*. In addition, upstream chemical minimization processes and waste reduction techniques to minimize the quantity of chemical used in an activity will be considered.

Note: The Environmental Protection-Environmental Stewardship Services Group (ENV-ES) may be contacted for assistance in chemical substitution, pollution prevention, and waste minimization. See the Laboratory [Chemical Safety Webpage](#) for assistance with surplus chemicals. Transportation of surplus chemicals must comply with requirements in Section 3.8.

Avoid introducing excess chemicals into radiologically controlled areas, to minimize the potential to create a mixed waste. The need for legacy chemicals should be evaluated on at least an annual basis.

3.5 Management of Extremely Hazardous Substances

An extremely hazardous substance present at the Laboratory in an amount greater than or equal to its threshold planning quantity triggers emergency planning requirements as required by [40 CFR 355](#), *Protection of Environment, Emergency Planning and Notification*. Contact Security and Emergency Operations-Emergency Management Group (SEO-EM) at 667-6211 for assistance in emergency planning and release reporting requirements.

3.6 Hazard Control

Identification, evaluation, and control of hazards associated with chemical use are managed through IWM (see [P300](#), *Integrated Work Management*), and worker exposure assessments (see [P101-32](#), *Worker Exposure Assessments*).

3.7 Hazardous Chemical Storage

Storage includes all physical phases and all types of containers including, but not limited to, tanks, piping, cylinders, and containers of solid, liquid, or gaseous chemicals. Storage includes all chemicals or chemical products, including used and unused chemicals, sealed, opened, or partially filled containers, working solutions, day-use containers, and chemical “residues” left

within tanks, piping, or other containers. Storage in this document excludes storage of solid waste or hazardous waste.

Chemical storage will be limited to the quantity necessary to perform the work, and within safety basis and fire protection limits. Liquid hazardous chemicals should be stored so that a spill will not exceed 20 L (5 gallons), as required by the National Fire Protection Association (NFPA 45, *Standard on Fire Protection for Laboratories Using Chemicals* and NFPA 400, *Hazardous Materials Code*). Flammable and combustible liquids will be limited to less than the maximum quantities allowed in Tables 10.1.1(a), 10.1.1(b) and 10.1.2 of NFPA 45. Both documents are available to Laboratory workers through the [Research Library](#).

Storage of gas must follow the requirements of NFPA 55, *Compressed Gases and Cryogenic Fluids Code*, and the Compressed Gas Association and be grouped together by type (e.g., flammable, oxidizer, corrosive, toxic and highly toxic gases); segregated from potential hazards; and separated by 20 feet, or a half hour fire barrier in accordance with [P101-34](#), *Pressure Safety*.

Containers of materials that might become hazardous (e.g., peroxidizable chemicals) during prolonged storage will be dated when first opened. At the end of six months after opening, the material will be evaluated or tested for continued safe use. Material that is found to be safe or that can be stabilized to be made safe will be permitted to be re-dated and retained for an additional 6-month period, or according to manufacturer's instructions, whichever is more stringent. All other material will be safely and compliantly discarded.

To protect the environment and the safety and health of all people, hazardous waste will be disposed of properly. See [P409](#), *LANL Waste Management*, for requirements.

Note: See [Tool #4](#), *Chemical Storage Schemes*, and [Tool #8](#), *Minimum Requirements for Peroxidizables*, on the [Chemical Safety Tools webpage](#) for additional information about storage requirements for materials that might become hazardous.

Note: The NFPA standards 30, 45, and 55, and the International Building Code define Maximum Allowable Quantities (MAQs) of different categories of chemicals that may be within open and closed systems in facilities. These criteria apply to LANL facilities (via the [Prime Contract](#)). The Fire Protection-Division Office (FP-DO) can assist in defining MAQs for specific facilities where those limits are not clearly defined.

3.8 Hazardous Chemical Transportation

Transportation refers to vehicular movement of chemicals, including movement subject to Department of Transportation (DOT) regulations for public roads, site transportation on nonpublic roads, and movement of chemicals within and between buildings. Off-site and on-site hazardous chemical transportation will be done in accordance with [P151-1](#), *LANL Packaging and Transportation Program Procedure*.

Transportation of gases (DOT Hazardous Class 2 Material) must be performed by the Gas Facility in accordance with [49 CFR 100–185](#), *Transportation, Pipeline and Hazardous Materials Safety Administration, Department of Transportation*.

3.8.1 Off-Site Shipping

Any chemical that meets the definition of a hazardous material, or is suspected to be hazardous material according to [49 CFR 171.8](#), *Transportation, General Information, Regulations, and Definitions, Definitions and Abbreviations*, and can be classified as a hazardous material in

accordance with [49 CFR 173](#), *Transportation, Shippers—General Requirements for Shipments and Packagings, Parts 115–141 and Parts 403–436*, will be packaged, marked, labeled, and shipped with prepared shipping papers in accordance with [49 CFR 100–185](#), *Transportation, Pipeline and Hazardous Materials Safety Administration, Department of Transportation*, and applicable Department of Energy (DOE) Orders by DOT trained personnel. Contact Operations Support-Packaging and Transportation (OS-PT) for assistance.

Any chemical being shipped by air that meets the definition of dangerous goods according to the International Civil Aviation Organization will be packaged, marked, labeled, and shipped, with an accompanying properly prepared dangerous goods declaration, in accordance with the International Civil Aviation Organization technical instructions. Contact OS-PT for assistance.

Wastes containing chemicals that are also New Mexico special wastes or hazardous wastes have additional shipping, placarding, manifesting, and training requirements. Contact your Waste Management Coordinator (WMC).

3.8.2 On-Site Transfers of Chemicals

The on-site transfer of hazardous chemicals will follow [P151-1](#), *LANL Packaging and Transportation Program Procedure*. OS-PT has jurisdiction over the requirements for packaging, marking, and documenting on-site transfers.

On-site shipping of analytical-scale samples of hazardous chemicals (DOT small quantities) is permissible, as long as it meets Laboratory and DOT requirements for such samples. An example procedure that meets the Laboratory and DOT requirements for such on-site shipping, including training requirements, is SOP-C-DO-003, *On-Site Shipping of Analytical-Scale Samples of Hazardous or Radioactive Materials (DOT Small Quantities)*.

All hazardous chemical transport will be done in a government vehicle. Hand carrying of hazardous chemical containers will be done using secondary containment and laboratory carts for heavy or multiple containers. Exception: Gas must be transferred by Gas Facility personnel in accordance with [49 CFR 100–185](#), *Transportation, Pipeline and Hazardous Materials Safety Administration, Department of Transportation*.

3.8.3 Hazardous Chemical Spills

Workers must be authorized, provided the necessary training, understand required spill response procedures before working with a hazardous chemical, and ensure that containment and cleanup of a spill is permitted by the IWD.

- Contact SEO-EM Group at 667-6211 then the FOD or the FOD's on-call designee for the building (or the Operations Center if a facility is so equipped), in the event of a large hazardous chemical spill (i.e., a spill that cannot be safely contained by an authorized chemical worker). The FOD or on-call designee must ensure involvement of deployed support as necessary. SEO-EM provides the Incident Commander to manage cleanup of all spills outside the scope of IWDs.
- When safe to do so, authorized chemical workers will determine the extent of the area affected, and demarcate it with barricade tape or use another reliable means to restrict entry into the area.
- Properly briefed, authorized chemical workers may cleanup smaller spills, following spill control, mitigation, cleanup, and reporting procedures listed in the IWD associated with the activity in progress at the time of the spill.

- Workers and their supervisors are required to go to Occupational Medicine for a work-related injury or illness, including exposure to hazardous chemical spills, unless transported directly to Los Alamos Medical Center (LAMC). Prior to return to work, workers must go to Occupational Medicine for follow up.
- Manage all debris and waste resulting from the cleanup of a spill as though it contains the hazardous chemical, according to WMC instruction.

Note: Incidental spill guidance is available on the [Chemical Safety webpage](#) under Resources, Systems & Tools.

3.9 Chemical Safety Tools

Chemical safety tools, found on the [Chemical Safety webpage](#), contain safety and health considerations to be followed when using hazardous chemicals. These tools will be supplemented and updated as needed.

4.0 RESPONSIBILITIES

4.1 Associate Director for Nuclear and High Hazard Operations-Operations Support (OS) Division

- Overall accountability for the proper management of the Chemical Management Program.
- Chemical Management Program Manager provides overall coordination of LANL's Chemical Management Program.
- Oversees the [LANL institutional chemical inventory](#) database application.

4.2 Associate Director for Environment, Safety, Health (ADESH)

- Maintains a site-wide MSDS/SDS program (OSH-ISH).
- Maintains a site-wide hazard assessment and exposure monitoring database and Comprehensive Tracking System (CTS) (OSH-ISH).
- Consults with the Laboratory community on the development and implementation of chemical hygiene and safety policies and practices (OSH-ISH).
- Annually reviews and updates as necessary per the Hazard Communication and Chemical Hygiene Plan (OSH-ISH).
- Provides medical consultation and examinations for individuals who are exposed or potentially exposed to hazardous materials, including OSHA regulated carcinogens (OSH-OM).
- Provides consultation with respect to reproductive toxicants (OSH-OM, Deployed Services Environment, Safety, and Health [DSESH]).
- Provides assistance in researching less hazardous chemical substitutes (ENV-ES).
- Provides the LANL CHO (OSH-ISH)/Chemical Safety SME.

4.3 Security and Emergency Response Division

- Provides specialized expertise and equipment in response to hazardous materials emergencies at LANL and within the surrounding communities.

4.4 Division Leaders

- Ensure that Division activities involving chemicals are conducted within the safety envelope and the scope of work identified in Division and Facility documents.
- Ensure that adequate resources are provided to Responsible Line Managers (RLMs) to identify, evaluate, and control chemical hazards associated with existing and proposed work performed within their Divisions so that chemical management can be integrated into day-to-day operations.
- Ensure that a chemical safety plan is written for their Division, or provide written documentation that references Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan*, as their Hazard Communication and Chemical Hygiene Plan. Ensure that the written program governs all hazardous chemical work in the group or facility (HAZCOM or CHP), and is referenced in IWDs and other relevant documents.
- Ensure that violations of codes and safety standards identified by reviews or inspections are corrected or that compensatory measures or action plans are developed.
- In CHP areas only, assign a Division Chemical Hygiene Officer (CHO) Group CHOs may be assigned as necessary. Ensure that CHOs have the experience and training as noted in Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan*, Section 1.9.

4.5 Program Directors, Program Managers, and Project Leaders

- Negotiate with RLMs to provide adequate resources for the requirements in this document.

4.6 Responsible Line Managers (RLMs) in Coordination with the Person in Charge (PIC)

- Ensure that primary hazardous chemical containers in their organization are barcoded, and entered and tracked in the [LANL institutional chemical inventory](#) database.
- Ensure that workers keep the [LANL institutional chemical inventory](#) database current and accurate for their chemicals.
- Ensure that a physical chemical inventory of primary hazardous chemical containers is performed in their organization annually and reconciled in the [LANL institutional chemical inventory](#) database.
- Ensure that for any new activity (i.e., an activity that requires a new IWD) a hazard review is completed for hazards that can be encountered or generated during the course of the work. The evaluation must include the hazards associated with the properties and the reactivity of the materials used, any intermediate and end products that can be formed, hazards associated with the operation of the equipment at the operating conditions, and hazards associated with the proposed reactions.
- Ensure that all required training is completed by workers before the work is authorized.
- Integrate chemical life cycle management (purchase through disposition) into resource planning, funding, prioritizing, planning, scheduling, and implementation of work conducted under their supervision.
- Specify the written program governing all chemical work in the group (HAZCOM or CHP) and reference in IWDs and other safety documents.
- Ensure that IWDs are completed and approved for work with Occupational Safety and Health Administration (OSHA) carcinogens and LANL Category 1 (LANL Cat 1) chemicals in CHP areas. See the [Chemical Safety webpage](#).
- Provide job-specific briefings and/or information on the chemical hazards and safety precautions related to each authorized chemical worker's assigned work, before beginning

work. **Note:** Never assume that a worker has knowledge of the chemical, its hazards, and the controls. Job-specific information must include:

- chemical inventory, relevant to the employee's assigned work, specific chemicals used, and the location of activities where hazardous chemicals are present;
- specific methods and observations, if applicable, that are used to detect the presence or release of a hazardous chemical;
- the location of the associated MSDS/SDS(s), and how to obtain an MSDS/SDS. For hazardous chemicals used, the following information from each MSDS/SDS must be discussed within a job-specific briefing, or as part of a pre-job briefing:
 - hazards identification;
 - fire protection/incompatibilities;
 - accidental release measures, handling and storage;
 - exposure controls/personal protection;
 - physical and chemical properties; and
 - chemical stability and reactivity information, particularly instability conditions and incompatible chemicals.
- the applicable details of the written Hazard Communication and Chemical Hygiene Plan (see Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan*) and any facility-specific HAZCOM Plan or written CHP;
- secondary container labeling requirements (see Attachment A, Section 1.5.);
- specific building signs and postings for hazardous chemicals;
- Building Emergency Plans;
- locations of eyewashes and safety showers;
- spill response requirements, including mitigation, cleanup, and reporting requirements, and
- specific chemical storage requirements.
- Monitor through Management Observation and Verification (MOV) or other means that equipment and chemical containers are labeled with the name of the contents and that work areas are posted with signs or placards that depict the chemical hazards in the area.
- Monitor through MOV or other means that MSDS/SDSs are accessible to all workers who may have potential exposure to chemicals.
- When authorizing IWDs, ensure that elimination of hazardous chemicals, or substitution of a less hazardous material when practical, has been addressed by the preparer.
- When authorizing IWDs, ensure identification of operations where the following are used: LANL Cat 1 chemicals (CHP), known and suspect human carcinogens, reproductive toxicants, and highly acute toxicity/highly chronic toxicity chemicals (HAZCOM). Ensure that deployed personnel are notified to conduct worker exposure assessments, and that proper controls are established. See the [Chemical Safety Webpage](#).
- Ensure that workers adhere to the requirements in this document.
- Authorize workers to perform chemical work and purchase chemicals.
- Investigate accidents and near misses involving chemicals, and ensure that corrective actions identified from chemical accident investigations and inspections are implemented.

- Ensure that all chemical hazards are removed when vacating space. When an area is being vacated, all chemicals will be moved, transferred to new ownership, or properly disposed. The work area will be cleaned and restored to its original condition or a condition acceptable to the next occupant before transfer of ownership.
- Ensure that resource planning, funding, prioritizing, scheduling, and implementation of chemical work conducted under their supervision addresses the necessary environmental, safety, and health evaluation and controls.
- Inform visitors about the Laboratory's chemical safety policies and procedures and ensure that they are aware of the existence and availability of chemical hazard information and resources.
- Notify DSESH deployed staff of new or modified work activities that require exposure assessments.
- Negotiate with Program Directors, Program Managers, and Project Leaders to provide adequate resources to meet the requirements in this document.
- Ensure that hazards of chemicals and chemical reactions are evaluated before laboratory activities or chemical reactions are begun. See Attachment A, Section 1.11.3.

4.7 Facility Operations Directors (FODs)

- Ensure that new work involving hazardous chemicals is reviewed by appropriate Subject Matter Experts (SMEs).
- Communicate Safety Basis levels to RLMS and maximum chemical quantities allowed to tenants.
- Maintain a proactive preventive maintenance program to ensure that laboratory engineering controls and emergency equipment (e.g., ventilation systems, detectors, shutoff devices, and emergency eyewash and safety showers) are in proper operating condition.
- Inform on-site construction/equipment subcontractors of the presence and identity of hazardous chemicals in their immediate work areas.
- Notify building occupants of testing, demolition, construction, and renovation activities and their related chemical hazards before initiation.
- Work with the Subcontract Technical Representative (STR) to ensure that subcontractors comply with Exhibit F and other subcontractor requirements.
- Working with Acquisition Services Management-Project Management and the STR, ensure that subcontractors provide an inventory and the MSDS/SDS for hazardous chemicals brought on-site to the Environment, Safety, Health (ESH) manager or designee, SEO Division personnel.
- Ensure that chemical incidents are reported and investigated and that corrective action is taken to prevent recurrence.
- Provide facility-specific information so tenants are aware of bounding chemical thresholds.
- Ensure that facilities maintain quantities (by weight) of highly hazardous chemicals below threshold quantities (see [Process Safety Management \(PSM\) List \[use Firefox\]](#)).

4.8 Deployed Services Environment, Safety, and Health (DSESH) Deployed Personnel

- Assist line managers in performing and documenting hazard assessments and risks for existing and planned operations, including laboratory moves and decommissioning.
- Provide guidance for establishing administrative, work practice, PPE, and engineering controls. Assist in determining labeling requirements for equipment, piping, containers, and facilities.
- Perform and document worker exposure assessments and exposure monitoring to determine employee exposures to hazardous materials and to evaluate the adequacy of controls in accordance with [P101-32](#), *Worker Exposure Assessments*.

4.9 Authorized Chemical Owners

- Ensure that all their primary hazardous chemical containers are barcoded and entered into the [LANL institutional chemical inventory](#) database.
- Ensure that the [LANL institutional chemical inventory](#) database is updated when one of their primary hazardous chemical containers is transferred to a new owner and/or a new location; or is disposed.
- Complete the training requirements for an authorized chemical worker. Individuals with appointments of less than one year, visitors, undergraduate and high school students will not be chemical owners. The immediate supervisor for visitors, undergraduates and high school students will be the chemical owner.
- Post work areas with signs or placards that depict the current chemical hazards in the area. Labels, signs, and placards will be consistent with the group's written plan (HAZCOM or CHP).
- Label chemical containers with required information. See Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan*, Section 1.5.
- Working with the WMC, establish whether the chemical or its end product will require disposal as a hazardous waste, New Mexico Special Waste, or has other disposal requirements.
- To the greatest extent possible, purchase chemicals on an as-needed basis and limit the purchase quantity to an amount that will be used in six months or less, to minimize inventory and chemicals in storage. If possible purchase reagents in polyethylene bottles or plastic-coated glass bottles to minimize breakage, corrosion, and rust. Ensure that the amount purchased does not exceed safety basis or flammable or combustible liquid storage limits.
- Be aware of chemical incompatibilities and store chemicals accordingly.

4.10 Authorized Chemical Workers

- Work safely by observing safety standards, guidelines, and procedures.
- Implement all controls required by work authorization documentation.
- Stop work that may pose an imminent danger to workers.
- Work with DSESH deployed personnel in workplace monitoring and sample collection.
- Report unsafe conditions, chemical incidents, or injuries to line managers immediately.
- Call 911 immediately if a chemical-related illness or injury occurs.
- Be familiar with and follow chemical and emergency procedures as directed in work authorization documentation.

- Label chemical containers with required information. See Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan*, Section 1.5.
- Complete required training and ensure receipt and understanding of job-specific information on the chemical hazards and safety precautions related to assigned work, before beginning work. (See Section 6.0.)

5.0 IMPLEMENTATION

The requirements in this document are effective on the issue date.

6.0 TRAINING

Job-specific and site-specific information provided will be documented in the activity specific IWD. Training and briefings will use a graded approach so that each increasing level of risk associated with the safe use of chemicals is addressed. Job-specific information will include other topics such as MSDS/SDSs, labeling, emergency equipment, chemical spill control/mitigation/cleanup, process chemistry, process control, chemical storage, hazardous material regulations for chemical packaging, waste identification and disposal, pollution prevention, and waste minimization. Training and briefings will include methods that will be used to detect the presence or release of chemicals and measures workers can implement to protect themselves from chemical hazards.

RLMs will work with FOD personnel to ensure that workers are informed of the hazards when non-routine tasks are performed in the work area by maintenance or subcontract workers, and work with FOD personnel to inform subcontractors and visitors of the hazards in the building.

Required training for chemical workers, along with the regulatory reference is as follows:

- [Course #25418](#), *Chemical Hazard Introduction*, or [Course #25997](#), *Chemical Hazard Communication Introduction*, which includes how to detect hazards, how to interpret an MSDS/SDS, and labeling requirements, in accordance with [29 CFR 1910.1200](#), *Labor, Occupational Safety and Health Standards, Hazard Communication*, (h) (2-3), and [29 CFR 1910.1450](#), *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories* (f) (3-4).
- Facility-specific hazard information, in accordance with [29 CFR 1910.1450](#) (f).
- Awareness briefing on operation and building chemical inventory, how to obtain an MSDS/SDS, secondary container labeling requirements, building signs and postings, building emergency plans, written program documents, location of eyewashes and safety showers, spill response, and chemical storage requirements in accordance with [29 CFR 1910.1200](#) (h) (1-3) and [29 CFR 1910.1450](#) (f).
- Level 1 On-the-Job Training (Level 1 formality of training requires trainee to read, observe/walk through, and self-assess/sign the communication document) or pre-job briefing on specific chemical hazards, procedures, and PPE and review the hazard analysis documentation (for moderate and high-level hazard IWDs) authorized by his/her RLM/PIC for the job assignment every time a worker receives a new job assignment or a new hazard is introduced into the current assignment in accordance with [29 CFR 1926.21](#), *Labor, Safety and Health Regulations for Construction, Safety Training and Education* (b), [29 CFR 1910.1450](#) (f) (3), and [29 CFR 1910.1003](#), *Labor, Occupational Safety and Health Standards, 13 Carcinogens*.
- If a chemical worker will be generating waste, [Course #23263](#) *Waste Generation Overview Live*, and [Course #21464](#), *Waste Generation Overview Refresher*, every three years, in

accordance with [40 CFR 262](#), *Protection of Environment, Standards Applicable to Generators of Hazardous Waste*.

- If a chemical worker will be using gas, [Course #769](#), *Pressure Safety Orientation*, and [Course #9518](#), *Gas Cylinder Safety*.

7.0 EXCEPTION OR VARIANCE

To obtain an exception or variance to this document, see the following instructions:

- Managers may request an exception or variance from the IA through the RM;
- At the IA's request, the RM will provide a recommendation or supporting information; and
- The IA or designee will provide the requester with a written response and copy the RM.

The requesting organization must maintain the official copy of record of the approved correspondence granting the exception or variance.

8.0 DOCUMENTS AND RECORDS

8.1 Office of Record

The Policy Office is the Laboratory Office of Record for this Institutional Document and maintains the administrative record.

9.0 DEFINITIONS AND ACRONYMS

9.1 Definitions

See LANL [Definition of Terms](#).

Accident—Any event, including, but not limited to, equipment failure, rupture of containers, or failure of engineering controls, that potentially creates a hazard through uncontrolled release of a hazardous chemical.

Authorized Chemical Worker—A worker (Los Alamos National Security, Limited Liability Company [LANS, LLC or LANS], contractor, subcontractor, student) whose RLM and PIC have determined that he/she has the training, skill, knowledge, and abilities to safely perform the chemical work to which he/she is assigned.

Carcinogen—Those chemicals that have been identified as substances that can lead to cancer by the agencies listed below and that have a concentration equal to or greater than 0.1% (1,000 parts per million).

- American Conference of Governmental Industrial Hygienists (ACGIH), either Category A1 (confirmed human carcinogen) or Category A2 (suspected human carcinogen).
- Compounds that the International Agency for Research on Cancer (IARC) has confirmed or identified as possible human carcinogens and those chemicals that the National Toxicology Program (NTP) has identified as known to be carcinogenic or chemicals that may reasonably be expected to be carcinogenic.

Chemical—Any element, compound, or mixture of elements and compounds. A substance that (1) possesses potentially hazardous properties (including, but not limited to, flammability, toxicity, corrosivity, reactivity, and instability); or (2) is included on any Federal, state, or local agency regulatory list; or (3) is associated with a MSDS/SDS. For the purposes of this document, this definition also applies to chemical products.

Chemical Hygiene Officer (CHO)—(CHP areas only). An employee, appointed by the Division Leader, who is qualified by training or experience to provide technical guidance in the development and implementation of the provisions of the LANL Hazard Communication and Chemical Hygiene Plan (see Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan*).

Chemical Hygiene Plan (CHP)—A written program that consists of the Laboratory's CHP (see Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan*) and activity-specific documentation, such as IWDs, which set forth guidance to protect workers from the dangers presented by hazardous chemicals used in a particular laboratory work area.

Chemical Inventory—A written or electronic record of chemicals.

Chemical Owner—An authorized chemical worker to whom a container that contains a chemical on the chemical inventory is assigned.

Chemical Release—Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of a chemical into the environment.

Chemical Worker—A worker who works with hazardous chemicals.

Corrosive—A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. A substance or a mixture that by chemical action will materially damage, or even destroy, metals is termed "corrosive to metal." See [29 CFR 1910.1200](#), *Labor, Occupational Safety and Health Standards, Hazard Communication*, Appendix A.

Designated Area—An area that will be used for work with LANL Cat 1 chemicals and to which access is administratively restricted to authorized personnel.

Emergency Response—A response made by workers from outside the immediate release area or by other designated emergency responders (i.e., SEO-EM, the Los Alamos County Fire Department and the Hazardous Materials Response Group) to an occurrence that results, or is likely to result, in an uncontrolled release of a hazardous substance.

Environment, Safety, and Health (ESH) Qualified Person—An employee who has academic credentials or work experience in a relevant discipline, such as industrial hygiene or industrial safety, who has experience or training in conducting workplace exposure monitoring and in determining the hazards and consequences of exposure to chemicals.

Extremely Hazardous Substance—Any of 366 (+ or -) chemicals or hazardous substances identified by EPA on the basis of hazard or toxicity and listed under EPCRA. The list is periodically revised. [See 40 CFR Part 355.](#)

Explosive—A chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.

Flammable Liquid Storage Cabinet—A cabinet for the storage of flammable and combustible liquids constructed in accordance with Section 9.5 of NFPA 30, *Flammable and Combustible Liquids Code*.

Hazard Communication (HAZCOM) Plan—A written program developed and implemented by the Laboratory or subcontractor, which consists of requirements listed in Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan*, and activity-specific documentation such as IWDs, or operating procedures that set forth requirements to protect workers from the dangers presented by hazardous chemicals used in a specific construction or production work area.

Hazardous Chemical—Any chemical that presents a physical hazard or a health hazard (health hazard defined below). If a hazardous chemical comprises 1% (0.1% for carcinogens) or greater of a compound or mixture, the compound or mixture will be treated as a hazardous chemical. See [29 CFR 1910.1200](#), *Labor, Occupational Safety and Health Standards, Hazard Communication* (g) (2) (i) (c) (1).

Hazardous Waste—A solid waste that is not excluded from regulation as a hazardous waste and is a listed hazardous waste or exhibits any of the hazardous characteristics: ignitability, corrosivity, reactivity, or toxicity.

Health Hazard—A chemical that is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in [29 CFR 1910.1200](#), Appendix A, *Health Hazard Criteria* having an NFPA rating of 2, 3, or 4 under fire conditions.

High Acute Toxicity—Substances that may be fatal or cause clinical damage to target organs as a result of a single exposure or exposures of short duration. High-acute-toxicity chemicals meet the following criteria: a Permissible Exposure Limit (PEL) or Threshold Limit Value (TLV) of less than 0.1 ppm Time-Weighted Average (TWA) or ceiling limit of less than 1.0 ppm.

High Chronic Toxicity—Refers to substances that produce adverse effects in humans who suffer repeated exposures to those substances over a relatively prolonged period.

Immediate Use—The hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Irritant—A chemical, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact.

Laboratory Scale—Work with substances in which the containers used for reactions, transfers, and other handling of substances are designed to be easily and safely manipulated by one person.

Laboratory Produced Material—A chemical or chemical mixture that is manufactured or synthesized by an operating group at the Laboratory.

LANL Category 1 Chemical (LANL Cat 1)—A Laboratory designation identifying specific chemicals that are regulated at the Laboratory and that require the chemical worker to follow special provisions. LANL Cat 1 chemicals are known human carcinogens, chemicals of high acute or high chronic toxicity, and/or known human reproductive toxins. Lists are available at the

[Chemical Safety Webpage](#). **Note:** The Globally Harmonized System (GHS) used in the update for [29 CFR 1910.1200](#) uses the term hazard category: the division of criteria within each hazard class. GHS hazard category 1 has specific criteria for each hazard class.

Legacy Chemical—A stable, non-time-sensitive stock chemical or chemical mixture being held for evaluation for future use. Note: Per EPA [40 CFR 261.2(a) (2) and 261.33], unused commercial chemical products do not become solid wastes (i.e., they remain commercial chemical products) until a determination is made that the material will be discarded. Commercial chemical products, even those whose shelf life has been exceeded, that ultimately will be used for their intended purpose or that will be reclaimed are not subject to the Resource Conservation and Recovery Act (RCRA). In 2006 [71 FR 29719; May 23, 2006], EPA noted the following for laboratory chemicals "when accumulated for long periods of time, for example, such unused reagents may be considered solid or hazardous wastes if it can be determined that they are no longer usable for their intended purpose."

Material Safety Data Sheet/Safety Data Sheet (MSDS/SDS)—Written, printed, or electronically transmitted information on the hazards and properties of a particular material, including instructions for its safe use.

Mutagen—A chemical that induces DNA damage and genetic alterations that range from changes in one or a few DNA base pairs to gross changes in chromosome structure.

Occupational Exposure Limit (OEL)—The upper limit on the acceptable concentration of a hazardous substance in workplace air for a particular material or class of materials. LANL OELs include OSHA PELs (8-hour time weighted average), and Ceiling Values; ACGIH Threshold Limits Values (Threshold Limit Value-Time-Weighted Average [TLV-TWA], Threshold Limit Value-Short-Term Exposure Limit [TLV-STEL], and Threshold Limit Value-Ceiling [TLV-C]), or other appropriate OELs.

Occupational Safety and Health Administration Permissible Exposure Limit—regulatory limits on the amount or concentration of a substance in the air. They may also contain a skin designation. OSHA PELs are based on an 8-hour TWA exposure.

Physical Hazard—A chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas. See [29 CFR 1910.1200](#), Appendix B, *Physical Hazard Criteria*.

Production—An operation in which large quantities of a limited list of hazardous chemicals are used on a routine basis for synthesis, product manufacture, product preparation, dip tank or painting, solvent cleaning, photographic development, mechanical shops, construction, or maintenance activities.

Regulated Area—An area where entry and exit is restricted and controlled.

Reproductive Toxicants (known human)—Substances that are known to have lethal effects on the fertilized egg, developing embryo, or fetus, or to cause teratogenesis (malformation) in the fetus.

Secondary Container—Any chemical container other than an original container that will be used to store decanted chemicals or mixed chemicals beyond a single workday.

Note: This definition should not be confused with secondary containment for chemical release prevention and control.

Sensitizer—A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical.

Short-Term Exposure Limit (STEL)—A 15-minute time weighted average that should not be exceeded at any time during a work day.

Solid Waste—As defined by regulations promulgated under RCRA and the New Mexico Hazardous Waste Act, unless otherwise excluded, is any discarded material, either abandoned, recycled, or inherently waste-like, including liquids, solids, semisolids, and contained gases.

Spill—An unintentional release of a hazardous chemical, liquid, or solid that creates a hazard because of quantity, physical properties, or toxicity.

Subcontractor—A party entering into a contract with LANS, LLC.

Threshold Limit Value (TLV)—An ACGIH limit that is usually expressed as an 8-hour TWA, meaning a time-weighted airborne contaminant concentration for a normal 8-hour workday and a 40-hour work week, to which nearly all workers may be repeatedly exposed, day after day, over a working lifetime, without adverse effect.

Time Sensitive Chemicals—Those chemicals that, when stored for prolonged periods or under improper storage conditions, can develop hazards that were not present in the original formulation. There are four general categories of time-sensitive chemicals loosely based on those unsafe properties that can develop. They are (1) peroxide formers, (2) peroxide formers that can undergo hazardous polymerization, (3) materials that become shock or friction sensitive upon the evaporation of a stabilizer, and (4) materials that generate significant additional hazards by undergoing slow chemical reactions. It should be noted that time-sensitive chemicals can be pure reagents or they can be commercial mixtures formulated as cleaners, adhesives, and other products. **Note:** This definition does not include chemicals that have expiration dates for nonsafety reasons, e.g., inorganic standard solutions that expire 1 year from purchase.

Toxicant—A material that has the ability to injure biological tissue.

Toxicity—A relative property of a chemical agent that refers to a harmful effect on some biologic mechanism and the condition under which this effect occurs.

9.2 Acronyms

See LANL [Acronym Master List](#).

ACGIH	American Conference of Governmental Industrial Hygienists
ADESH	Associate Director for Environment, Safety, Health
ADNHOO	Associate Director for Nuclear and High Hazard Operations
ANSI	American National Standards Institute
ASM	Acquisition Services Management
CFR	Code of Federal Regulations
CGA	Compressed Gas Association
CHO	Chemical Hygiene Officer
CHP	Chemical Hygiene Plan

CTS	Comprehensive Tracking System
D&D	Decontaminate and Decommission
DEAR	Department of Energy Acquisition Regulation
DOE	Department of Energy
DOT	Department of Transportation
DPR	Designated Procurement Representative
DSESH	Deployed Services Environment, Safety, and Health
ENV-ES	Environmental Protection-Environmental Stewardship
EO-EPP	Emergency Operations-Emergency Planning and Preparedness
ESH	Environment, Safety, Health
FOD	Facility Operations Director
FP-DO	Fire Protection-Division Office
GHS	Globally Harmonized System
HAZCOM	Hazard Communication
HDBK	Handbook
HEPA	High-Efficiency Particulate Air
IA	Issuing Authority
IARC	International Agency for Research on Cancer
ISEA	International Safety Equipment Association
IWD	Integrated Work Document
IWM	Integrated Work Management
LANL or the Laboratory	Los Alamos National Laboratory
LAMC	Los Alamos Medical Center
LANS, LLC or LANS	Los Alamos National Security, Limited Liability Company
MAQ	Maximum Allowable Quantity
MOV	Management Observation and Verification
MSDS/SDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NTP	National Toxicology Program
OEL	Occupational Exposure Limit
OM	Occupational Medicine
OS	Operations Support (Division)
OS-DO	Operations Support-Division Office
OSHA	Occupational Safety and Health Administration
OSH-ISH	Occupational Safety and Health-Industrial Safety and Hygiene
OSH-OM	Occupational Safety and Health-Occupational Medicine
OS-PT	Operations Support-Packaging and Transportation
OST	Operations Support Tool
PEL	Permissible Exposure Limit
PFITS	Performance Feedback and Improvement Tracking System
PIC	Person in Charge

PPE	Personal Protective Equipment
R&D	Research and Development
RCRA	Resource Conservation and Recovery Act
RLM	Responsible Line Manager
RM	Responsible Manager
RO	Responsible Office
SBP	Safety Basis Procedure
SME	Subject Matter Expert
STEL	Short-Term Exposure Limit
STR	Subcontract Technical Representative
TA	Technical Area
TLV	Threshold Limit Value
TLV-C	Threshold Limit Value-Ceiling
TLV-STEL	Threshold Limit Value-Short-Term Exposure Limit
TLV-TWA	Threshold Limit Value-Time-Weighted Average
TWA	Time-Weighted Average
USI	Unreviewed Safety Issue
USQ	Unreviewed Safety Question
WMC	Waste Management Coordinator

10.0 HISTORY

Revision History		
04/22/08	P101-14, Rev. 0	Renumbered document, ISD 101-14, <i>Chemical Management</i> .
04/15/09	P101-14, Rev. 1	Reformatted to meet the requirements as set forth in P311-1, Creating, Revising, and Cancelling Institutional Documents . Updated to address needs identified by the Chemical Management Improvement Project, driven by a Black Belt Project Execution Plan, and captured in Laboratory Issues Management Tracking System (LIMTS). The need to provide a more user friendly chemical inventory process, and tools to Designated Procurement Representatives (DPRs) and chemical workers is addressed. As part of the provision of a more user friendly chemical inventory process, drivers based on compliance requirements for chemical management were identified. Divisions responsible for these compliance requirements provided additional requirements for chemical inventory management and tracking, which are now reflected in a Chemlog functional requirements document. The set of requirements is provided in Section 3.3 of the document. There are no new requirements in this document, but the document has been simplified and updated, including combining the Hazard Communication (HAZCOM) plan and the Chemical Hygiene Plan (CHP) into one attachment.
08/11/10	P101-14, Rev. 2	Issued as a PROVISIONAL document until October 11, 2010. Added a requirement to ensure compliance with 29 Code of Federal Regulations (CFR) 1910.119, Labor, Occupational

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Revision History		
		<p><i>Safety and Health Standards, Process Safety Management of Highly Hazardous Chemicals (OSHA PSM Rule)</i>, Appendix A. by requiring Facility Operations Directors (FODs) to ensure that quantities are kept below threshold quantities.</p> <p>Updated responsibilities for chemical inventory to reflect ownership by Emergency Operations-Emergency Planning and Preparedness (EO-EPP).</p> <p>Clarified training requirements for “authorized chemical workers” and explained the training requirements for a worker who performs chemical spill/control/mitigation/cleanup.</p> <p>Added a requirement that work involving hazardous chemicals is reviewed using a new activity review process or equivalent process.</p> <p>Clarified the requirement for Chemical Hygiene Officers (CHOs), added the requirement that CHOs are assigned by the Division Leader, and added training and responsibilities for CHOs.</p> <p>Added specific requirements for job-specific briefings and/or information.</p> <p>Added the requirement for evaluation of chemicals and chemical reactions before start of laboratory activities.</p>
10/11/10	P101-14, Rev. 2	Document became effective and is no longer PROVISIONAL.
11/30/10	P101-14, Rev. 3	<p>Updated links to ensure correct names; removed irrelevant, incorrect, or duplicative links.</p> <p>Section 3.2: Elimination of a requirement for DPRs and clarification of chemical owner responsibility for procurement.</p> <p>Reducing requirement for justification of keeping chemical containers from six months to five years.</p>
11/30/11	P101-14, Rev. 4	<p>Updated items in Section 3.2 to consider before a chemical is purchased and provided link to list of chemicals with no disposal path.</p> <p>Changed Form 2134, <i>Medical Surveillance and Medical Certification Program Enrollment Form</i>, to Form 1793, <i>Job-Demands Evaluation</i>.</p> <p>Changed Chemical Management Webpage to Chemical Management Webpage.</p> <p>Updated Section 5.0 to reflect that this Quick Change does not require an Unreviewed Safety Question/Unreviewed Safety Issue (USQ/USI) review.</p> <p>Updated links, titles, and acronyms.</p>
09/27/12	P101-14, Rev. 5	<p>Section 5.0: Updated to reflect effective date of December 17, 2012 for applicable nuclear, high- and moderate-hazard facilities and accelerators.</p> <p>Removed the requirement for the approval by the Person in Charge (PIC) for the applicable Integrated Work Document (IWD).</p>

Revision History		
		Updated links, titles, and acronyms.
01/08/15	P101-14, Rev. 6	<p>This document cancels PD100, <i>Occupational Safety and Health</i>.</p> <p>Performed three-year review in accordance with PD311, <i>Requirements System and Hierarchy</i>.</p> <p>Changed the Issuing Authority (IA) from Associate Director for Environment, Safety, and Health (ADESH) to Associate Director for Nuclear and High Hazard Operations (ADNHHO); changed the Responsible Manager (RM) from Industrial Hygiene and Safety Division Leader to Operations Support (OS) Division Leader; and changed the Responsible Office (RO) from Industrial Hygiene and Safety Division to Operations Support-Division Office (OS-DO).</p> <p>Addressed revised Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, now aligned with the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.</p> <p>Clarified requirements for Chemical Hygiene Officers.</p> <p>Reinserted requirements for chemical inventory.</p> <p>Added new requirements in 29 CFR 1910.1200, <i>Labor, Occupational Safety and Health Standards, Hazard Communication</i>.</p> <p>Added requirements for handling of sharps.</p> <p>Clarified and streamlined other chemical management requirements.</p> <p>Revised language in Section 5.0 to reflect Unreviewed Safety Question/Unreviewed Safety Issue (USQ/USI) process and implementation dates for affected facilities.</p> <p>Updated acronyms, links, and organization names.</p> <p>Made other edits and clarifications to resolve vague or inappropriate wording.</p>
08/06/15	P101-14, Rev. 7	<p>Performed three-year review in accordance with PD311, <i>Requirements System and Hierarchy</i>.</p> <p>Throughout document: Changed "Chemlog@lanl.gov" to "ChemDB@lanl.gov."</p> <p>Section 1.0: Changed the name from "Hazardous Materials Lifecycle Management Program" to "Chemical Lifecycle Management Program."</p> <p>Section 3.3: Changed how to barcode, enter, and track to the "Support and Resources" tab in the LANL institutional chemical inventory database application.</p> <p>Section 5.0: Updated this section to read, "The requirements in this document are effective on the issue date."</p> <p>Section 6.0: Updated broken link to UTrain course # 25418.</p> <p>Attachment A, Section 1.3: Removed sentence referencing Tools #9.</p> <p>Updated hyperlinks and references.</p>

Revision History		
07/31/17	P101-14, Rev. 7 Admin. Chg. 1	Changed pointer in Table 2, row 7, from Main Document Section 3.7 to 3.6.
08/23/17	P101-14, Rev. 7 Admin. Chg. 2	Section 3.7: Changed “i.e.” to “e.g.” in paragraph 4. Changed title from P102, <i>Occupational Medicine</i> , to P102, <i>Occupational Health</i> .
10/16/17	P101-14, Rev. 7 Admin. Chg. 3	Section 6.0, first bullet following third paragraph: Replaced reference to “Course #21464 or equivalent” with “ Course #25418 , <i>Chemical Hazard Introduction</i> , or Course #25997 , <i>Chemical Hazard Communication Introduction</i> .”

11.0 REFERENCES

Prime Contract:

- Clause I-121, Department of Energy Acquisition Regulation (DEAR) 970.5203-1, *Management Controls* (Dec. 2000)
- Clause I-122, DEAR 970.5203-3, *Contractor's Organization* (Dec. 2000) (Deviation)
- Clause I-123, DEAR 970.5204-2, *Laws, Regulations, and DOE Directives* (Dec. 2000) (Deviation)
- DEAR 970.5223-1, *Integration of Environment, Safety and Health into Work Planning and Execution*
- DEAR 970.5204-2, *Laws, Regulations, and DOE Directives; Appendix B 4.2, Environment, Safety, and Health*
- [29 CFR 1910.1200](#), *Labor, Occupational Safety and Health Standards, Hazard Communication*
- [DOE O 151.1C](#), *Comprehensive Emergency Management System*

11.1 Other References

- [29 CFR 1910.1450](#), *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories*
- [29 CFR 1926.59](#), *Labor, Safety and Health Regulations for Construction, Hazard Communication*
- [P101-29](#), *Working with Nanotechnology Materials and Processes*
- [P101-15](#), *Biological Safety*
- [P101-8](#), *Explosives Safety*
- [P121](#), *Radiation Protection*
- [29 CFR 1910.119](#), *Labor, Occupational Safety and Health Standards, Process Safety Management of Highly Hazardous Chemicals (OSHA PSM Rule)*, Appendix A
- [MSDS/SDS electronic binder](#)
- [Designated Procurement Representative \(DPR\)](#)
- [LANL institutional chemical inventory](#)
- [10 CFR 1021](#), *Energy, National Environmental Policy Act Implementing Procedures*
- [40 CFR 355](#), *Protection of Environment, Emergency Planning and Notification*

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- NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response*
- [P300](#), *Integrated Work Management*
- [P101-32](#), *Worker Exposure Assessments*
- NFPA 45, *Standard on Fire Protection for Laboratories Using Chemicals*
- [Research Library](#)
- [P101-34](#), *Pressure Safety*
- NFPA 55, *Compressed Gases and Cryogenic Fluids Code*
- [P409](#), *LANL Waste Management*
- [P151-1](#), *LANL Packaging and Transportation Program Procedure*
- [49 CFR 100–185](#), *Transportation, Pipeline and Hazardous Materials Safety Administration, Department of Transportation*
- [49 CFR 171.8](#), *Transportation, General Information, Regulations, and Definitions, Definitions and Abbreviations*
- [49 CFR 173](#), *Transportation, Shippers—General Requirements for Shipments and Packagings, Parts 115–141 and Parts 403–436*
- SOP-C-DO-003, *On-Site Shipping of Analytical-Scale Samples of Hazardous or Radioactive Materials (DOT Small Quantities)*
- [SBP 112-3](#), *Unreviewed Safety Question (USQ) Process*
- [29 CFR 1926.21](#), *Labor, Safety and Health Regulations for Construction, Safety Training and Education*
- [29 CFR 1910.1003](#), *Labor, Occupational Safety and Health Standards, 13 Carcinogens*
- [40 CFR 262](#), *Protection of Environment, Standards Applicable to Generators of Hazardous Waste*
- NFPA 30, *Flammable and Combustible Liquids Code*
- [P311-1](#), *Creating, Revising, and Cancelling Institutional Documents*
- [PD311](#), *Requirements System and Hierarchy*
- [P101-21](#), *Chronic Beryllium Disease Prevention Program*
- [Laboratory Industrial Hygiene and Safety Manual](#)
- [P101-16](#), *Local Exhaust Ventilation and HEPA Filtration Systems*
- American National Standards Institute/International Safety Equipment Association (ANSI/ISEA) z358.1-2009, *American National Standard for Emergency Eyewash and Shower Equipment*
- [LANL Operations and Maintenance Manual, Criterion 407: Emergency Eyewash and Shower Equipment](#)
- [LANL Category 1 Chemicals](#) list
- [P101-19](#), *Safety Signs, Labels, and Tags*
- [P101-6](#), *Personal Protective Equipment*
- [PD1200](#), *Emergency Management*

- [P102](#), *Occupational Health*
- [10 CFR 851](#), *Energy, Worker Safety and Health Program*
- [Montreal Protocol on Substances that Deplete the Ozone Layer](#)
- [Public Law 101-549](#), *Clean Air Act Amendments of 1990*
- [29 CFR 1910 Subpart Z](#), *Labor, Occupational Safety and Health Standards, Toxic and Hazardous Substances*
- [29 CFR 1910.1020](#), *Labor, Occupational Safety and Health Standards, Access to Employee Exposure and Medical Records*
- [40 CFR 61](#), *Protection of Environment, National Emission Standards for Hazardous Air Pollutants*
- [40 CFR 63](#), *Protection of Environment, National Emission Standards for Hazardous Air Pollutants for Source Categories*
- [40 CFR 68](#), *Protection of Environment, Chemical Accident Prevention Provisions*
- [40 CFR 82](#), *Protection of Environment, Protection of Stratospheric Ozone*
- [40 CFR 261](#), *Protection of Environment, Identification and Listing of Hazardous Waste*
- [40 CFR 263](#), *Protection of Environment, Standards Applicable to Transporters of Hazardous Waste*
- [40 CFR 268](#), *Protection of Environment, Land Disposal Restrictions*
- [40 CFR 302](#), *Protection of Environment, Designation, Reportable Quantities, and Notification*
- [40 CFR 370](#), *Protection of Environment, Hazardous Chemical Reporting: Community Right-to-Know*
- [40 CFR 372](#), *Protection of Environment, Toxic Chemical Release Reporting: Community Right-to-Know*
- [40 CFR 700–799](#), *Protection of Environment, Toxic Substances Control Act*
- [49 CFR](#), *Transportation*
- NFPA 430, *Code for the Storage of Liquid and Solid Oxidizers*
- NFPA 432, *Code for the Storage of Organic Peroxide Formulations*
- NFPA 484, *Standard for Combustible Metals*
- [Compressed Gas Association \(CGA\)](#) Publications
- [49 CFR 171-180](#), *Transportation, Hazardous Materials Regulations*
- DOE-HDBK (Handbook)-1139/2-2006, *Chemical Management (Volume 2 of 3), Chemical Safety and Lifecycle Management*
- DOE-HDBK-1139/3-2003, *Chemical Management (Volume 3 of 3), Consolidated Chemical User Safety and Health Requirements*
- [P313](#), *Roles, Responsibilities, Authorities, and Accountability*
- [P301](#), *Research Sample Management for Quality R&D*

12.0 FORMS

There are no forms associated with this document.

13.0 ATTACHMENTS

Attachment A. *LANL Hazard Communication and Chemical Hygiene Plan*

14.0 CONTACTS

Chemical Management: ADNHHO Operations Support (OS) Division

Telephone: (505) 665-5550

Website: <http://int.lanl.gov/org/padops/adnhho/operations-support/index.shtml>

Chemical Safety: Occupational Safety and Health Division

Telephone: (505) 606-0295

Website: <http://int.lanl.gov/org/padops/adesh/occupational-safety-and-health/index.shtml>

No: P101-14 Chemical Management**Attachment A. LANL Hazard Communication and Chemical Hygiene Plan (Page 1 of 12)**

1.0 INTRODUCTION

A Chemical Hygiene Plan (CHP) is required by [29 Code of Federal Regulations \(CFR\) 1910.1450](#), *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories*, which applies to facilities where multiple chemicals are used in laboratory scale quantities or Research and Development (R&D). A written Hazard Communication (HAZCOM) Plan is required by [29 CFR 1910.1200](#), *Labor, Occupational Safety and Health Standards, Hazard Communication*, and [29 CFR 1926.59](#), *Labor, Safety and Health Regulations for Construction, Hazard Communication*, which apply to workers who use chemicals in shops, maintenance activities, construction or facility work, product manufacture, laboratory analysis, environmental restoration, or decommissioning activities. This attachment covers both standards. Areas where only one standard applies will be noted in the text.

Personnel exposure to chemical agents is to be minimized, and maintained within acceptable exposure limits. Exposures will be minimized by the use of hazard elimination, hazard substitution, engineering controls, administrative controls, and Personal Protective Equipment (PPE). Every employee, guest, visiting scientist, student, or subcontractor working on or off-site will be familiar with and comply with appropriate Los Alamos National Laboratory (LANL or the Laboratory) safety standards.

This plan includes:

- procedures to be followed when work involves the use of hazardous chemicals,
- criteria used to determine and implement control measures to reduce employee exposure to hazardous chemicals through the Integrated Work Management (IWM) and Worker Exposure Assessment processes,
- methods used to inform workers of non-routine tasks and hazards associated with chemicals in unlabeled pipes through the IWM process,
- requirements for:
 - fume hoods and other protective equipment,
 - employee information and training,
 - authorization and approval of activities through the IWM process,
 - additional employee protection for work with particularly hazardous substances in accordance with [29 CFR 1910.1450](#),
 - a hazardous chemical listing, and
 - subcontractor personnel in terms of HAZCOM.

1.1 Purpose

The purpose of this Hazard Communication and Chemical Hygiene Plan is to provide workers with the specific requirements for chemicals used during work, the hazards involved, the forms of warning, Material Safety Data Sheets/Safety Data Sheets (MSDS/SDSs), and the procedures and work practices to minimize their exposure to those chemicals.

No: P101-14 Chemical Management**Attachment A. LANL Hazard Communication and Chemical Hygiene Plan (Cont.) (Page 2 of 12)**

1.2 Scope

HAZCOM applies to the use of chemicals in shops, maintenance activities, construction or facility work, product manufacture, the use of chemicals in a process in excess of 40 pounds or 5 gallons (see [40 CFR 355](#), *Protection of Environment, Emergency Planning and Notification*), environmental restoration, or decommissioning activities.

The CHP applies to work with small quantities of chemicals where the work can be safely manipulated by one person and multiple chemical procedures or multiple chemicals are used.

1.3 Chemical Inventory Requirements

A list of the hazardous chemicals known to be present at the Laboratory is maintained in the [LANL institutional chemical inventory](#) database. Primary hazardous chemical containers must be barcoded, and entered and tracked in the database.

Note: Most primary hazardous chemical containers ordered through standard purchasing agreements will be delivered to the user with a barcode and will already be listed in the [LANL institutional chemical inventory](#) database.

The chemical owner is responsible for ensuring the entry was accurately made in the chemical inventory database (e.g., owner, name of chemical, location). Some hazardous chemical containers (e.g., P-card purchases) may be delivered without a barcode and absent from the chemical inventory database. Chemical owners are responsible for barcoding these containers and entering them into the chemical inventory database. When a primary hazardous chemical container is transferred to a new owner and/or a new location; or is disposed, the chemical owner is responsible for updating the database.

Responsible Line Managers (RLMs) are accountable for accurate chemical inventories and are responsible for ensuring that physical inventories of their primary hazardous chemical containers are performed annually to verify the database inventory.

Note: Accuracy of the Laboratory's chemical inventory is very important. For example, in accordance with [40 CFR 370](#), *Protection of Environment, Hazardous Chemical Reporting: Community Right-to-Know*, "The owner or operator or the officially designated representative of the owner or operator must certify that all information included in the Tier II submission is true, accurate, and complete...under penalty of law..." The accuracy of the Laboratory's Tier II submittal (annual hazardous chemical report) is dependent on the accuracy of the Laboratory's chemical inventory.

For assistance with the [LANL institutional chemical inventory](#) database, contact the help desk at 667-9242, or e-mail ChemDB@lanl.gov.

1.4 Material Safety Data Sheets/Safety Data Sheets (MSDS/SDSs)

Access to MSDS/SDSs is provided through a link on the [Chemical Safety Webpage](#).

No: P101-14 Chemical Management**Attachment A. LANL Hazard Communication and Chemical Hygiene Plan (Cont.) (Page 3 of 12)**

- For chemicals acquired prior to December 1, 2015: MSDSs are available for all hazardous chemicals and hazardous chemical mixtures in the [LANL institutional chemical inventory](#) database (see the [Chemical Safety Webpage](#)) through the [LANL MSDS/SDS database](#), or if specific manufacturer MSDS/SDSs are not available, refer to the Laboratory [Chemical Safety Webpage](#) for commercial MSDS/SDS databases.
- For chemicals acquired after December 1, 2015, or for chemicals for which an SDS has been created: SDSs, are available for all hazardous chemicals and hazardous chemical mixtures in the [LANL institutional chemical inventory](#) database (see the [Chemical Safety Webpage](#)) through the [LANL MSDS/SDS database](#), or if specific manufacturer SDSs are not available, refer to the Laboratory [Chemical Safety Webpage](#) for commercial MSDS/SDS databases.

Manufacturer's MSDS/SDSs are provided to Industrial Safety and Hygiene (ISH) as part of the I-procurement process. If a chemical owner has acquired the chemical through another process, the manufacturer's MSDS/SDS will be provided to ISH.

Note: This does not apply to samples being submitted for analysis.

New chemicals developed at the Laboratory for internal use will be evaluated by the chemical owner to determine if they are hazardous (CHP only). If it is determined the chemicals are hazardous, the information will be included in the Integrated Work Document (IWD), thus allowing for the chemical workers to receive information on how to control the hazard. If the chemical produced is a byproduct whose composition is not known, the chemical will be assumed to be hazardous and handled accordingly. If an employee produces a new chemical, and plans to ship it off-site for use or distribution, an MSDS/SDS is required to be created and shipped with the chemical. For chemicals created at the Laboratory, ISH will be contacted for assistance in creating an MSDS/SDS.

1.5 Labels

Labels on containers, including, but not limited to, tanks, totes, piping and drums must be maintained. This means that labels must be maintained on chemicals in a manner which continues to be legible and the pertinent information (such as the hazards and directions for use) does not get defaced (i.e., fade, get washed off) or removed in any way.

Note: All hazardous chemicals shipped after June 1, 2015, must be labeled with specified elements including pictograms, signal words and hazard and precautionary statements. However, manufacturers, importers, and distributors may start using the new labeling system in the revised HCS before the June 1, 2015 effective date if they so choose. LANL is not responsible for updating labels on shipped containers, even if the shipped containers are labeled under the 1994 Hazard Communication Standard, unless the labels have been removed or defaced. However, if there are newly-identified hazards that are not disclosed on the label, RLMs and PICs must ensure that the workers are aware of the hazards as discussed below under workplace labels.

Primary chemical containers associated with the 1994 Hazard Communication Standard will have a label with the chemical name, and hazard warning. The hazard warning is a statement of the hazardous effect of the chemical (e.g., "flammable" or "causes lung damage") or a numerical rating such as that found on the NFPA label.

No: P101-14 Chemical Management**Attachment A. LANL Hazard Communication and Chemical Hygiene Plan (Cont.) (Page 4 of 12)**

(CHP areas only) When one transfers a material from the original manufacturer's container to other vessels, these vessels are referred to as "secondary containers." Secondary containers in HAZCOM areas will include the chemical name, creation date, hazard warning, and manufacturer. Secondary containers in CHP areas will include the name of the chemical, date created, and the owner of the container.

Portable containers into which hazardous chemicals are transferred and which are intended only for the immediate use (i.e., use by one worker for one day, and always under the control of that one worker) of the chemical worker who performed the transfer are not required to be labeled. However, it is good practice to label the container with the name of the chemical and the owner.

Contact the CHO and OSH-ISH for assistance in developing labels

1.6 Methods Used to Inform Workers

Workers use the IWM process (see [P300](#), *Integrated Work Management*) to develop IWDs for the proposed work activity. The IWD or other work document describes the scope, location, duration, hazards and environmental aspects, and controls (including PPE) to mitigate the hazards and negative environmental impact of the work. The IWD is used to authorize the work in accordance with [P300](#). IWDs or other work documents will be used to address tasks involving hazardous chemicals.

Responsible Line Managers (RLMs) will ensure that all work involving hazardous chemicals is reviewed for impacts on security, environment, safety and health, facility or equipment, and facility safety basis concerns in accordance with [P300](#). At a minimum, the following steps will be performed:

1. Initially categorize hazardous chemical work in accordance with [P300](#). If categorized as high hazard/complex work, assemble a hazard analysis review team (see [P300](#) Appendix A, *Integrated Work Management Process for Research and Development*). In addition to the required members for the team, include deployed industrial hygienist(s), and other hazardous chemical Subject Matter Experts (SMEs).
2. Create a detailed description of the work for the IWD involving hazardous chemicals that identifies the hazards associated with performing the work.
3. Specify hazard controls within the IWD using the following hierarchy of controls.
 - a. Elimination or Substitution
 - b. Engineering Controls
 - c. Administrative Controls
 - qualifications
 - formal procedures
 - training
 - work practices

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d. PPE

Note: Guidance for Preparing IWDs: Consider and understand the potential for generating new hazardous chemical-bearing waste streams. Consider substituting a less hazardous chemical and speak with your Waste Management Coordinator (WMC) before creating new waste streams.

4. Contact your deployed industrial hygienist to perform a qualitative exposure assessment in accordance with the [Laboratory Industrial Hygiene and Safety Manual](#) to evaluate the potential for worker exposure to hazardous chemicals.

Your deployed industrial hygienist will work with subcontractor personnel to ensure that the potential for subcontractor worker exposure to hazardous chemicals is evaluated before removing, remodeling, servicing, maintaining, or repairing laboratory equipment and exhaust systems.

1.7 Worker Exposure Assessments

Worker exposure assessments, including exposure monitoring, will be conducted in accordance with applicable sections of:

- [P101-21](#), *Chronic Beryllium Disease Prevention Program*
- [P101-32](#), *Worker Exposure Assessments*
- the [Laboratory Industrial Hygiene and Safety Manual](#)

1.8 Use and Maintenance of Laboratory Fume Hoods

Requirements that will be followed for the proper design, operation, and use of laboratory fume hoods are located in [P101-16](#), *Local Exhaust Ventilation and HEPA Filtration Systems*.

1.9 Chemical Hygiene Officer (CHO) (Chemical Hygiene Plan [CHP] Only)

The LANL CHO resides in OSH-ISH. Each Division Leader will appoint a CHO to provide technical guidance to line management and chemical workers (CHP only). The CHO will be an authorized chemical worker with the education and experience to determine the hazards and consequences of exposure to the chemicals found in the chemical inventory.

1.9.1 Roles and Responsibilities (Based on [29 CFR 1910.1450](#), *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories, Appendix A [nonmandatory] and Prudent Practices for Handling Hazardous Chemicals in Laboratories*)**LANL CHO:**

- Establish, maintain, and revise the CHP.
- Create and revise CHP documentation.
- Communicate chemical safety lessons learned to Division CHOs for dissemination.

Division CHO:

- Liaise with OSH-ISH to ensure compliance with this document.
- Monitor procurement, use, and disposal of chemicals used in the Division.
- Seek ways to improve the LANL Hazard Communication and Chemical Hygiene program.

LANL

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- Perform MOVs with Division management of laboratories, preparation rooms, and chemical storage rooms.
- Assist laboratory owners in developing and maintaining adequate facilities.
- Provide assistance to Division members for proposed research activities that involve hazardous chemicals.

1.10 Safety Showers and Eye Washes

- Safety Showers and Eye Washes will be maintained, inspected, and tested periodically as required by American National Standards Institute (ANSI)/International Safety Equipment Association (ISEA) z358.1-2009 *American National Standard for Emergency Eyewash and Shower Equipment*, with the exception of weekly activation of safety showers. Activation of safety showers will be done on a quarterly basis due to issues associated with containment of test water. See [LANL Operations and Maintenance Manual, Criterion 407: Emergency Eyewash and Shower Equipment](#).

1.11 Provisions for Additional Employee Protection**1.11.1 Work with LANL Category 1 Chemicals**

- Special handling procedures are necessary to minimize exposures to known human carcinogens, reproductive toxicants, and substances with high acute or high chronic toxicity. Chemicals in these hazard groups are identified in the [LANL Cat 1 Chemicals](#) list.
- Handling procedures for these agents will be defined in laboratory or work authorization documents and approved by Deployed Services Environment, Safety, and Health (DSESH) deployed personnel before initiation of work.
- Specific consideration will be given to the following controls, to be used as appropriate for the agent and process: establishment of designated areas; use of containment devices such as laboratory fume hoods or glove boxes; procedures for safe removal of contaminated waste; and decontamination procedures (see [29 CFR 1910.1450, Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories](#) [e] [3] [viii]).

Decontamination is necessary before the affected work area can be released from “designated area” status. The type and level of decontamination should be defined by ISH personnel. After decontamination, the area will no longer be considered a “designated area,” and all warning and control signs will be removed. A wet mop or a vacuum cleaner equipped with a High-Efficiency Particulate Air (HEPA) filter will be used instead of dry sweeping.

1.11.2 Additional Requirements for Carcinogens

A regulated area will be established where a known human or suspected human carcinogen is manufactured, processed, used, repackaged, released, handled, or stored. All materials containing 0.1% (by weight) or more of a listed carcinogen will be clearly labeled to warn of a carcinogen hazard. A list of carcinogens, located in the LANL Cat 1 chemical list can be found on the [Chemical Safety Webpage](#). Less-hazardous, noncarcinogenic chemicals that can be substituted for currently used carcinogens will be substituted when compatible with the work to be accomplished.

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All areas in which carcinogens are used or stored will meet the following conditions:

- Clearly marked by posting signs warning of a carcinogen hazard. Additional signs and labels are required when OSHA-regulated carcinogens are in use. See [P101-19](#), *Safety Signs, Labels, and Tags*.
- Signs posted prohibiting eating, drinking, gum chewing, smoking, or applying cosmetics or lip balm.
- Ventilation and hood performance that meet minimum requirements before beginning any new operations involving carcinogens. (See [P101-16](#), *Local Exhaust Ventilation and HEPA Filtration Systems*.)
- Evaluation of carcinogen storage and use using the [Laboratory Industrial Hygiene and Safety Manual](#), Chapter 33, *Carcinogens*. Request the Environment, Safety, Health (ESH) Qualified Person perform a re-evaluation of carcinogen hazards when the use of a carcinogen changes in quantity, concentration, frequency, or duration.
- Decontamination procedures for equipment and facilities will be documented in an IWD before new carcinogens are used.
- Notification of ISH and Occupational Medicine (OM) with names of authorized chemical workers working with carcinogens.

1.11.3 Evaluation of Laboratory Operations

- Before laboratory tests or chemical reactions begin, evaluations must be made for hazards that can be encountered or generated during the course of the work.
- Evaluations must include the hazards associated with the properties and the reactivity of the materials used and any intermediate and end products that can be formed, hazards associated with the operation of the equipment at the operating conditions, and hazards associated with the proposed reactions, for example, oxidation and polymerization.
- Where reactions are being performed to synthesize materials, the hazard characteristics of which have not yet been determined by test, precautions must be employed to control the highest possible hazard based on a known hazard of similar material.
- Where use of a new material might present an explosion potential, initial experiments or tests must be conducted in an enclosure that is designed to protect people and property from potential explosion damage.
- Unattended or automatic laboratory operations involving hazardous chemicals must be equipped with regular surveillance for abnormal conditions.

1.12 Personal Protective Equipment (PPE)

- The Laboratory requires that suitable clothing and equipment be used to protect workers and others in Laboratory spaces from hazards in the workplace. PPE is intended to protect the body (including eyes, face, feet, hands, head, hearing, and respiratory system) from hazards capable of causing injury, illness, or impairment of bodily function. No protective material will provide full protection against all hazards. PPE is considered for use as a hazard control strategy only after it has been determined that elimination, substitution and engineered and administrative controls are not feasible, or in the interim while engineered and administrative controls are being designed and implemented. Proper PPE will be identified in the work authorization documentation.

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- The level of protection and type of PPE selected will match the applicable hazards. See [P101-6](#), *Personal Protective Equipment*.

1.13 Flammable Liquids Storage Cabinets

A flammable liquids storage cabinet is a cabinet that is Underwriters Laboratories listed or Factory Mutual approved for storage of flammable liquids. The Fire Protection-Division Office (FP-DO) should be contacted for questions on what qualifies as a flammable storage cabinet and the chemical limits.

Not more than 60 gallons of Class I and/or Class II liquids, or not more than 120 gallons of Class III liquids may be stored in an individual cabinet. Storage cabinets shall be designed and constructed to limit the internal temperature to not more than 325°F when subjected to a standardized 10-minute fire test. Storage cabinets shall be conspicuously labeled, "Flammable - Keep Fire Away."

The bottom, top, door, and sides of metal cabinets shall be at least No. 18 gage sheet metal and double walled with 1½-inch air space. The door shall be provided with a three-point lock, and the door sill shall be raised at least 2 inches above the bottom of the cabinet.

Note: Do not store compressed gases in these cabinets.

1.14 Hydrofluoric Acid (HF)

Hydrofluoric Acid (HF) is a particularly dangerous acid because of its unique ability among acids to penetrate tissue. This ability to penetrate tissue allows HF to cause severe systematic toxicity from even relatively small dermal exposures. For this reason, the following requirements and recommended safe practices apply to work with HF:

Requirements:

- Substitute less hazardous fluoride compounds, where possible, e.g., use aluminum fluoride instead of HF to remove silicates from aqueous solutions.
- An Integrated Work Document (IWD) (see [P300](#), *Integrated Work Management*) is required for work with HF. The IWD must include the first-aid procedure in case of an exposure and what to do in case of a spill.
- As required in [P300](#), the IWD must be readily accessible where the activity is being conducted.
- A Material Safety Data Sheet/Safety Data Sheet (MSDS/SDS) must be available.
- Before working with HF, workers must read the MSDS/SDS, read the IWD, complete training on the first-aid procedure in case of an exposure, and know what to do in case of a spill.
- Workers must be authorized in accordance with the requirements in [P300](#).
- Workers who work with HF must be registered and trained by Occupational Medicine on first-aid procedures associated with HF exposure.

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- Personal protection by engineered controls, personal protective equipment, or a combination is required for HF use. Controls must be commensurate with the HF hazard represented by a specific use or process involving HF. Your deployed industrial hygienist will assist in the development of and approve personal protective equipment and engineered controls for HF uses and processes through IWD development.
- A calcium gluconate skin exposure mitigation kit must be located in close proximity to the work involving HF. The kit must be replaced with new stock annually. A list of HF first-aid trained personnel must be posted near the kit. Contact Occupational Medicine for mitigation kits and replacement components.
- An HF spill kit must be available with calcium compounds such as calcium carbonate, calcium sulfate, or calcium hydroxide. It is advised that facilities that use or handle HF maintain on hand adequate compatible spill control materials to absorb or contain the volume of the largest volume container of HF commonly within the facility. In facilities with a “no spill cleanup” policy, these materials will supplement that which is immediately available to Hazardous Material (HAZMAT) first responders. Sodium bicarbonate should never be used with an HF spill since it does not bind the fluoride ion and can generate toxic aerosols.

Safe Practices

- Never work alone with concentrated (~6M or greater) HF or large volumes of dilute HF; use a buddy system. It is highly recommended that HF work not be conducted during hours when facilities may have minimum personnel such as nights and weekends even with small volumes and dilute solutions to ensure that there are adequate personnel to render aid in the event of an accident or spill.
- Use an HF-compatible tray or other suitable container while working with HF for containment in case of a spill.
- Store HF in compatible materials (e.g., Teflon, fluorinated ethylene propylene, polyethylene, etc.) containers and keep containers closed.
- Label all nonoriginal containers that contain HF and solutions other than that for immediate use (See Section 1.5).
- Store the stock HF in HF-compatible plastic secondary containment and label the cabinet. Store HF in lower cabinets near the floor. Store HF with other inorganic acids and away from bases, flammables, or oxidizers.
- Wash or wipe gloves with water before removing them, if permissible, by specific laboratory protocols.
- Protect exposed skin and nonresistant or absorbent clothing through:
 - enclosed processes and uses,
 - chemical fume hoods with sash down,
 - gloveboxes with HF-compatible gloves and windows,
 - specially engineered process enclosures, e.g., ventilated cabinets,

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Note: Concentrated HF and hydrogen fluoride gas from reactions can etch the glass hood sash on a fume hood and make it hard to see through. If the hood sash becomes fogged and hard to see through because of etching, contact your Facility Operations Director (FOD) representative about installing a polycarbonate sash. In some cases, hood sashes as well as glove box windows may be protected before exposure with a transparent film of Polyvinylidene Fluoride (PVDF, Kynar, Hylar, and Sygef) or other HF-resistant plastic.

- HF-resistant rubber or plastic apron,
- HF-resistant plastic arm coverings,
- HF-resistant gloves and glove combinations,
 - incidental use of dilute acid solutions—double gloves with heavy nitrile exam gloves; re-glove if there is any exposure to the gloves,
 - extended use of concentrated acid—heavy neoprene or butyl gloves worn over nitrile or silver shield gloves,
 - fluorinated polymer gloves for high-concentration and/or high-concentration HF gas exposure,
- closed toe shoes or chemical resistant boots,
- long pants and a long-sleeve shirt with a reasonably high-neck (not low-cut).
- Protect the face and eyes through
 - safety glasses in conjunction with chemical fume hoods with sash down (dilute solutions),
 - splash goggles in conjunction with a fume hood sash (high-concentration, high-reactivity process), and
 - face shield in conjunction with splash goggles (open processes, open hood sash).

1.15 Emergency Procedures

Emergency procedures will be in accordance with requirements contained in [PD1200](#), *Emergency Management*.

1.16 Medical Surveillance

Medical surveillance requirements will be in accordance with requirements contained in [P102](#), *Occupational Health*.

1.17 Worker Information, Training and Authorization

Chemical workers who work with hazardous chemicals will receive training about those chemicals before they begin work. Chemical workers receive this training through a combination of formal training, reading assignments and job-specific information as specified in the work authorization documentation. Chemical workers who work in areas where hazardous chemicals are used, but who do not work directly with such chemicals, will be made aware of the hazards before they begin work in those areas. Formal training will be conducted and documented in accordance with Laboratory training policy. Chemical workers will be trained on chemicals in use in their workplace at the time of initial assignment and whenever new hazards are introduced. See Section 6.0 of this document.

No: P101-14 Chemical Management**Attachment A. LANL Hazard Communication and Chemical Hygiene Plan (Cont.) (Page 11 of 12)**

1.18 Use of Non-medical Sharps

- Use the correct tool for the job, i.e., a box cutter to cut boxes.
- Do not shear, clip, or bend needles. Do not recap used disposable hypodermic needles. Do not remove used disposable hypodermic needles from the syringe. If you are using a glass syringe and a non-disposable needle, use extreme caution when recapping the needle, or removing the needle. To recap a non-disposable needle, use either a one-handed “scoop” technique or a mechanical device designed for holding the needle sheath.
- Do not walk with an unprotected sharp.
- Dispose of sharps at the point of use.
- Use needleless systems, or a blunt needle whenever possible.
- Organize your work space so that all materials for the experiment are ready and available before accessing the sharp device. This helps reduce the chance of having to set an exposed needle down on the lab bench in order to retrieve other necessary supplies.
- Be prepared to use the device the moment the sharp is exposed (e.g., when the needle is uncapped, the razor blade removed from its wrapper).
- Make sure you have adequate lighting to perform the task involving the sharp.
- Keep exposed sharps pointed away from yourself and others.
- Never directly hand an exposed sharp to another person. Instead, designate a “sharps passing zone” where exposed sharps are set down prior to being picked up by another person.
- Be accountable for the sharps you use.
- Look around after you complete your work and make sure that all sharps have been disposed of properly.
- Store sharps in a safe manner. Protect the sharp with a cap, cover, or store it in a rigid container.
- Use a dedicated, labeled sharps storage area.

Disposal of Non-medical Sharps:

- Hypodermic needles and contaminated sharps must always be discarded in an approved, rigid, leak-proof sharps container. Do not overfill the container. Do not open sharps containers. Note: sharps containers for personal medical use are available at Occupational Medicine.
- Do not discard loose sharps or sharps containers in the regular trash.
- **Broken glass:** (no regulated chemical or bioagent/biohazard contamination): Carefully sweep up any broken pieces into a dustpan and place them in a hard sided closed container (e.g., cardboard box) labeled “broken glass” with the technical area (TA), building number, room number and generator’s name written on the container. The container can be placed in the regular trash provided the broken glass is not contaminated; coordinate disposal with your WMC.

No: P101-14 Chemical Management**Attachment A. LANL Hazard Communication and Chemical Hygiene Plan (Cont.) (Page 12 of 12)**

- **Chemical contaminated sharps:** Store in leak-proof, rigid, puncture-resistant containers that are manufactured for the purpose of sharps containment and are taped closed or tightly lidded to preclude loss of contents. Label and manage in accordance with regulatory requirements for the material with which they are contaminated. Contact your WMC for assistance.
- **Uncontaminated (no rad, chemical, or biological) Sharps:** Store in leak-proof, rigid, puncture-resistant containers that are manufactured for the purpose of sharps containment and are taped closed or tightly lidded to preclude loss of contents. Label the container “non-infectious and non-hazardous waste” with the TA, building number, room number and generator’s name written on the container. The container can be placed in the regular trash; however, coordinate with your WMC.
- **New Mexico special waste sharps (infectious waste sharps):** Refer to [Tool 502 “Infectious Waste”](#) for assistance.

The [Chemical Safety Webpage](#) also contains guidance on [Working with Sharps](#) and [Management of Waste Sharps](#).

IMPORTANT

If you wish to receive credit for the preceding document you **must** enter the course through [UTrain](#) **not** the Policy Office website.

**ATTACHMENT J: THREATENED AND ENDANGERED SPECIES HABITAT MANAGEMENT
PLAN FOR LANL**

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Approved for public release; distribution is unlimited.

Title: Threatened and Endangered Species Habitat Management Plan for Los Alamos National Laboratory

Author(s): Hathcock, Charles D.
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Title: **Threatened and Endangered Species
Habitat Management Plan for
Los Alamos National Laboratory**

Author(s): Environmental Protection Division
Resources Management Team

Intended for: Reference purposes

Date: March 2014



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ACRONYMS

AEI	Area of Environmental Interest
BA	biological assessment
Bd	Batrachochytrium dendrobatidis
BSL-3	Biosafety Level 3
COPCs	chemicals of potential concern
DARHT	Dual-Axis Radiographic Hydrodynamic Test (Facility)
dB	Decibel
DDT	(dichloro-diphenyl-trichloroethane)
DOE	U.S. Department of Energy
EPA	Environmental Protection Agency
ESA	Endangered Species Act of 1973
fc	foot candles
FR	Federal Register
GIS	geographic information system
HMP	Threatened and Endangered Species Habitat Management Plan
HVAC	heating, ventilation, and air conditioning
LANL	Los Alamos National Laboratory
NEPA	National Environmental Policy Act
NMED	New Mexico Environment Department
NPDES	National Pollutant Discharge Eliminations System
PCBs	polychlorinated biphenyls
PR-ID	Permits and Requirements Identification
SME	subject matter expert
USFWS	U.S. Fish and Wildlife Service

I. THREATENED AND ENDANGERED SPECIES HABITAT MANAGEMENT PLAN GENERAL OVERVIEW

1.0 INTRODUCTION

Los Alamos National Laboratory's (LANL) Threatened and Endangered Species Habitat Management Plan (HMP) was prepared to fulfill a commitment made in the U.S. Department of Energy's (DOE) "Final Environmental Impact Statement for the Dual-Axis Radiographic Hydrodynamic Test Facility Mitigation Action Plan" (DOE 1996). The HMP received concurrence from the U.S. Fish and Wildlife Service (USFWS) in 1999 (USFWS consultation numbers 2-22-98-I-336 and 2-22-95-I-108). In this 2014 update, we retained the management guidelines from the 1999 HMP for listed species, updated some descriptive information, and added the Jemez Mountains salamander (*Plethodon neomexicanus*), which was federally listed in September 2013 (USFWS consultation number 02ENNM00-2014-I-0014).

2.0 ROLE OF SITE PLANS IN THE HMP

The purpose of the HMP is to provide a management strategy for the protection of threatened and endangered species and their habitats on LANL property. The HMP consists of site plans for federally listed threatened or endangered species with a moderate or high probability of occurring at LANL. The following federally listed threatened or endangered species currently have site plans at LANL: Mexican Spotted Owl (*Strix occidentalis lucida*), Southwestern Willow Flycatcher (*Empidonax trailii extimus*), and the Jemez Mountains salamander. Site plans provide guidance to ensure that LANL operations do not adversely affect threatened or endangered species or their habitats.

3.0 DESCRIPTION OF AREAS OF ENVIRONMENTAL INTEREST

Suitable habitats for federally listed threatened and endangered species have been designated as Areas of Environmental Interest (AEIs). AEIs are geographical units at LANL that are managed for the protection of federally listed species and consist of core habitat areas and buffer areas. The purpose of the core habitat is to protect areas essential for the existence of the specific threatened or endangered species. This includes the appropriate habitat type for breeding, prey availability, and micro-climate conditions. The purpose of buffer areas is to protect core areas from undue disturbance and habitat degradation.

Site plans identify restrictions on activities within the AEIs. Allowable activities are activities that the USFWS has reviewed and provided concurrence that these activities are not likely to adversely affect federally listed species. Activities discussed in site plans include day-to-day activities causing disturbance (hereafter referred to as "disturbance activities"), such as access into an AEI, and long-term impacts, such as habitat alteration.

3.1 Definition and Role of Developed Areas in AEI Management

Summary: Habitat alteration is not restricted in developed areas unless it impacts undeveloped core areas of an AEI (e.g., noise and light impacts on a core area). Current ongoing disturbance activities are not restricted in developed areas. Disturbance activities not currently ongoing are

restricted when impacts occur to undeveloped core areas of an AEI that are occupied by a threatened or endangered species.

Developed areas include all building structures, paved roads, improved gravel roads, paved and unpaved parking lots, and firing sites. The extent of developed areas in each AEI was determined using two methods. First, LANL geographic information system (GIS) analysts placed a 15 m (49 ft) border around all buildings and parking lots. For paved and improved gravel roads, the developed area was defined as the area to a roadside fence, if one exists within 9 m (30 ft) of the road, or 5 m (15 ft) on each side of the road, if there is no fence within 9 m (30 ft). If an area of highly fragmented habitat was enclosed by roads, a security fence, or connected buildings, that area was also classified as developed. Developed areas at firing sites were defined as a circle with a 91-m (300-ft) radius from the most centrally located firing pad. Second, LANL GIS analysts overlaid scanned orthophotos onto a map of the Los Alamos area and digitized all areas that appeared developed. These two information sources were overlaid and combined, so that areas classified as developed by either method were considered developed in final maps and analyses. Some areas were confirmed by ground surveys, such as the firing sites. Developed areas are contained in the HMP GIS database.

Developed areas are located in the core and/or buffer of some AEIs. However, developed areas do not constitute suitable habitat for federally listed species. Current ongoing activities in developed areas constitute a baseline condition for the AEIs and are not restricted. New activities including further development within already existing developed areas are not restricted unless they impact undeveloped portions of an AEI core. For example, if light or noise from a new office building in a developed area were to raise levels in an undeveloped core area, those light and noise levels would be subject to the guidelines on habitat alterations. If a proposed action within a developed area does not meet site plan guidelines, it must be individually reviewed for compliance with the Endangered Species Act of 1973 (ESA).

Building a new structure or clearing land within a previously designated developed area in an AEI core does not add to the size of the developed area. New structures in core areas will not be given any developed-area border unless they are individually reviewed for ESA compliance.

Development occurring in the developed area in an AEI buffer can be given a 15 m (49 ft) developed-area border at the discretion of the project leader or facility manager. To expand the size of a developed area in a buffer based on new developments, please contact a LANL biological resources subject matter expert (SME) (<http://int.lanl.gov/environment/bio/controls/index.shtml>).

3.2 General Description of Buffer Areas and Allowable Buffer Area Development

Summary: Limited future development is allowed in the currently undeveloped DOE-controlled buffer area under the guidelines of this HMP as long as it does not alter habitat in the undeveloped AEI core (including light and noise guidelines). Development beyond the cap established for each AEI, or greater than 2 ha (5 ac) in size including the developed-area border, requires independent review for ESA compliance.

The purpose of buffer areas is to protect core areas from undue disturbance or habitat degradation. The current levels of development in buffer and core areas represent baseline conditions for this

HMP. No further development is allowed in the core area under the guidelines of this HMP. A limited amount of development is allowed in buffer areas. Under the guidelines of this HMP, individual development projects are limited to 2 ha (5 ac) in size, including a 15 m (49 ft) developed-area border around structures and a 5 m (15 ft) developed-area border around paved and improved gravel roads. Projects greater than 2 ha (5 ac) in area require individual review for ESA compliance (see exceptions for fuels management activities and utility corridor maintenance). New development projects in AEI buffer areas must be reported to LANL biological resources SMEs for tracking (<http://int.lanl.gov/environment/bio/controls/index.shtml>). Descriptions of each of the AEIs give the total area in each buffer area available for development.

3.3 Emergency Actions

Summary: Contact DOE and LANL biological resources SMEs as soon as possible.

If safety and/or property is immediately threatened by something occurring within an AEI (for example, wildfire, water line breakage, etc.) managers may activate emergency actions. Contact a LANL biological resources SME (<http://int.lanl.gov/environment/bio/controls/index.shtml>), the Environmental Stewardship Group (1-505-665-8855), or the DOE Los Alamos Field Office (Field Office; 1-505-667-6819) as soon as possible. If the emergency occurs outside of regular business hours, contact the Emergency Management Office (1-505-667-6211). This office will then communicate with the appropriate LANL and DOE Field Office personnel.

4.0 IMPLEMENTATION OF SITE PLANS

4.1 Roles and Responsibilities

Summary: LANL's facility managers and operational staff are responsible for ensuring that activities are reviewed for compliance with all applicable site plans. Figure 1 illustrates the process for utilizing site plans. If activities follow approved guidance, there is no requirement for additional ESA regulatory compliance. However, additional National Environmental Policy Act (NEPA), cultural resources, wetlands, or other regulatory compliance actions may be required.

If an activity or project occurs outside of all LANL AEIs and will not impact habitat within an AEI, it does not have to be reviewed for ESA compliance, unless it is a large project. Projects that are larger than 2 ha (5 ac) or cost more than \$5 million require an individual ESA compliance review, even if they are not located within an AEI.

LANL's facility managers are responsible for determining if operations within their geographic and/or programmatic area of responsibility comply with the guidelines in these site plans. Submission of a Permits and Requirements Identification (PR-ID) for a new or modified project is required under Program Description 400 (LANL 2013) and allows managers to identify the requirements within their project area. Deployed environmental professionals and core LANL biological resources SMEs are available to support facility managers. If activities follow site plan guidelines, they do not require any additional ESA regulatory compliance action. However, NEPA, cultural resources, wetlands, or other regulatory compliance actions are not addressed in site plans and additional compliance actions may be required. It is the responsibility of the project leader or facility management staff to ensure that all requirements are satisfied. If you have

questions, contact biological, cultural, NEPA, or other environmental SMEs. Contacts can be found at <http://int.lanl.gov/environment/compliance/ier/index.shtml>.

A single facility may have one or more AEIs within its boundary and the AEIs may be for different species. Some AEIs overlap. In areas where overlap occurs, project managers must follow the guidelines for AEIs of all involved species.

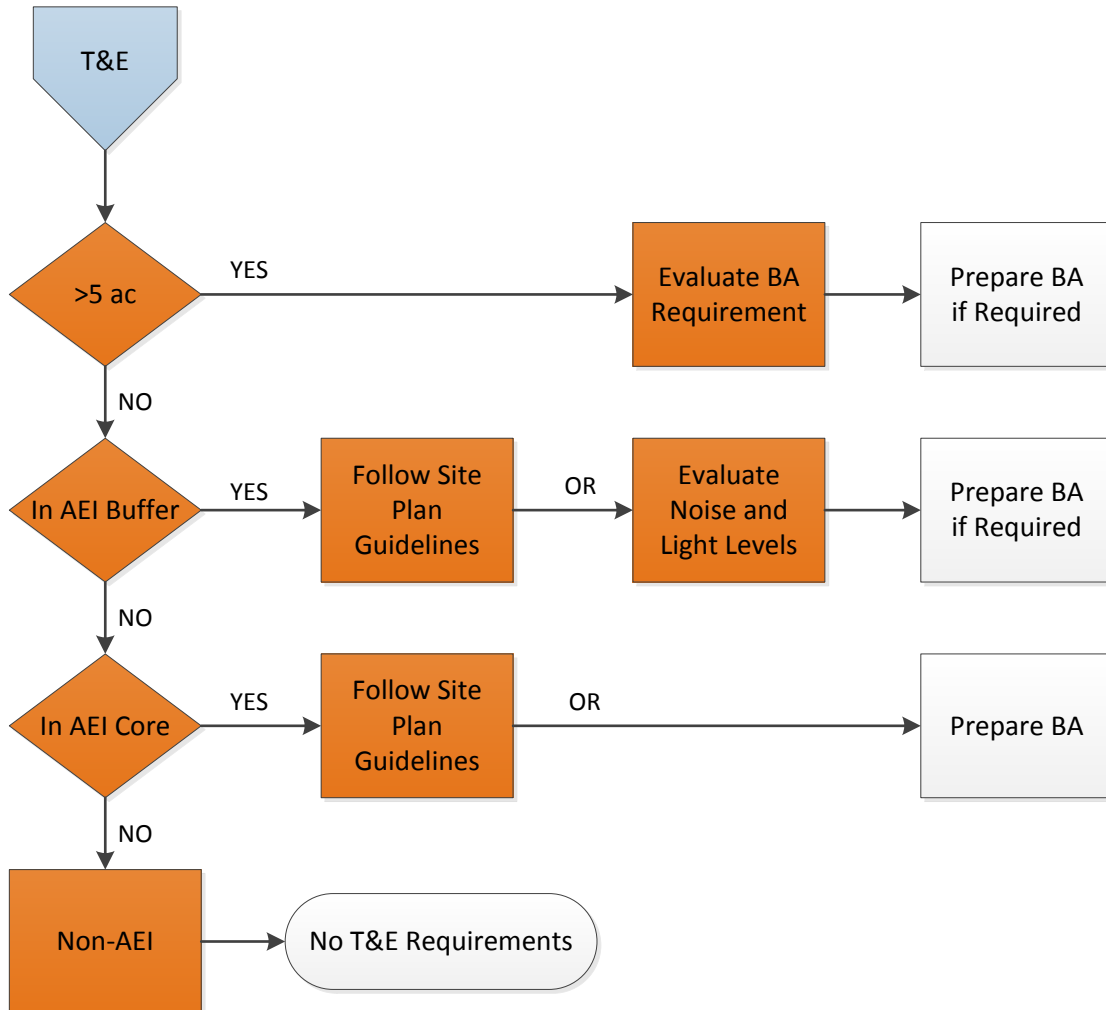


Figure 1. Process flowchart for determining site plan requirements.

4.2 If an Activity Does Not Meet Site Plan Guidelines

Summary: Activities or projects that do not meet all applicable site plan guidelines must be evaluated individually for compliance with the ESA.

If a project reviewer determines that an activity or project cannot meet the guidelines in applicable site plans, LANL biological resources SMEs evaluate that activity individually for compliance with the ESA. Results of the evaluation of potential impacts allow LANL biological resources SMEs to make recommendations to the DOE Field Office Biological Resources Program Manager

regarding the need for USFWS consultation. An evaluation may result in 1) a DOE Field Office determination that there is no possibility of adverse effects and the activity can proceed, 2) a DOE Field Office suggestion for modifications of the action to avoid adverse effects so that it can proceed, or 3) a DOE Field Office decision to prepare a biological assessment (BA) for the activity and submit it to the USFWS for concurrence. Fieldwork and preparation of a BA can take a few months with an additional 2 to 12 months for DOE Field Office review and then final USFWS concurrence.

4.3 Dissemination of Information

Although information about threatened and endangered species is not classified, it is considered sensitive information. It is in the best interest of threatened and endangered species to restrict specific knowledge about their locations. Habitat locations of threatened and endangered species are not considered sensitive.

5.0 CHANGES IN THE HMP SINCE IMPLEMENTATION

The HMP received concurrence from USFWS and was first implemented in 1999. Since that time, both the Peregrine Falcon (*Falco peregrinus*) and the Bald Eagle (*Haliaeetus leucocephalus*) have been delisted. Site plans for those species have been removed from LANL's HMP. Both species are protected at LANL under the Migratory Bird Treaty Act, and the Bald Eagle is also protected under the Bald and Golden Eagle Protection Act.

The black-footed ferret (*Mustela nigripes*) is federally listed as endangered. However, no sightings of black-footed ferrets have been reported in Los Alamos County for more than 50 years. In addition, no large prairie dog towns, which are prime habitat for black-footed ferrets, have been observed on DOE property around LANL. Therefore, there is no site plan for this species.

In 2005, the USFWS concurred with DOE's proposal for new Mexican Spotted Owl habitat boundaries based on a revised analysis of Mexican Spotted Owl habitat quality within DOE property around LANL (USFWS consultation number 22420-2006-I-0010).

In 2012, the USFWS concurred with DOE's proposal to modify the habitat boundaries for the Los Alamos Canyon Mexican Spotted Owl AEI due to changes from the fire response activities after the Las Conchas wildfire (USFWS consultation number 02ENNM00-2012-IE-0088).

In 2013, the USFWS concurred with the DOE's new site plan for the Jemez Mountains salamander and its addition to LANL's HMP (USFWS consultation number 02ENNM00-2014-I-0014).

6.0 DATA MANAGEMENT

The data used in the implementation of the HMP is stored in a GIS database at LANL.

II. AREA OF ENVIRONMENTAL INTEREST SITE PLAN FOR THE MEXICAN SPOTTED OWL

1.0 SPECIES DESCRIPTION—MEXICAN SPOTTED OWL

1.1 Status

In 1993, the USFWS determined the Mexican Spotted Owl to be a threatened species under the authority of the ESA, as amended (58 Federal Register [FR] 14248). In 1995, the USFWS released its final recovery plan for the owl (USFWS 1995), which was revised in 2012 (USFWS 2012). The USFWS most recently designated critical habitat for Mexican Spotted Owl in 2004 (69 FR 53181).

1.2 General Biology

The Mexican Spotted Owl is found in northern Arizona, southeastern Utah, and southwestern Colorado south through New Mexico, west Texas, and into Mexico. It is the only subspecies of Spotted Owl recognized in New Mexico (USFWS 1995).

The Mexican Spotted Owl generally inhabits mixed conifer and ponderosa pine (*Pinus ponderosa*; Lawson & C. Lawson) - Gambel oak (*Quercus gambelli*; Nutt.) forests in mountains and canyons. High canopy closure, high stand diversity, multilayered canopy resulting from an uneven-aged stand, large, mature trees, downed logs, snags, and stand decadence as indicated by the presence of mistletoe are characteristic of Mexican Spotted Owl habitat. Some owls have been found in second-growth forests (i.e., younger forests that have been logged); however, these areas were found to contain characteristics typical of old-growth forests. Mexican Spotted Owls in the Jemez Mountains seem to prefer cliff faces in canyons for their nest sites (Johnson and Johnson 1985). The recovery plan for the Mexican Spotted Owl recommends that mixed conifer and pine-oak woodland types on slopes greater than 40 percent be protected for the conservation of this owl.

A mated pair of adult Spotted Owls may use the same home range and general nesting areas throughout their lives. A pair of owls requires approximately 800 ha (1,976 ac) of suitable nesting and foraging habitat to ensure reproductive success. Incubation is carried out by the female. The incubation period is approximately 30 days, and most eggs hatch by the end of May. Most owlets fledge in June, 34 to 36 days after hatching (USFWS 1995). The owlets are “semi-independent” by late August or early September, although juvenile begging calls have been heard as late as September 30. Young are fully independent by early October. The non-breeding season runs from September 1 through February 28. Although seasonal movements vary among owls, most adults remain within their summer home ranges throughout the year.

The diet of Mexican Spotted Owls nesting in canyons consists primarily of woodrats (*Neotoma* spp.) and mice (*Peromyscus* spp.) with lesser amounts of rabbits, birds, reptiles, and arthropods (Willey 2013). The relative abundance of prey types in Mexican Spotted Owl pellets collected at LANL are listed in Table A-1 in the Appendix. Ganey and Balda (1994) found core areas of individuals (i.e., where owls spent 60 percent of their time) averaged 134 ha (331 ac), and core areas for pairs averaged 160 ha (395 ac).

1.3 Threats

The Mexican Spotted Owl was listed as threatened because of destruction and modification of habitat caused by timber harvest and fires, increased predation on owls associated with habitat fragmentation, and a lack of adequate protective regulations.

2.0 IMPACT OF HUMAN ACTIVITIES

2.1 Introduction

The primary threats to Mexican Spotted Owls on DOE property around LANL property are 1) impacts to habitat quality from LANL operations and 2) disturbance of nesting owls. This section provides a review and summary of scientific knowledge of the effects of various types of human activities on the Mexican Spotted Owl and provides an overview of the current levels of activities at LANL.

2.2 Impacts on Habitat Quality

2.2.1 Development

The type of habitat used by Mexican Spotted Owls, late seral stage forests with large trees, are usually not found in large quantities near developed areas or near areas that have had recent agricultural or forest product extraction land uses. Therefore, Mexican Spotted Owls are generally not found near developments. Whether it is the development itself or a lack of suitable habitat that discourages colonization of these areas by Mexican Spotted Owls is unknown.

Areas of LANL vary from remote undeveloped areas to heavily developed and/or industrialized facilities. Most LANL facilities are situated atop mesas, primarily in the northern and western portion of the DOE property. LANL is bounded by developed residential, industrial, and retail areas along its northern boundary (the town of Los Alamos) and by residential and retail development along a portion of its eastern boundary (the town of White Rock). Three major paved roads traverse LANL from northeast to southwest. Sandia, Pajarito, and Los Alamos canyons have paved roads within AEIs, and several AEIs have dirt roads along at least a portion of the canyon bottom. AEIs containing paved or dirt roads in the canyon bottoms have not been occupied at LANL (Hathcock et al. 2010).

2.2.2 Ecological Risk

There is no specific information on the impact of chemicals on the Mexican Spotted Owl, although experience with other raptor species suggests that exposure to polychlorinated biphenyls (PCBs), dichloro-diphenyl-trichloroethane (DDT) and its derivatives, and other organophosphate or organochlorine pesticides would probably be harmful. Exposure to other chemicals could also be harmful (Cain 1988).

LANL completed three ecological risk assessments that included the Mexican Spotted Owl between 1997 and 2009. The ecological risk assessment process involves using computer modeling to assess potential effects to animals from chemicals of potential concern (COPCs) that have been detected in the environment. All of the following ecological risk assessments concluded that, on average, no appreciable impact is expected to Mexican Spotted Owls from COPCs (Gallegos et al. 1997; Gonzales et al. 2004; Gonzales et al. 2009).

2.2.3 Disturbance

2.2.3.1 Pedestrians and Vehicles

Based on work with other raptors, LANL biological resources SMEs assume that Mexican Spotted Owls would likely be disturbed by the approach of either pedestrians or vehicles. At an equal distance, pedestrians are frequently more disturbing to raptors than vehicles (Grubb and King 1991). Brown and Stevens (1997) reported that during surveys in Grand Canyon National Park, 22 times more Bald Eagles were found in canyon reaches with low human recreational use compared to reaches with moderate to high human recreational use. Human activity 100 m (328 ft) from Bald Eagle nests in Alaska caused clear and consistent changes in behavior of breeding eagles (Steidl and Anthony 2000).

Swarthout and Steidl (2001) found that both juvenile and adult roosting Mexican Spotted Owls were unlikely to alter their behavior in the presence of a single hiker at distances greater than 55 m (180 ft). Swarthout and Steidl (2003) concluded that cumulative effects of high levels of short-duration recreational hiking near Mexican Spotted Owl nests may be detrimental.

Many canyon bottoms and mesa tops at LANL have dirt roads traversing them. Most of these roads are gated. However, these roads are accessible to LANL employees and some of them are accessible to the public on foot or by bike. LANL biological resources SMEs have found that AEIs are occupied less often if there is recreational access into a canyon (Hathcock et al. 2010).

2.2.3.2 Aircraft

Ground-based disturbances appear to impact raptor reproductive success more than aerial disturbances (Grubb and King 1991). Grubb and Bowerman (1997) concluded that an exclusion of aircraft within 600 m (1,968 ft) of Bald Eagle nest sites would limit Bald Eagle response frequency to 19 percent.

Delaney et al. (1999) found for Mexican Spotted Owls that chainsaws consistently elicited higher response rates than helicopters at similar distances. Owl flush rates did not differ between nesting and non-nesting seasons. No owls flushed when noise stimuli (helicopter or chainsaws) were at distances greater than 105 m (344 ft). Distance was generally a better predictor of owl response to helicopter overflights than sound level.

LANL is restricted airspace, and planes infrequently fly less than 609 m (2,000 ft) above ground level. The County of Los Alamos operates an airport along the northern edge of LANL. The airport is located on the southern rim of Pueblo Canyon. Most flights approach and depart to the east of the airport, over the Rio Grande.

2.2.3.3 Explosives

There is no specific information on the reaction of Mexican Spotted Owls to explosives detonation currently available. Explosive blasts set off 120 to 140 m (393 to 459 ft) from active Prairie Falcon (*Falco mexicanus*) nests caused perched Prairie Falcons to flush from perches 79 percent of the time, and, in 26 percent of the cases, caused incubating Prairie Falcons to flush from nests. Measured sound levels at aerie entrances during blasts ranged from 129 to 141 decibel (dB) (Holthuijzen et al. 1990). Explosives blasting for dam construction 560 to 1,000 m (1,837 to 3,280 ft) from active Prairie Falcon nests caused a change in behavior 26 percent of the time, and

birds flushed in 17 percent of all cases. No incubating birds flushed (Holthuijzen et al. 1990). Brown et al. (1999) found little activity change in roosting or nesting Bald Eagles and no population-level impacts from weapons detonations at the Aberdeen Proving Ground. Holthuijzen et al. (1990) found that a 167-g (5.89-oz) charge of Kinestik produced noise levels between 138 and 141 dB at 100 m (328 ft), and that a 500-g (17.6-oz) charge of TNT produced noise levels between 144 and 146 dB at 100 m (328 ft). A 20-kg (44-lb) charge of TNT produced noise levels that measured 163 dB at 100 m (328 ft) (Paakkonen 1991).

Measurements of noise levels during explosives testing were conducted at three locations at LANL using quantities of high explosives ranging from 4.5 to 67.5 kg (10 to 148 lb) of TNT during six shots. Noise levels increased during the test from a background level of 31 dB(A)¹ to a range between 64 and 71 dB(A) during shots at a distance of 1.8 km (1.1 mi). At a distance of 4.3 km (2.67 mi), noise levels rose from a background range of 35 to 64 dB(A) to a range of 60 to 63 dB(A) (Vigil 1995). At a distance of 6.7 km (4.16 mi), noise levels rose from a background range of 38 to 51 dB(A) to a range of 60 to 71 dB(A) (Burns 1995). LANL biological resources SMEs estimated that the noise from a shot at the Dual-Axis Radiographic Hydrodynamic Test (DARHT) Facility would be 150 dB(A) at the source and 80 dB(A) at 400 m (1,312 ft) (Keller and Risberg 1995). LANL biological resources SMEs found that Mexican Spotted Owl AEIs located within the explosives testing buffer area were occupied more frequently than AEIs in other locations (Hathcock et al. 2010). This is likely due to the strict access control in explosives areas which limit human activity and development in the canyon bottoms.

2.2.3.4 Other Sources of Noise

Major noise-producing activities at LANL include automobile and truck traffic and noise associated with office buildings, construction activities, a live-fire range, and explosives testing. Also, there is noise associated with aircraft traffic at the Los Alamos County airport. Construction and maintenance activities involved with operations at LANL are fairly common. In addition, implementation of the 2005 Compliance Order on Consent (NMED 2005) issued by the New Mexico Environmental Department (NMED) has resulted in an increased frequency of drilling groundwater monitoring wells in protected habitat at LANL. Also, forest fuels management operations use chainsaws, chippers, and other noise-generating equipment. The 2010 National Pollutant Discharge Elimination System (NPDES) Individual Permit (EPA 2010) issued by the Environmental Protection Agency (EPA) requires sediment control features such as berms and small rock check dams to be installed at various sites with stormwater runoff; these are sometimes installed in protected habitat. LANL biological resources SMEs conducted a study of noise levels in canyons and found that the primary sources of noise exceeding 55 dB(A) were cars and trucks. Readings taken near flowing water were up to 11 dB(A) higher than readings taken elsewhere. The average dB(A) in canyons near paved roads ranged from 41 to 62, with maximum values ranging from 62 to 74. Away from paved roads 1.6 km (1 mi) or more, average dB(A) in canyons ranged from 37 to 50, with all but one average below 45. Maximum dB(A) away from paved roads ranged from 38 to 76 [76 dB(A) was measured during a thunder clap] (Huchton et al. 1997).

¹ Sound can be measured as decibels (dB), C-weighted dB [dB(C)], or A-weighted dB [dB(A)]. The dB(A) measurement best resembles the response of the human ear by filtering out lower and higher frequency sound not normally heard by the human ear.

Noise measurements were conducted by LANL biological resources SMEs at the Los Alamos County airport and in Bayo and Pueblo canyons, including the Los Alamos County Sewage Treatment Facility, in December 1997. Sound levels near the airport runway during the maximum use time (6:30 to 7:30 am) had background values averaging 54 dB(A). Noise during plane arrivals ranged from 47 to 63 dB(A). No measurements were collected during plane take-off. Sound measurements conducted in the bottoms of Pueblo and Bayo canyons ranged from 37 to 40 dB(A) in most areas of the canyon. At the sewage treatment facility parking lot during a working day, the average dB(A) during a three-minute period was 46 (range 45 to 49). At the intersection of the road going into Pueblo Canyon with State Road 502, the average dB(A) during a three-minute period was 60 (range 41 to 70).

LANL biological resources SMEs conducted sound measurements at successive distances from an industrial area near a canyon rim, into the canyon, and to the opposite rim, using a C-weighted decibel scale (Keller and Foxx 1997). Measurements of noise levels using the C-weighted decibel scale are greater than if measured using A-weighted decibels. The average background noise on the mesa was 65.8 dB(C) [with a range of 43–81 dB(C)]. The average background noise in the canyon bottom was 62.3 dB(C) [with a range of 54–78 dB(C)]. The average background noise at the bottom of the north-facing slope was 53.8 dB(C) [with a range of 48–64 dB(C)]. Measurements were taken mid-day.

LANL biological resources SMEs measured sound levels from various pieces of construction equipment used at project sites at LANL over 5-minute intervals at distances of 6 to 31 m (20 to 100 ft) (Knight and Vrooman 1999). Average values ranged from 58.5 dB(A) to 80.9 dB(A). Peak values ranged from 75.7 to 155.4 dB(A). Additional data were collected by other LANL operators on specific pieces of construction equipment and on the Security Computer Complex construction site fence perimeter at Technical Area 3 before and during construction (Knight and Vrooman 1999). The average noise levels before construction began was 56.6 dB(A), and the average during construction was 82.1 dB(A).

LANL biological resources SMEs conducted a series of sound measurements at LANL to investigate background noise levels around AEIs (Vrooman et al. 2000). Background noise levels were significantly higher in daytime than in nighttime. AEIs with greater than 10 percent developed area in their buffers had significantly higher levels of background noise than undeveloped AEIs. Mean background sound levels were 51.3 dB(A) in developed AEIs and 39.6 dB(A) in undeveloped AEIs. The LANL biological resources project review process uses the individual AEI background measurements from Vrooman et al. (2000) to screen project activities for increases more than 6 dB(A) above background.

LANL biological resources SMEs took sound level measurements of heavy equipment use associated with concrete recycling on Sigma Mesa at LANL in 2004 (Hansen 2004). At this location, background noise levels at two different locations were 55.2 and 58.8 dB(A). Operation of a dump truck hauling and dumping concrete increased noise levels above background by a mean of 22.7 dB(A) at 30 m (98 ft) and 2.4 dB(A) at 80 m (262 ft). Additional sound level measurements were taken in the same general area on Sigma Mesa in 2005 as part of a BA for the operation of an asphalt batch plant (Hansen 2005). Measurements were taken on the north rim of Mortandad Canyon (south of the asphalt batch plant at distances of approximately 30 to 122 m (100 to 400 ft), at the bottom of Mortandad Canyon, approximately 183 to 244 m (600 to 800 ft) from the asphalt

batch plant, and on the south rim of Mortandad Canyon approximately 305 m (1,000 ft) from the asphalt batch plant. Background noise levels at the various locations ranged from 41.1 to 48.7 dB(A). The only locations with increases greater than 3 dB(A) during operation of the asphalt batch plant were the locations on the north rim of Mortandad Canyon, within 122 m (400 ft) of the asphalt batch plant. Noise from the operation of the asphalt batch plant was not detected in the bottom of Mortandad Canyon or on the south rim.

LANL biological resources SMEs took sound level measurements around the LANL Biosafety Level 3 (BSL-3) Laboratory with the heating, ventilation, and air conditioning (HVAC) system on and with it off (Hansen 2009). The area to the north of the BSL-3 is developed, the area to the south is not. Background noise levels north of the facility ranged from 53.6 to 57.6 dB(A). Background noise levels south of the facility ranged from 41.6 to 49.7 dB(A). Noise from the HVAC system was detected at 25 m (82 ft) from the facility on both sides, but was not detected at 81 m (266 ft) on the north side, or at 107 m (351 ft) on the south side.

Overall, these studies appear to show that areas adjacent to or within developed areas or paved roads are likely to have daytime average background noise levels between 45 and 63 dB(A). Less disturbed areas are likely to have average background noise levels between 37 and 50 dB(A).

2.2.3.5 Artificially Produced Light

There is no information available on the effects of artificially produced light on Mexican Spotted Owls. Under the Los Alamos County Code, commercial site development plans are reviewed to ensure that lighting serves the intended use of the site while minimizing adverse impacts to adjacent residential property (Section 16-276). Section 16-276 of the County Code includes light source measurement limitations by zoning district. The code allows off-site light to be 0.5 foot candles (fc) in residential areas. By comparison, full moonlight measures 0.1 fc, and a crescent moon was measured at 0.01 fc. Table A-2 in the Appendix presents preliminary light measurements in fc.

Preliminary surveys were conducted for light levels within Los Alamos Canyon at the Omega Reactor (Keller and Foxx 1997). The Omega Reactor was brightly lit for purposes of security; therefore, total light intensity was greater than the average street lighting. Measurements were conducted at a light pole with an open parking lot at the reactor as the source. Trees did not obscure the area. Using the relationship of light intensity reducing as a square of the distance, calculations using the field data indicated that at 30 m (98 ft) from the source the light levels would be equivalent or nearly equivalent to full moonlight.

3.0 AEI GENERAL DESCRIPTION FOR MEXICAN SPOTTED OWL

An AEI consists of two areas—a core and a buffer. The core of the habitat is defined as suitable canyon habitat from rim to rim and 100 m (328 ft) out from the top of the canyon rim. The buffer area is 400 m (1,312 ft) wide extending outward from the edge of the core area. Although adult Mexican Spotted Owls may be found within their home range anytime throughout the year, the primary threat from disturbance to the owls is during the breeding season when owl pairs are tied to their nest sites. Therefore, management of disturbance in Mexican Spotted Owl AEIs is concentrated on the breeding season.

3.1 Method for Identifying a Mexican Spotted Owl AEI

The original location of each Mexican Spotted Owl AEI was identified using a habitat model developed by Johnson (1998) that classified nesting and roosting habitat for Mexican Spotted Owls using topographic characteristics and vegetative diversity. LANL biological resources SMEs compared the results from the Johnson (1998) model to a different model identifying slopes >40 percent in mixed conifer and ponderosa pine cover types at LANL. Areas identified from the Johnson (1998) model application to LANL that were over five contiguous 30 × 30 m (97 × 98 ft) pixels in size, were above 1,980 m (6,496 ft) in elevation, and that had mixed conifer or ponderosa pine forest cover, were considered suitable Mexican Spotted Owl habitat. Where suitable habitat was identified, AEI core area boundaries were established to include the canyons and 100 m (328 ft) outward from the canyon rims.

A new Mexican Spotted Owl habitat model was developed and refined for application on LANL following the Cerro Grande wildfire (Hathcock and Haarmann 2008). This model incorporated finer-scale vegetation characteristics into the Mexican Spotted Owl habitat quality assessment. This model was used to redelineate the boundaries of the Mexican Spotted Owl AEIs at LANL in 2005 following wildfire, drought, and a regional bark beetle outbreak (USFWS consultation number 22420-2006-I-0010).

The new core boundaries were delineated with an area approximately 0.4 km (0.25 mi) from the edge of the nearest suitable habitat, up and down canyon. Core boundaries were established along readily recognizable geologic features or anthropogenic features in the terrain wherever possible to facilitate the ease of identification of core boundaries when in the field.

3.2 Location and Number of Mexican Spotted Owl AEIs

There are currently five Mexican Spotted Owl AEIs on LANL, each encompassing one or more canyons. In general, the AEI cores are centered in canyons on the western side of LANL. The canyons with AEIs are Cañon de Valle, Water, Pajarito, Los Alamos, Sandia, Mortandad, and Three-Mile. AEI boundaries are maintained in the LANL biological resources program GIS database.

4.0 AEI MANAGEMENT

4.1 Overview

This AEI management section provides guidelines for LANL operations to reduce or eliminate the threats to Mexican Spotted Owls from 1) habitat alterations that reduce habitat quality and 2) disturbance of breeding or potentially breeding owls. Habitat alterations are considered for all AEIs and for both core and buffer areas. Disturbance activities to owls are considered only for occupied AEIs and only for impacts on core areas. Developed areas (see Part I, Section 3.1) that have ongoing baseline levels of activities and are not suitable habitat for Mexican Spotted Owls have different restrictions than undeveloped core or buffer areas. Therefore, the location of the disturbance activity within the AEI, the occupancy status of the AEI, and the type of activity all affect whether or not the activity is allowable. AEIs for different species may overlap, and an activity must meet the guidelines of all applicable site plans to be allowable.

4.2 Definition and Role of Occupancy in AEI Management

Summary: The occupancy status of an AEI affects what disturbance activities are allowable in different areas (core, buffer, developed) of the AEI. All Mexican Spotted Owl AEIs are considered occupied during March 1 through August 31 or until surveys show the AEI to be unoccupied. See the Activity Table (Table 1, Section 4.5.2) for restrictions on occupied undeveloped core and buffer areas, and Part I, Section 3.1 for restrictions on developed areas.

Occupancy simply refers to whether or not an AEI is occupied during a species' period of sensitivity. For Mexican Spotted Owls, LANL is primarily concerned with protecting the owls from disturbance during the breeding season. Because individuals may colonize suitable habitat, all Mexican Spotted Owl AEIs are treated as though they are occupied from March 1 through August 31 or until surveys show an AEI to be unoccupied. Mexican Spotted Owl surveys are conducted from late March through June. In general, surveys in areas with ongoing or proposed projects are completed by May 15. If a nest is located during surveys, then the AEI can be treated as unoccupied except for the area within a 400 m (1,312 ft) radius of the nest site. Because owls are not as sensitive to disturbance during the non-breeding season, Mexican Spotted Owl AEIs are treated as unoccupied from September 1 to February 28.

The occupancy status of an AEI affects what activities are allowable in the AEI. Although activities causing habitat alterations are restricted in all AEIs, disturbance activities are restricted only in occupied AEIs. The Activity Table (Table 1, Section 4.5.2) provides dates and levels of allowable disturbance activities within occupied Mexican Spotted Owl AEIs under the guidelines of this site plan. Contact a LANL biological resources SME to find out the current occupancy status of an AEI (<http://int.lanl.gov/environment/bio/controls/index.shtml>).

4.3 Introduction to AEI Management Guidelines

Summary: The habitat alterations section and the activities section give the guidelines for habitat alteration and disturbance activities, respectively, for Mexican Spotted Owl AEIs. The flow chart (see Figure 1) provides a quick reference to determine what, if any, guidelines need to be consulted for a specific activity. Protective measures give management practices that should be applied when working or considering work in AEIs. LANL biological resources SMEs are available to answer questions and provide advice (<http://int.lanl.gov/environment/bio/controls/index.shtml>).

Sections 4.4 and 4.5 provide the guidelines for habitat alterations and allowable activities in AEI core and buffer areas. Section 4.4 describes what and where habitat alterations are allowed under the guidelines of this site plan. Section 4.5 describes what, when, and where disturbance activities are allowed in occupied AEIs under the guidelines of this site plan. If an activity does not meet the restrictions given in the guidelines, the activity must be individually reviewed for ESA compliance. This site plan only provides guidelines for Mexican Spotted Owl AEIs. If an activity is desired in an area with overlapping AEIs, all applicable site plans must be consulted. AEI maps show the location of all AEIs in an area. Section 4.6 describes management practices that should be applied when working or considering work in an AEI. LANL biological resources SMEs are available to answer questions and provide advice (<http://int.lanl.gov/environment/bio/controls/index.shtml>).

4.4 Definition of and Restrictions on Habitat Alterations

4.4.1 Definition of Habitat Alterations

Habitat alteration includes any action that alters the soil structure, vegetative components necessary to the species, prey quality and quantity, water quality, hydrology, or noise or light levels in undeveloped areas of an AEI. Long-term means the alteration lasts for more than one year. For physical disturbances, in general, any activity that can be accomplished by one person with a hand tool is generally not considered habitat alteration; any activity that requires mechanized equipment on a landscape is habitat alteration. An actual activity may take place outside of the AEI and will be considered habitat alteration if consequences of the activity have effects inside the AEI core.

The habitat components most important to Mexican Spotted Owls include vegetative structure, food quality and quantity, and disturbance levels, including noise and light. The forest structure within a canyon designated as a Mexican Spotted Owl AEI is important because it provides roost sites and a suitable habitat for nesting and foraging. Trees along the canyon rim are used for foraging and territorial calling, and they shelter the canyon interior from light and noise disturbances.

A long-term change in light or noise levels within the undeveloped core of an AEI is considered to be a habitat alteration if it increases average noise levels by ≥ 6 dB(A) during any portion of the 24-hour day, or it increases average light levels by ≥ 0.05 fc at night. Changes in noise and light levels are measured at the core area boundary if the source is outside the core area, or at 10 m (33 ft) from the source if the source is inside the undeveloped core area. Impacts of changes in developed areas on undeveloped cores are measured at the developed area boundary if it is within the core, or at the core area boundary if the developed area is outside of the core.

4.4.2 Fuels Management Practices to Reduce Wildfire Risk

The recovery plan for the Mexican Spotted Owl lists stand-replacing wildfires as a primary threat to their habitat and encourages land managers to reduce fuel levels and abate fire risks in ways compatible with owl presence on the landscape (USFWS 1995). Within undeveloped core areas, on slopes >40 percent, in the bottoms of steep canyons, and within 30 m (100 ft) of a canyon rim, thinning of trees <22 cm (9 in) diameter at breast height, treatment of fuels, and prescribed and natural prescribed fires are allowed. Exceptions allowing trees >22 cm (9 in) to be thinned within 30 m (100 ft) of buildings are granted to protect facilities. Large logs (>30 cm [11.8 in] midpoint diameter) and snags should be retained. Thinning within core areas not meeting the characteristics listed above, and in buffer areas, may include trees of any size to achieve 8 m (25 ft) spacing between tree crowns. However, clear cutting is not allowed in undeveloped core areas.

For health and safety reasons, any trees within 30 m (100 ft) of buildings, but outside a developed area, may be thinned to achieve 8 m (25 ft) spacing between crowns. Habitat alterations including thinning are not restricted in developed areas. However, LANL biological resources SMEs encourage the retention of trees and snags along canyon rims if the rim is in a developed area. Because of the extreme fire danger associated with firing sites and the potential impact of a fire on Mexican Spotted Owl habitat, firing sites and burn areas are treated separately for the purposes of fuels management. Trees within 380 m (1,246 ft) of firing sites and burn areas in both core and

buffer areas may be thinned to a 15 m (49 ft) spacing between trees everywhere except on slopes >40 percent or in the bottoms of steep canyons. Any tree over 22 cm (9 in) diameter at breast height within 380 m (1,246 ft) of a firing site may be delimbed to a height of 2 m (6 ft) to help prevent crown fires.

In historically occupied core areas, fuels treatment may not exceed 10 percent of the undeveloped core area and is not allowed within 400 m (1,312 ft) of nesting areas. In occupied core areas, forest management activities must take place during the nonbreeding season (September 1 to February 28) (USFWS 1995). Fuels management activities that are allowable in core areas have to be reported to LANL biological resources SMEs for tracking.

4.4.3 Utility Corridors

Habitat alterations such as cutting down trees that threaten power lines are allowed within 8 m (26 ft) of either side of an existing utility line in all areas of an AEI (Trujillo and Racinez 1995). New utility lines and utility lines requiring clearance of a right-of-way greater than 16 m (52 ft) total must be individually reviewed for ESA compliance. Disturbance activities must follow the guidelines given in the Activities Table (Table 1, Section 4.5.2) for occupied AEIs.

4.4.4 Restrictions on Habitat Alterations

Summary: Habitat alterations other than fuels management practices and utility corridor maintenance are not allowed in undeveloped core areas. Habitat alterations in buffer areas are restricted to 2 ha (5 ac) per project, with a maximum cap on development in the buffer for each AEI. Habitat alterations other than fuels management and utility corridor maintenance must be reported to LANL biological resources SMEs for tracking (<http://int.lanl.gov/environment/bio/controls/index.shtml>).

Habitat alterations other than the fuels management practices and utility corridor maintenance described above are not allowed in undeveloped core areas under the guidelines of this site plan. If a project or activity is planned that would alter habitat in an undeveloped core area, it must be individually evaluated for ESA compliance. Habitat alterations in undeveloped buffer areas other than the fuels management activities and utility corridor maintenance described above are restricted to 2 ha (5 ac) in area per project and are subject to other restrictions including light and noise effects in the core (see Section 2.2.3). Projects in the buffer over 2 ha (5 ac) in size will require individual ESA compliance review.

Habitat alterations in a buffer area other than the fuels management and utility corridor maintenance described above must be reported to LANL's biological resources SMEs for tracking (<http://int.lanl.gov/environment/bio/controls/index.shtml>). There is a cumulative maximum area that can be developed in each AEI's buffer. Once that cumulative area is reached, all habitat alterations in a buffer will require individual ESA reviews for compliance.

4.5 Definition of and Restrictions on Disturbance Activities

4.5.1 Definitions of Disturbance Activities

LANL biological resources SMEs considered six categories of activities that might cause disturbance in an AEI. Most of the categories were first identified in the document "Peregrine

Falcon Habitat Management in the National Forests of New Mexico,” prepared for the United States Forest Service (Johnson 1994). LANL biological resources SMEs added explosives detonation, other light production, and other noise production to provide the most comprehensive list of activities possible, thereby reducing the need for individual review of activities for ESA compliance. The categories of activities are people, vehicles, aircraft, other light production, other noise production, and explosives detonation. LANL biological resources SMEs have defined low, medium, and high levels of impact for these activities except for explosives detonation. Activity levels for explosives detonation have been designed to follow the guidelines agreed upon by LANL, DOE, and USFWS in the DARHT BA (Keller and Risberg 1995). Restrictions on explosives detonation are described in the definition of the activity, but are not included in the Activity Table (Table 1, Section 4.5.2). These six categories of activities are restricted only in AEIs that are classified as occupied.

People—includes any entry of people into an AEI on foot.

- Low impact is the presence of three or fewer people per project and duration of one day or less during a breeding season.
- Medium impact is the exceedance of either the number of people or the duration criteria.
- High impact is the exceedance of both the number of people and the duration criteria.

Vehicles—includes the entry of any two-axle highway vehicle, all-terrain vehicle, or motorized machinery into an AEI by any route other than a paved road or an improved gravel road.

- Low impact is the presence of two or fewer vehicles per project and duration of one day or less during a breeding season.
- Medium impact is the exceedance of either the number of vehicles or the duration criteria.
- High impact is the exceedance of both the number of vehicles and the duration criteria.

Aircraft—includes the operation of any aircraft below an elevation of 600 m (2,000 ft) above the highest ground level in the local vicinity.

- Low impact is the presence of one single-engine airplane and the duration of one day or less during a breeding season.
- Medium impact is the exceedance of either the number of aircraft or the duration criteria.
- High impact is the exceedance of both the number of aircraft and the duration criteria.

Any use of helicopters, jet airplanes, and propeller airplanes with two or more engines is classified as medium impact or above, depending on duration.

Other Light Production—includes any activity not previously listed that causes additional light to occur in an AEI core area. For example, plans for construction of a new building at the edge of a developed area may call for lighting at night to facilitate nighttime work that impacts an undeveloped core area.

- Low impact is the increase of light intensity by ≤ 0.05 fc and a duration of one night or less per project per breeding season.
- Medium impact is the exceedance of either the intensity or duration criteria.
- High impact is the exceedance of both the intensity and duration criteria.

Measurements for increases in light are taken at the AEI core area boundary closest to the light source if the source is outside the core and at 10 m (33 ft) from the source if the source is inside the core. Light measurements for developed areas are taken at the edge of the developed area if the developed area is within an AEI core or at the closest core boundary if the developed area is outside of an AEI core.

Other Noise Production—includes any activity not previously listed except for explosives detonation that causes additional noise to occur in an AEI. For example, operation of machinery creates noise.

- Low impact is increasing noise levels in an AEI core by 6 dB(A) or less for one day or less per project per breeding season.
- Medium impact is the exceedance of either the level or the duration criteria.
- High impact is the exceedance of both the level and the duration criteria.

Measurements for increases in noise are taken at the AEI core boundary closest to the noise source if the source is outside the core and at 10 m (33 ft) from the source if the source is inside the core. Noise measurements for developed areas are taken at the edge of the developed area if the developed area is within an AEI core or at the closest core boundary if the developed area is outside of an AEI core.

Explosives Detonation—includes the use of high explosives for any purpose. LANL biological resources SMEs did not define low, medium, and high levels of this activity because of the difficulty of determining levels for a shot before actually doing the shot. For the purpose of explosives detonation near Mexican Spotted Owl AEIs, occupied habitat is defined as the area within 400 m (1,312 ft) of the current year's nest/roost sites or the previous year's nest site if a current site has not been identified. No explosives detonation will take place within 400 m (1,312 ft) of nest/roost sites in occupied habitat between March 1 and August 31. Explosives detonation at night at sites within 400 to 800 m (1,312 to 2,624 ft) of a nest site in occupied habitat is restricted to once a month from March 1 and August 31. There are no restrictions on daytime explosives testing between 400 and 800 m (1,312 to 2,624 ft). There are no restrictions between September 1 and February 28 or in unoccupied habitat. Explosives detonation adjacent to AEIs that have not previously been recorded by LANL as occupied will have no restrictions unless surveys detect Mexican Spotted Owls. Explosives tests not allowed under the guidelines of this site plan must be individually reviewed for ESA compliance.

4.5.2 Activity Table

The dates shown in the Activity Table (Table 1) are the dates between which the activity in the row is restricted under the guidelines of this site plan. All AEIs are considered occupied from March 1 to August 31 or until surveys show an AEI to be unoccupied. If owls are detected, AEIs

are considered occupied until August 31 within 400 m (1,312 ft) of the nest site. Consult with LANL biological resources SMEs to find out occupancy status of AEIs and what locations are within 400 m (1,312 ft) of nest sites (<http://int.lanl.gov/environment/bio/controls/index.shtml>).

Table 1. Restrictions on Activities in Undeveloped Occupied Mexican Spotted Owl AEIs

	Core	Buffer
<i>People</i>		
Low	No Restrictions*	No Restrictions
Medium	March 1 to August 31	No Restrictions
High	March 1 to August 31	No Restrictions
<i>Vehicles</i>		
Low	No Restrictions	No Restrictions
Medium	March 1 to August 31	No Restrictions
High	March 1 to August 31	No Restrictions
<i>Aircraft</i>		
Low	March 1 to August 31	No Restrictions
Medium	March 1 to August 31	March 1 to May 15
High	March 1 to August 31	March 1 to August 31
<i>Other Light Production</i>		
Low	March 1 to August 31	No Restrictions**
Medium	March 1 to August 31	No Restrictions**
High	March 1 to August 31	No Restrictions**
<i>Other Noise Production</i>		
Low	March 1 to August 31	No Restrictions**
Medium	March 1 to August 31	No Restrictions**
High	March 1 to August 31	No Restrictions**
<i>Explosives Detonation (see text in Section 4.5.1)</i>		

*Entry is restricted in core areas that are occupied within 400 m (1,312 ft) of the nest site from March 1 to August 31. If the current nest has not been located, entry is restricted within 400 m (1,312 ft) of the previous year's nest site.

**Noise or light production in the buffer is restricted if the activity would violate core area restrictions on noise or light.

4.6 Protective Measures

Summary: This section provides a list of management practices to apply in Mexican Spotted Owl AEIs.

- Timing of projects must take into account that projects in core areas or projects that violate restrictions for occupied buffer areas must stop on February 28 each year until occupancy status of the AEI is determined.
- Every reasonable effort should be made to reduce the noise from explosives testing within 800 m (2,624 ft) of occupied habitat. Methods to reduce noise could include contained shots, noise shields in the direction of AEI cores, etc. For night shots, every reasonable effort should be made to limit the amount of light directed into AEI core areas.

- Put signs on dirt roads and trails leading into AEIs labeling them as restricted access areas and providing a number to contact for access restrictions.
- Keep disturbance and noise to a minimum.
- Avoid unnecessary disturbance to vegetation (e.g., excessive parking areas or equipment storage areas, off-road travel, materials storage areas, crossing of streams or washes).
- Avoid removal of vegetation along drainage systems and stream channels.
- Avoid all vegetation removals not absolutely necessary.
- Appropriate erosion and runoff controls should be employed to reduce soil loss. The controls must be put in place and periodically checked throughout the life of projects.
- All exposed soils must be revegetated as soon as feasible after construction to minimize erosion.
- In the Los Alamos Canyon AEI, development should be focused away from undeveloped areas on the western end of the AEI.

5.0 LEVELS OF DEVELOPMENT IN AEI CORE AND BUFFERS

5.1 Allowable Habitat Alteration in the Buffer Areas

The following quantifications of development and guidance for allowable habitat alteration in buffer areas were published and consulted on in the 1999 version of the HMP. Most AEIs changed in dimensions during the 2005 redelination of the habitats, and many have experienced additional development. Development in buffer habitat was not addressed during the 2005 consultation. Many projects were reviewed and received USFWS concurrence between 1999 and 2014.

LANL biological resources SMEs have provided the current development status for each of the AEIs at the end of each paragraph. The percent developed numbers were derived with the original size of the AEIs.

Cañon de Valle—In 1999, 16.3 ha (40.3 ac, 2.9 percent) of the core was developed and 52.2 ha (129 ac, 6.8 percent) of the DOE-controlled buffer was developed. For this AEI, it was recommended that only an additional 25.30 ha (62.5 ac) of the AEI buffer be developed. The 1999 HMP stated that once this cap is reached or a large-scale project is proposed, additional consultation with USFWS would be required. By 2011, 28 ha (69.2 ac) of the core and 84 ha (207.5 ac) of the buffer had been developed.

Pajarito—In 1999, there were 6.7 ha (16.5 ac, 5.5 percent) of the core developed and 75.1 ha (186.5 ac, 16.7 percent) developed in the buffer. LANL biological resources SMEs recommended only an additional 35 ha (86.4 ac) of the buffer be developed before additional USFWS consultations take place. The 1999 HMP stated that once the cap is reached or a single large-scale project is proposed, additional consultation would be required. By 2011, 27 ha (66.7 ac) of the core and 89 ha (220 ac) of the buffer had been developed.

Los Alamos—In 1999, there were 77.16 ha (190 ac) of the core developed and 167.2 ha (413.1 ac) developed in the buffer. For this AEI, LANL biological resources SMEs recommended only an

additional 28.6 ha (70.6 ac, 5.9 percent) of the DOE-owned buffer be developed before additional USFWS consultations take place.

Because this AEI is so heavily developed, additional development was restricted to a few selected areas within the buffer. Development outside of these areas requires individual review for ESA compliance. A large percentage of this AEI was removed in the 2005 and 2013 BAs. By 2011, 94 ha (232.2 ac) of the core and 181 ha (447.3 ac) of the buffer had been developed.

Sandia-Mortandad—In 1999, 98.4 ha (243.2 ac) of this AEI on DOE lands were developed, including 29 ha (71.7 ac, 10.7 percent) of the core and 75.1 ha (185.6 ac, 16.7 percent) of the buffer. For this AEI, LANL biological resources SMEs recommended only an additional 38.1 ha (94.1 ac) of the buffer be developed before additional USFWS consultations take place. Once this cap is reached or a single large-scale project is proposed, additional consultation will be required. By 2011, 45 ha (111.2 ac) of the core and 83 ha (205.1 ac) of the buffer had been developed.

Three Mile—In 1999, 25.3 ha (62.5 ac) of this AEI on DOE lands were developed, including 3.8 ha (9.4 ac, 2.8 percent) of the core and 21.5 ha (51.1 ac, 7.3 percent) of the buffer. For this AEI, LANL biological resources SMEs recommended only 64.3 ha (158.8 ac) additional area of buffer be developed before additional USFWS consultations take place. Once this cap is reached or a single large-scale project is proposed, additional consultation will be required. By 2011, 12 ha (29.6 ac) of the core and 37 ha (91.4 ac) of the buffer had been developed.

III. AREA OF ENVIRONMENTAL INTEREST SITE PLAN FOR THE SOUTHWESTERN WILLOW FLYCATCHER

1.0 SPECIES DESCRIPTION—SOUTHWESTERN WILLOW FLYCATCHER

1.1 Status

In 1995, the USFWS designated the Southwestern Willow Flycatcher as a federally endangered species (60 FR 10693). The USFWS most recently designated critical habitat for the Southwestern Willow Flycatcher in 2005 (70 FR 60885). The most recent recovery plan was published for Southwestern Willow Flycatcher in 2002 (USFWS 2002).

1.2 General Biology

The Southwestern Willow Flycatcher is one of four subspecies of the Willow Flycatcher. The historic range of the Southwestern Willow Flycatcher included Arizona, California, Colorado, New Mexico, Texas, Utah, and Mexico. Currently, this flycatcher breeds in riparian habitats from southern California to Arizona and New Mexico, plus southern Colorado, Utah, Nevada, and far western Texas. In winter it is found in southern Mexico, Central America, and northern South America (USFWS 2002).

Southwestern Willow Flycatchers are present in New Mexico from early May through mid-September and breed from late May through late July (Finch and Kelly 1999; USFWS 2002; Yong and Finch 1997). The flycatcher's nesting cycle is approximately 28 days. Three or four eggs are laid at one-day intervals, and incubation begins when the clutch is complete. The female incubates eggs for approximately 12 days, and the young fledge about 13 days after hatching.

Southwestern Willow Flycatchers typically raise one brood per year (USFWS 2002). Because arrival dates vary, northbound migrant Willow Flycatchers (of all subspecies) pass through areas where Southwestern Willow Flycatchers have already begun nesting. Similarly, southbound migrants (of all subspecies) in late July and August may occur where Southwestern Willow Flycatchers are still breeding. Therefore, it is only during a short period of the breeding season (approximately June 15 through July 20) that one can assume that a Willow Flycatcher seen within Southwestern Willow Flycatcher range is probably of that subspecies (USFWS 2002).

The Southwestern Willow Flycatcher only nests along rivers, streams, and other wetlands. It is found in close association with dense stands of willows (*Salix* spp.), arrowweed (*Pluchea* spp.), buttonbush (*Cephalanthus* spp.), tamarisk (*Tamarix* spp.), Russian olive (*Eleagnus angustifolia* L.), and other riparian vegetation, often with a scattered overstory of cottonwood (*Populus* spp.) (USFWS 2002). The size of vegetation patches or habitat mosaics used by Southwestern Willow Flycatchers varies considerably and ranges from as small as 0.8 ha (1.9 ac) to several hundred hectares (Hatten and Paradzick 2003). The Southwestern Willow Flycatcher nests in thickets of trees and shrubs approximately 2 to 15 m (6 to 49 ft) tall, with a high percentage of canopy cover and dense foliage from 0 to 4 m (0 to 13 ft) above ground. Regardless of the plant species composition or height, occupied sites always have dense vegetation in the patch interior (Allison et al. 2003; USFWS 2002).

The Southwestern Willow Flycatcher is an insectivore. It forages within and occasionally above dense riparian vegetation, taking insects on the wing and gleaning them from foliage. The flycatcher's prey includes flies, bees, wasps, ants, beetles, moths, butterflies, grasshoppers, crickets, dragonflies, damselflies, and spiders (Durst et al. 2008; Wiesenborn and Heydon 2007).

1.3 Threats

The current population of Southwestern Willow Flycatchers in the United States is estimated at 1,214 territories (Durst et al. 2006). The distribution of breeding groups is highly fragmented, with groups often separated by considerable distances. This subspecies has suffered declines attributed to extensive loss of its cottonwood-willow habitat and to poor productivity resulting from brood parasitism by Brown-headed Cowbirds (*Molothrus ater*) (USFWS 2002).

2.0 IMPACT OF HUMAN ACTIVITIES

2.1 Introduction

The primary threats to the Southwestern Willow Flycatcher on LANL property are 1) impacts on habitat quality from LANL operations and 2) disturbance of nesting flycatchers. This section includes a review and summary of the known effects of various types of human activities to the Southwestern Willow Flycatcher and an overview of the current levels of activities at LANL within species habitat.

2.2 Impacts on Habitat Quality

2.2.1 Development

Throughout the Southwest, riparian habitats are rare and tend to be small and separated by vast expanses of arid lands. The Southwestern Willow Flycatcher has experienced extensive loss and

modification of its habitat resulting from urban and agricultural development, water diversion and impoundment, channelization of waterways, livestock grazing, off-road vehicle and other recreational uses, and hydrological changes resulting from these and other land uses (USFWS 2002). River and stream impoundments, groundwater pumping, and overuse of riparian areas have altered as much as 90 percent of the Southwestern Willow Flycatcher's habitat (USFWS 2002). Loss of cottonwood-willow riparian forests has had widespread impact on the distribution and abundance of bird species associated with that forest. Development itself may be tolerated if the habitat is left intact.

Because watercourses at LANL tend to be intermittent to ephemeral, riparian habitat is uncommon. There has been extensive degradation of the riparian zone along the Rio Grande caused by feral cattle grazing and flood control operations of Cochiti Lake. There are other riparian/wetland areas on LANL associated with canyon bottoms, the most significant one being Pajarito wetlands in the lower end of Pajarito Canyon. A major paved road traverses the wetlands area in Pajarito Canyon.

2.2.2 Ecological Risk

There is no specific information on the impact of chemicals on Southwestern Willow Flycatcher.

2.2.2.1 Ecorisk Assessment

LANL completed two ecological risk assessments that included the Southwestern Willow Flycatcher between 1997 and 2009. The ecological risk assessment process involves using computer modeling to assess potential effects to animals from COPCs that have been detected in the environment. The ecological risk assessments concluded that, in general, there is a small potential for effects to Southwestern Willow Flycatcher from COPCs (Gonzales et al. 1998; Gonzales et al. 2009).

An ecotoxicological risk assessment for the Southwestern Willow Flycatcher, centered on the Pajarito wetlands, found that between 7 and 16 percent of 100 hypothetical nest sites examined had hazard indices >1.0 and <10.0 , depending on the foraging scenario (Gonzales et al. 1998). This indicates a small potential for impacts from chemicals. The primary chemicals driving the risk scenario were pentachlorophenol, aluminum, radium-226, calcium, and thorium-228. Aluminum, radium, and thorium are naturally occurring substances in northern New Mexico.

2.2.3 Disturbance

2.2.3.1 Pedestrians and Vehicles

There is no specific information on the reactions of Southwestern Willow Flycatchers to pedestrians and vehicles available. The recovery plan for the Southwestern Willow Flycatcher recommends providing protected areas, reducing unpredictable activities providing visual barriers, and reducing noise disturbance (USFWS 2002).

2.2.3.2 Aircraft

There is no specific information on the reaction of Southwestern Willow Flycatchers to aircraft available.

LANL lies within restricted airspace and planes infrequently fly less than 609 m (2,000 ft) above ground level. The County of Los Alamos operates an airport along the northern edge of LANL. The airport is located on the southern rim of Pueblo Canyon. Most flights approach and depart to the east of the airport, over the Rio Grande.

2.2.3.3 Explosives

There is no specific information on the reaction of Southwestern Willow Flycatchers to explosives detonation available. The Southwestern Willow Flycatcher AEI is not located close to any explosives testing sites at LANL.

2.2.3.4 Other Sources of Noise

LANL biological resources SMEs do not have good information on the effects of noise, including machinery operation, on Southwestern Willow Flycatchers. However, Southwestern Willow Flycatchers are probably not as sensitive to disturbance as some other threatened or endangered species (USFWS 2002). For a description of noise levels at LANL, see Part I, Section 2.2.3.

2.2.3.5 Artificially Produced Light

There is no information on the effects of artificially produced light on Southwestern Willow Flycatchers available. Under the Los Alamos County Code, commercial site development plans are reviewed to ensure that lighting serves the intended use of the site while minimizing adverse impacts to adjacent residential property (Section 16-276). Section 16-276 of the County Code includes light source measurement limitations by zoning district. The code allows off-site light to be 0.5 fc in residential areas. By comparison, full moonlight measures 0.1 fc, and a crescent moon was measured at 0.01 fc.

3.0 AEI GENERAL DESCRIPTION FOR SOUTHWESTERN WILLOW FLYCATCHER

The AEI consists of two types of areas—core and buffer. Core areas represent wetland areas with suitable vegetation for nesting, primarily dense willows. The buffer area is the area within 100 m (328 ft) of core areas. The Southwestern Willow Flycatcher AEI on LANL consists of two separate core areas. For purposes of this site plan, both core areas and associated buffers are considered one AEI unit.

3.1 Method for Identifying the Southwestern Willow Flycatcher AEI

The core areas were defined by the presence of riparian habitat and suitable wetland vegetation. These areas were identified in 1994 during a survey of wetlands at LANL and mapped using a global positioning system receiver. Wetlands without stands of dense willows at least 2 m (7 ft) tall and 30 m (98 ft) wide were not included in the AEI. The buffer area is the area within 100 m (328 ft) of the core areas.

3.2 Location of the Southwestern Willow Flycatcher AEI

LANL has one AEI for Southwestern Willow Flycatcher. It is composed of two core areas with associated buffers. The AEI core areas are located in the bottom of Pajarito Canyon, on the eastern side of LANL adjacent to Pajarito Road and State Road 4. The boundaries of the Southwestern

Willow Flycatcher AEI are maintained in the biological resources program GIS database at LANL.

4.0 AEI MANAGEMENT

4.1 Overview

This AEI management section provides guidelines for LANL operations to reduce or eliminate the threats to the Southwestern Willow Flycatcher from 1) habitat alterations that reduce habitat quality and 2) disturbance of breeding or potentially breeding flycatchers. Habitat alterations are considered for all AEIs and for both core and buffer areas. Disturbance activities to flycatchers are considered only for occupied AEIs and only for impacts on core areas. Developed areas (see Part I, Section 2.3) with ongoing baseline levels of activities and are not suitable habitat for Southwestern Willow Flycatchers have different restrictions than undeveloped core or buffer areas. Therefore, the location of the disturbance activity within the AEI, the occupancy status of the AEI, and the type of activity all affect whether or not the activity is allowable. AEIs for different species may overlap, and an activity must meet the guidelines of all applicable site plans to be allowable. Protective measures are described as management practices that should be followed when working in AEIs.

4.2 Definition and Role of Occupancy in AEI Management

Summary: The occupancy status of an AEI affects what disturbance activities are allowable in different areas (core, buffer, developed) of the AEI. The Southwestern Willow Flycatcher AEI is considered occupied during May 15 through September 15 or until the surveys show the AEI to be unoccupied. See the Activity Table (Table 2, Section 4.5.2) for restrictions on occupied undeveloped core and buffer areas, and Part I, Section 2.3 for restrictions on developed areas.

Occupancy simply refers to whether or not an AEI is occupied during a species' period of sensitivity. For Southwestern Willow Flycatchers, LANL biological resources SMEs are primarily concerned with protecting the birds from disturbance during the breeding season. Because individuals may colonize suitable habitat, the Southwestern Willow Flycatcher AEI is treated as though it is occupied from May 15 through September 15 or until surveys show an AEI to be unoccupied. Southwestern Willow Flycatcher surveys are conducted during May, June, and July. Because Southwestern Willow Flycatchers migrate south for the winter, the AEI is treated as unoccupied from September 16 to May 14.

The occupancy status of an AEI affects what activities are allowable in the AEI. Although activities causing habitat alterations are always restricted, disturbance activities are restricted only in occupied AEIs. Table 2 provides dates and levels of disturbance activities allowable in the occupied Southwestern Willow Flycatcher AEI under the guidelines of this site plan. The dates in Table 2 indicate the time period during which the activity is restricted. Contact a LANL biological resources SME to find out the current occupancy status of an AEI (<http://int.lanl.gov/environment/bio/controls/index.shtml>).

4.3 Introduction to AEI Management Guidelines

Summary: The habitat alterations section (Section 4.4) and the activities section (Section 4.5) gives the guidelines for habitat alteration and disturbance activities, respectively, for the

Southwestern Willow Flycatcher AEI. The flow chart (see Figure 1) provides a quick reference to determine what, if any, guidelines need to be consulted for a specific activity. Protective measures give management practices that should be applied when working or considering work in AEIs. LANL biological resources SMEs are available to answer questions and provide advice (<http://int.lanl.gov/environment/bio/controls/index.shtml>).

Sections 4.4 and 4.5 provide the guidelines for habitat alterations and allowable activities in AEI core and buffer areas. The flow chart (see Figure 1) provides a quick reference that should be used to determine whether a project or activity will affect an AEI and what sections of the site plan need to be consulted. The section on habitat alterations (Section 4.4) describes what and where habitat alterations are allowed under the guidelines of this site plan. The section and table on allowable activities (Section 4.5 and Table 2) describe what, when, and where disturbance activities are allowed in occupied AEIs under the guidelines of this site plan. If an activity does not meet the restrictions given in the guidelines, the activity must be individually reviewed for ESA compliance. This site plan only provides guidelines for the Southwestern Willow Flycatcher AEI. If an activity is desired in an area with overlapping AEIs, all applicable site plans must be consulted. Section 4.6 describes management practices that should be applied when working or considering work in an AEI. LANL biological resources SMEs are available to help interpret site plans and answer questions (<http://int.lanl.gov/environment/bio/controls/index.shtml>).

4.4 Definition of and Restrictions on Habitat Alterations

4.4.1 Definition of Habitat Alterations

Habitat alteration includes any action that alters over the long-term the soil structure, vegetative components necessary to the species, prey quality and quantity, water quality, hydrology, or noise or light levels in undeveloped areas of an AEI. Long-term means the alteration lasts for more than one year. Habitat alteration includes any activity that removes vegetative components important to the Southwestern Willow Flycatcher (primarily trees and shrubs). An actual activity may take place outside of the AEI and will be considered habitat alteration if consequences of the activity have effects inside the AEI core.

The habitat components most important to flycatchers include vegetative structure, food quality and quantity, and disturbance levels, including noise and light. The thickets of certain trees and shrubs along wetlands are important because they provide roost sites and a suitable habitat for nesting and foraging.

4.4.2 Fuels Management Practices to Reduce Wildfire Risk

Thinning within undeveloped buffer areas may include trees of any size to achieve 7.6 m (25 ft) spacing between tree crowns. However, clear cutting is not allowed in undeveloped buffer areas. No fuels management practices are allowed in core areas. Habitat alterations including thinning are not restricted in developed areas. All fuels management activities in developed and buffer areas must follow the guidelines in the Activity Table (Table 2, Section 4.5.2) if the AEI is occupied.

4.4.3 Utility Corridors

Habitat alterations such as cutting down trees that threaten power lines are allowed within 8 m (26 ft) of either side of an existing utility line in all areas of an AEI (Trujillo and Racine 1995).

New utility lines and utility lines requiring clearance of a right-of-way greater than 16 m (52 ft) total must be individually reviewed for ESA compliance. Disturbance activities must follow the guidelines given in the Activities Table for occupied AEIs.

4.4.4 Restrictions on Habitat Alterations

Summary: Habitat alterations other than the utility corridor maintenance described above are not allowed in undeveloped core areas under the guidelines of this site plan. Habitat alteration in buffers is limited. If a project or activity is planned that would alter habitat in an undeveloped core area, it must be individually evaluated for ESA compliance. Habitat alterations in a buffer area other than fuels management activities or utility corridor maintenance must be reported to a LANL biological resources SME for tracking (<http://int.lanl.gov/environment/bio/controls/index.shtml>).

4.5 Definition of and Restrictions on Disturbance Activities

4.5.1 Definition of Disturbance Activities

LANL biological resources SMEs considered five categories of activities that might cause disturbance in an AEI. Most of the categories were first identified in the document “Peregrine Falcon Habitat Management in the National Forests of New Mexico” prepared for the U.S. Forest Service (Johnson 1994). Other light production and other noise production were included to provide the most comprehensive list of activities possible, reducing the need for individual review of activities for ESA compliance. The categories of activities are people, vehicles, aircraft, other light production, and other noise production. The impact of explosives detonation on this species is not considered here because there are no explosives testing sites within 2 km (1.25 mi) of potential nesting habitat. Low, medium, and high levels of impact for these activities are considered here. The following categories of activities are restricted only in AEIs that are classified as occupied.

People—includes any entry of people into an AEI on foot.

- Low impact is the presence of three or fewer people per project and duration of one day or less during a breeding season.
- Medium impact is the exceedance of either the number of people or the duration criteria.
- High impact is the exceedance of both the number of people and the duration criteria.

Vehicles—includes the entry of any two-axle highway vehicle, all-terrain vehicle, or motorized machinery into an AEI by any route other than a paved road or an improved gravel road.

- Low impact is the presence of two or fewer vehicles per project and duration of one day or less during a breeding season.
- Medium impact is the exceedance of either the number of vehicles or the duration criteria.
- High impact is the exceedance of both the number of vehicles and the duration criteria.

Aircraft—includes the operation of any aircraft below an elevation of 600 m (2,000 ft) above the highest ground level in the local vicinity.

- Low impact is the presence of one single-engine airplane and duration of one day or less during a breeding season.
- Medium impact is the exceedance of either the number of aircraft or the duration criteria.
- High impact is the exceedance of both the number of aircraft and the duration criteria.

Any use of helicopters, jet airplanes, and propeller airplanes with two or more engines is classified as medium impact or above, depending on duration.

Other Light Production—includes any activity not previously listed that causes additional light to occur in an AEI core area (e.g., plans for construction of a new building at the edge of a developed area may call for lighting at night to facilitate nighttime work that impacts an undeveloped core area).

- Low impact is the increase of light intensity by up to 0.05 fc and a duration of one night or less per project per breeding season.
- Medium impact is the exceedance of either the intensity or duration criteria.
- High impact is the exceedance of both the intensity and duration criteria.

Measurements for increases in light are taken at the AEI core area boundary closest to the light source, if the source is outside the core, and at 10 m (33 ft) from the source if the source is inside the core. Light measurements for developed areas are taken at the edge of the developed area if the developed area is within an AEI core, or at the closest core boundary, if the developed area is outside of an AEI core.

Other Noise Production—includes any activity not previously listed except for explosives detonation that causes additional noise to occur in an AEI. For example, operation of machinery causes noise.

- Low impact is increasing noise levels in an AEI core by 6 dB(A) or less for one day or less per project per breeding season.
- Medium impact is the exceedance of either the level or the duration criteria.
- High impact is the exceedance of both the level and the duration criteria.

Measurements for increases in noise are taken at the AEI core boundary closest to the noise source if the source is outside the core, and at 10 m (33 ft) from the source if the source is inside the core. Noise measurements for developed areas are taken at the edge of the developed area if the developed area is within an AEI core, or at the closest core boundary if the developed area is outside of an AEI core.

4.5.2 Activity Table

Disturbance activities are of concern only when Southwestern Willow Flycatchers occupy an AEI. The AEI is always considered occupied between May 15 and September 15, or until surveys show the AEI to be unoccupied. The Southwestern Willow Flycatcher AEI is always considered unoccupied between September 16 and May 14, when flycatchers have migrated for the winter.

For occupancy status of an AEI after completion of surveys, contact a LANL biological resources SME (<http://int.lanl.gov/environment/bio/controls/index.shtml>).

Table 2. Restrictions on Activities in Undeveloped Occupied Southwestern Willow Flycatcher AEI

	Core	Buffer
<i>Restrictions on Occupied Habitat</i>		
<i>People</i>		
Low	No Restrictions	No Restrictions
Medium	May 15 to August 15	No Restrictions
High	May 15 to September 15	No Restrictions
<i>Vehicles</i>		
Low	May 15 to September 15	No Restrictions
Medium	May 15 to September 15	No Restrictions
High	May 15 to September 15	No Restrictions
<i>Aircraft</i>		
Low	No Restrictions	No Restrictions
Medium	May 15 to August 15	May 15 to August 15
High	May 15 to September 15	May 15 to August 15
<i>Other Light/Noise Production</i>		
Low	May 15 to September 15	No Restrictions*
Medium	May 15 to September 15	No Restrictions*
High	May 15 to September 15	No Restrictions*

*Noise or light production in the buffer is restricted if the activity would violate core area restriction on noise or light.

4.6 Protective Measures

Summary: This section provides a list of management practices to apply in the AEI.

- No wetland vegetation will be removed outside of developed areas.
- Appropriate erosion and runoff controls should be employed to reduce soil loss.
- Avoid unnecessary disturbance to vegetation (e.g., excessive parking areas or equipment storage areas, off-road travel, materials storage areas, crossing of streams or washes).
- Avoid removal of vegetation along drainage systems and stream channels.
- Avoid all vegetation removals not absolutely necessary.
- Appropriate erosion controls must be put in place and periodically checked throughout the life of any projects.
- All exposed soils must be revegetated as soon as feasible after disturbance to minimize erosion.

5.0 SOUTHWESTERN WILLOW FLYCATCHER AEI DESCRIPTION

5.1 Pajarito Canyon Southwestern Willow Flycatcher AEI

5.1.1 Allowable Habitat Alteration in the Buffer Area

Since the purpose of the buffer area is to help maintain the core area as suitable Southwestern Willow Flycatcher habitat, habitat alteration in the buffer area will be extremely limited. There are two areas in which restrictions on habitat alteration are relaxed.

1. The mesa top of Mesita del Buey. This mesa top can be developed as long as restrictions on impacts to the core area are met.
2. Pajarito Road within the AEI. Mowing of upland vegetation is allowed up to 5 m (15 ft) from Pajarito Road, or to the fence, if the fence is within 9 m (30 ft). Vegetation must cover the roadsides to prevent sediment runoff, so mowed plants should be at least 5 cm (2 in) high. LANL biological resources SMEs encourage the growth of willow throughout the AEI—even the area along Pajarito Road—to enhance habitat. If, within this area, it is absolutely necessary to remove new willow growth (i.e., to improve visibility for human safety), LANL biological resources SMEs recommend that only willows at or above the level of the roadway surface be mowed.

IV. AREA OF ENVIRONMENTAL INTEREST SITE PLAN FOR THE JEMEZ MOUNTAINS SALAMANDER

1.0 SPECIES DESCRIPTION—JEMEZ MOUNTAINS SALAMANDER

1.1 Status

The Jemez Mountains Salamander (*Plethodon neomexicanus*) was listed in New Mexico as endangered under the Wildlife Conservation Act of New Mexico in 2006 (NMDGF 2006). In September 2012 the USFWS proposed the Jemez Mountains Salamander as endangered under the ESA (FR 2012) and the final listing as endangered was on 10 September 2013 (FR 2013a)

1.2 General Biology

The Jemez Mountains Salamander is endemic to the Jemez Mountains of north-central New Mexico and is found in Los Alamos, Rio Arriba, and Sandoval counties (Stebbins and Rierner 1950). It is one of two endemic plethodontid salamanders that occur in New Mexico. It occurs predominantly at elevations between 2,130 to 3,430 m (6,988 to 11,254 ft) in mixed-conifer forest with greater than 50 percent canopy cover consisting mainly of Douglas fir (*Pseudotsuga menziesii* [Mirb.] Franco), blue spruce (*Picea pungens* Engelm.), Engelmann spruce (*Picea engelmannii* Parry ex Engelm.), white fir (*Abies concolor* [Gord. & Glend.] Lindl. ex Hildebr.), limber pine (*Pinus flexilis* James), ponderosa pine, and quaking aspen (*Populus tremuloides* Michx.). The ground surface in forest areas has (a) moderate to high volumes of large fallen trees and other woody debris, especially coniferous logs at least 25 cm (10 in) in diameter, particularly Douglas fir, which are in contact with the soil in varying stages of decay from freshly fallen to nearly fully decomposed; or (b) structural features, such as rocks, bark, and moss mats that provide

the species with food and cover. Underground habitat in forest or meadow areas contains interstitial spaces provided by (a) igneous rock with fractures or loose rocky soils, (b) rotted tree root channels, or (c) burrows of rodents or large invertebrates (Degenhardt et al. 1996; FR 2013b).

Plethodontid salamanders, which lack both lungs and gills, breathe through the mucous membranes in their mouth and throat and through their moist skin. The Jemez Mountains Salamander is completely terrestrial and does not use standing surface water for any life stage (FR 2012). Present in its habitat year-round, the Jemez Mountains Salamander spends most of its life underground, but can be found on the surface when conditions are warm and wet, approximately July through October. During this time, the Jemez Mountains Salamander can be found under rocks, bark, and moss mats and inside and under logs (Ramotnik 1986, Everett 2003). The Jemez Mountains Salamander eats invertebrates, including ants, mites, and beetles, and is thought to lay its eggs underground (FR 2013b).

1.3 Threats

Principal threats to habitat include historical fire exclusion and suppression and severe wildland fires; forest composition and structure conversions; post-fire rehabilitation; forest and fire management; roads, trails, and habitat fragmentation; recreation; and disease (FR 2012).

2.0 IMPACT OF HUMAN ACTIVITIES

2.1 Introduction

Primary threats to the Jemez Mountains Salamander on LANL property are impacts to habitat quality or destruction of individual salamanders caused by LANL or Los Alamos County operations. Forested LANL property is also subject to impacts from severe wildland fire and wildfire suppression.

2.2 Impacts on Habitat Quality

2.2.1 Development

Property at LANL varies from remote isolated land to heavily developed and/or industrialized. Most of the large developed areas at LANL are found on mesa tops, generally in the northern and western portion of LANL. The areas of Jemez Mountains Salamander habitat currently most impacted by development occur in Los Alamos Canyon. There is a secondary paved road (West Road) in the bottom of the canyon that exits the canyon on the north-facing slope through Jemez Mountains Salamander habitat. The canyon bottom also contains a recreational ice rink operated by Los Alamos County on an inholding owned by Los Alamos County. Development that reduces the occurrence of primary constituent elements of Jemez Mountains Salamander in core habitat would likely have a negative impact on the species.

2.2.2 Pedestrians and Vehicles

Many canyon bottoms and mesa tops at LANL have dirt roads traversing them. Most of these roads are gated; however, many of these roads are accessible to LANL employees and the public on foot or by bike. Some areas, such as Los Alamos Canyon, are frequently used by hikers and dog owners on active and historic trails which traverse the canyon, through Jemez Mountains

Salamander habitat in places. Maintenance of roads and trails in the habitat may have a negative impact on the species.

2.2.3 Severe Wildland Fire and Wildfire Suppression

Stand-replacing wildfires significantly change forest composition and structure, and reduce canopy cover. Even ground wildfires may reduce the volume of fallen logs and large woody debris. Large areas of historic Jemez Mountains Salamander habitat have been impacted by stand-replacing wildfires associated with current forest stocking conditions, drought, and high temperatures (FR 2012). Forested habitats on LANL are also subject to severe wildland fires. To mitigate wildfire risks, some areas of LANL have been treated for fuels reduction and creation of fuel breaks both pre-emptively and during active wildfire suppression. Both wildfires and wildfire suppression activities can negatively impact the primary constituent elements of Jemez Mountains Salamander core habitat.

2.3 Impacts on Individual Salamanders

2.3.1 Disease

The amphibian pathogenic fungus *Batrachochytrium dendrobatidis* (Bd) was found in a wild-caught Jemez Mountains Salamander in 2003 (Cummer et al. 2005) on the east side of the species' range and again in another Jemez Mountains Salamander in 2010 on the west side of the species' range (FR 2012). Bd causes the disease chytridiomycosis, whereby the Bd fungus attacks keratin in amphibians. In adult amphibians, keratin primarily occurs in the skin. The symptoms of chytridiomycosis can include sloughing of skin, lethargy, morbidity, and death. Chytridiomycosis has been linked with worldwide amphibian declines, die-offs, and extinctions, possibly in association with climate change (Pounds et al. 2006). Chytridiomycosis may be a threat to the Jemez Mountains Salamander because this disease is a threat to many other species of amphibians and the pathogen has been detected in the Jemez Mountains Salamander (FR 2012).

As part of a cooperative study with the New Mexico Department of Game and Fish between 2007 and 2013, various amphibian species including the canyon tree frog (*Hyla arenicolor*), western chorus frog (*Pseudacris triseriata*), Woodhouse's toad (*Anaxyrus woodhousii*), tiger salamander (*Ambystoma tigrinum*), and Jemez Mountains Salamander were tested for Bd infection at LANL. To date, all sampling has been negative for Bd infection (Fresquez et al. 2013).

2.3.2 Destruction of Individual Salamanders

During periods of the year when Jemez Mountains Salamander are on the soil surface, when conditions are warm and wet (generally July to October), they are vulnerable to injury and mortality from soil-disturbing activities, including operation of heavy equipment in core habitat. They also are at risk to be found and collected by people.

3.0 AEI GENERAL DESCRIPTION FOR JEMEZ MOUNTAINS SALAMANDER

The AEI consists of two areas, a core area and a buffer area. The core habitat is defined as suitable habitat where the Jemez Mountains Salamander occurs or may occur at LANL. The core habitat consists of sections of north-facing slope that contain the required micro-habitat to support Jemez

Mountains Salamander. The buffer area is 100 m (328 ft) wide extending outward from the edge of the core area.

3.1 Method for Identifying a Jemez Mountains Salamander AEI

The first step in identifying potential Jemez Mountains Salamander at LANL was to use a GIS to model habitat. Early modeling efforts by Hathcock (2008) identified areas of potential habitat and that model was further refined. The following parameters were modeled in the GIS:

- Elevation: 7,000 ft (2,150 m) and above
- Slope: Greater than 20 degrees
- Aspect: north-facing +/- 20 degrees
- Land cover: Mixed conifer
- Land use: Undeveloped
- Modeled habitat is only selected if it is greater than five contiguous 30 × 30 m (98 × 98 ft) pixels in size

Once this habitat layer was developed, a second layer was modeled that examined the level of shade in the habitat, also known as an illumination index. Since the Jemez Mountains Salamander needs cool moist conditions, an illumination index model would further highlight areas where this habitat type may occur or further reinforce the areas selected by the GIS modeling. The illumination index describes the amount and extent of solar radiation reaching the Earth's surface at a given point. This takes into account the topography that may cast shadows. The illumination model was developed using the 5 m (16 ft) resolution digital elevation model hillshade and using the Surface toolbox in ArcToolbox (Environmental Science Research Institute, Redlands, California) using the highest height of the sun on June 21 at 1:00 pm, altitude of 74.4 and Azimuth of 178.4, when the sun would be at its maximum height. These procedures were based on work done by Reilly et al. (2009).

Once this modeling was complete, LANL biological resources SMEs performed field validation to verify the suitability of the modeled habitat. The goal was to verify that mixed conifer was still the dominant cover class in the selected area. The GIS analysis used data from a landcover map created by McKown et al. (2003). There have been changes in habitat since this landcover map was published from fire and extreme drought effects. Since LANL is on the extreme edge of Jemez Mountains Salamander lower elevational range, a key component in this part of its range is soil moisture content. During field validation, evidence of a moist mixed conifer habitat versus a dry mixed conifer habitat was noted. One of the key indicators used to delimit areas of moist versus dry mixed conifer during the field validation was the presence of white fir (Evans et al. 2011) combined with a high canopy cover.

Field validation of the model occurred in May 2013, or decisions were based on earlier field visits to the sites from other projects. Each field validation consisted of LANL biological resources SMEs walking down all of the modeled habitat polygons to look for the presence of indicator features. If a polygon of modeled habitat contained white fir, indicating a moist wet conifer type habitat, a high canopy closure, and other signs of high habitat quality such as dead logs, moss or

other areas that could be used as cover by the Jemez Mountains Salamander, then the polygon was marked for retention in the final core habitat. Polygons that did not contain the necessary habitat requirements were omitted.

After the field validation was complete, the final core habitat boundaries that LANL would recognize were hand digitized using ArcGIS (Environmental Science Research Institute, Redlands, California) by LANL biological resources SMEs in and around the validated modeled polygon and areas between polygons if appropriate. The final identified core habitat at LANL occurs on the north-facing slopes of canyons. Toward the rim of the canyon the core boundaries end where the mixed conifer ends. In the canyon bottoms the core boundary extends to the edge of the stream channel. The upstream and downstream core boundaries end where the mixed conifer ends. A buffer habitat was extended around the core to a distance of 100 m (328 ft) outward. The LANL Fenton Hill satellite facility in the Jemez Mountains off of New Mexico Highway 126 is on land leased to DOE by the Santa Fe National Forest. The entire footprint is considered to be developed core habitat for the Jemez Mountains Salamander, since proposed critical habitat is adjacent to the facility.

3.2 Location and Number of Jemez Mountains Salamander AEIs

The identified Jemez Mountains Salamander core habitats were grouped by canyon system into AEIs, which contain contiguous and noncontiguous habitat areas. The largest contiguous section of habitat at LANL is in Los Alamos Canyon. There are two noncontiguous areas of habitat in Two-mile Canyon, four in Pajarito Canyon, one contiguous area in Cañon de Valle, and the entire Fenton Hill facility.

4.0 AEI MANAGEMENT

4.1 Overview

This AEI management section provides guidelines for LANL operations to reduce or eliminate the threats to the Jemez Mountains Salamander from habitat alterations that reduce habitat quality. Habitat alterations are considered for all AEIs and for both core and buffer areas. Developed areas that have ongoing baseline levels of activities and are not suitable habitat for Jemez Mountains Salamander have different restrictions than undeveloped core or buffer areas. AEIs for different species may overlap, and an activity must meet the guidelines of all applicable site plans to be allowable. Protective measures are described as management practices that should be followed when working in AEIs.

4.2 Definition and Role of Occupancy in AEI Management

Occupancy simply refers to whether or not an AEI is occupied by the Jemez Mountains Salamander. The Los Alamos Canyon AEI is known to be occupied based on past surveys. Surveys for the Jemez Mountains Salamander are known to have a very low detection rate for occupied areas, so at LANL all AEIs are assumed to be occupied at all times. If needed, site-specific surveys will be conducted by federally permitted LANL biological resources SMEs.

4.3 Definition and Role of Developed Areas in AEI Management

Developed areas include all building structures, paved roads, improved gravel roads, and paved and unpaved parking lots. The majority of Jemez Mountains Salamander core habitat is in undeveloped areas, except for the satellite facility at Fenton Hill and a small amount of habitat in Los Alamos Canyon where West Road crosses the habitat. Generally, developed areas will not have restrictions; however, some of the undeveloped sections within the footprint of Fenton Hill may have restrictions because they may contain Jemez Mountains Salamanders when they move to the surface between July and October. Any project that occurs within developed core habitat will be evaluated by LANL biological resources SMEs for ESA compliance.

4.4 General Description of Core and Buffer Areas and Allowable Area Development

The purpose of buffer areas is to protect core areas from habitat degradation. The current levels of development in buffer and core areas represent baseline conditions for this site plan. No further development is allowed in the core area under the guidelines of this site plan. Any development in a buffer area will be reviewed by LANL biological resources SMEs to ensure that there are no impacts to the core habitat.

4.5 Emergency Actions

If safety and/or property are immediately threatened by something occurring within an AEI (for example, wildfire, water line breakage, etc.) please contact a LANL biological resources SME (1-505-665-3366) as soon as possible. If the emergency occurs outside of regular business hours, contact the Emergency Management Office (1-505-667-6211). This office will then communicate with the appropriate LANL personnel.

4.6 Introduction to AEI Management Guidelines

Section 4.7 provides the guidelines for habitat alterations and allowable activities in AEI core and buffer areas. It describes what and where habitat alterations are allowed under the guidelines of this site plan. If an activity does not meet the restrictions given in the guidelines, the activity must be individually reviewed for ESA compliance. This site plan only provides guidelines for the Jemez Mountains Salamander AEIs. If an activity is desired in an area with overlapping AEIs, all applicable site plans must be consulted. AEI maps show the location of all AEIs in an area. LANL biological resources SMEs are always available to help interpret site plans and answer questions (<http://int.lanl.gov/environment/bio/controls/index.shtml>).

4.7 Definition of and Restrictions on Habitat Alterations

4.7.1 Definition of Habitat Alterations

Habitat alteration includes any action that alters the soil structure, vegetative components necessary to the species, water quality, or hydrology in undeveloped areas of an AEI. An actual activity may take place outside of the AEI and will be considered habitat alteration if consequences of the activity have effects inside the AEI core. Habitat alterations would also include soil pits for soil samples deeper than 15 cm (6 in) using either hand or mechanized augers. Any activity that might disturb the soil will need to be reviewed by LANL biological resources SMEs.

The habitat components most important to the Jemez Mountains Salamander include soil structure and vegetative structure. The forest structure within an area designated as a Jemez Mountains Salamander AEI is important because it provides the necessary moist, cool microclimate.

4.7.2 Fuels Management Practices to Reduce Wildfire Risk

One of the primary threats to the Jemez Mountains Salamander is wildfire (FR 2012), but they also require habitat with a high canopy cover which makes fuels reduction challenging. Within undeveloped core areas, thinning trees to a level of 80 percent canopy cover or higher is approved. Trees may not be thinned below 80 percent canopy cover without further ESA review by LANL biological resources SMEs. Large logs on the ground should be left in place and not chipped. Understory thinning that does not reduce total canopy cover below 80 percent is permitted. Large trees that are felled should be left as large logs on the ground. Smaller trees and understory shrubs that may be thinned should be dispersed and left on-site to aid in soil moisture retention. Thinning activities should not occur during the rainy season between July to October (or when freezing temperatures begin, whichever comes first) when the Jemez Mountains Salamander is found on the surface.

In buffer areas, thinning of trees can occur to the current LANL-approved prescription level (LAAO 2000). LANL biological resources SMEs are available to provide guidance and mark trees for thinning (<http://int.lanl.gov/environment/bio/controls/index.shtml>).

4.7.3 Utility Corridors

Habitat alterations such as cutting down trees that threaten power lines are allowed within 8 m (26 ft) of either side of an existing electrical utility line at LANL under existing guidelines and engineering controls (Hathcock 2013). This level is approved in all areas of an AEI. New utility lines and utility lines requiring clearance of a right-of-way greater than 16 m (52 ft) total in core habitat must be individually reviewed for ESA compliance.

4.7.4 Restrictions on Habitat Alterations

Habitat alterations other than the fuels management practices and utility corridor maintenance described above are not allowed in undeveloped core areas under the guidelines of this site plan. If a project or activity is planned that would alter habitat in an undeveloped core area, it must be individually evaluated for ESA compliance. Habitat alterations in buffer areas must be reviewed by LANL biological resources SMEs to ensure that there are no impacts to core habitat.

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APPENDIX

Table A-1. The percentage of each food type found in Mexican Spotted Owl food remains at LANL

Species	Relative Abundance
<i>Neotoma</i> spp.	26.22
<i>Peromyscus</i> spp.	10.22
<i>Microtus</i> spp.	4.44
Gophers	4.89
Bats	5.78
Chipmunks	0.89
Rabbits	12.89
Shrews	1.33
Small Mammal	1.33
Medium Mammal	1.78
Medium Bird	8.00
Small Bird	4.89
Nocturnal Birds	0.89
Reptiles	4.89
Arthropods	11.56

Table A-2. Preliminary light measurements in ftc for Mexican Spotted Owl site plan

		Distance from Source			
	Source (street light)	5 m	10 m	15 m	20 m
ftc	3.70	2.28	1.20	0.62	0.32

ATTACHMENT K: BIOLOGICAL ASSESSMENT



United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

December 9, 2013

Cons. #02ENNM00-2014-I-0014

Geoffrey L. Beausoleil, Acting Manager
National Nuclear Security Administration, Los Alamos Field Office
Department of Energy
Los Alamos, New Mexico 87544

Dear Mr. Beausoleil:

Thank you for your biological assessment entitled, "Biological Assessment of the Effects of Implementing the Jemez Mountains Salamander Site Plan on Federally Listed Threatened and Endangered Species at Los Alamos National Laboratory" (BA); the request for informal consultation and conferencing received on July 25, 2013 and supplemental information supplied in the "Jemez Mountains Salamander (*Plethodon neomexicanus*) Los Alamos National Laboratory (LANL) Site Plan" (Site Plan); and emails dated November 19 and December 3, 2013. The Department of Energy (DOE) requested concurrence with the determination of effects for the endangered Jemez Mountains salamander (*Plethodon neomexicanus*) (salamander) pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. § 1531 *et seq.*). Your proposed action consists of implementing the Site Plan, and includes of the incorporation of this Site Plan into LANL's Habitat Management Plan (HMP). The HMP was consulted upon in 1999 (Consultation #2-22-981-336) as the primary mechanism to ensure compliance with the ESA at LANL. The actions described in the Site Plan and analyzed in the BA, and supplemental emails are hereby incorporated by reference. You determined that implementing the Site Plan "may affect, is not likely to adversely affect" the salamander, and includes placing restrictions on certain types of work in areas identified as core habitat for the salamander on LANL property with the purpose of ensuring that effects to the salamander from those actions identified in the Site Plan are insignificant and discountable.

The Site Plan does not include any areas within designated salamander critical habitat, indicating that no critical habitat will be affected. The Site Plan has modeled and field validated the model to identify the areas on LANL property with the highest potential to be occupied by salamanders based on habitat features for the salamander. Each area identified by the modeling is termed "Area of Environmental Interest" (AEI) and consists of a "core area" and a "buffer area". The core area habitat is defined as suitable habitat where the salamander occurs or may occur at LANL. The core area habitat consists of sections of north-facing slope that contain the required

micro-habitat to support salamanders. The buffer area is 328 feet (100 meters) wide extending outward from the edge of the core area. Only the Los Alamos Canyon AEI is known to be occupied based on surveys. Surveys for the salamander are known to have a very low detection rate for occupied areas and DOE has assumed that all AEIs at LANL are occupied at all times by the salamander.

Within the Site Plan, DOE has assessed activities that could cause habitat alteration and includes any action that alters the soil structure, vegetative components necessary to the species, water quality, or hydrology in undeveloped areas of an AEI. If an activity were to take place outside of the AEI the activity will be assessed if it will have effects inside the AEI core. Within the core areas, only activities specified within the Site Plan and those that have no effect in the core areas (e.g. no habitat alterations or effects within the core areas) will be conducted without further consultation with the Service. Habitat alterations also include soil pits for soil samples deeper than 6 inches (15.2 centimeters) using either hand or mechanized augers. Within the Site Plan, DOE is proposing fuels management practices to reduce wildfire risk and maintenance of utility corridors within the AEIs. The likelihood that salamanders may be affected by the actions in the Site Plan is very low. To ensure that effects to the salamander are insignificant and discountable, the Site Plan incorporates the following conservation measures as restrictions to the identified work:

Fuels Management Practices to Reduce Wildfire Risk

- a. Within undeveloped core areas, thinning trees to a level of 80% canopy cover or higher may occur; tree thinning below 80% canopy cover is not part of the action under this consultation.
- b. Large logs on the ground will be left in place and not chipped.
- c. Large trees that are felled will be left as large logs on the ground
- d. When appropriate, smaller trees and understory shrubs that may be thinned will be dispersed and left on-site to aid in soil moisture retention.
- e. In buffer areas, thinning of trees may occur to the current LANL-approved prescription level; clear-cutting will not occur.
- f. Thinning activities will not occur during the rainy season when salamanders are surface active, between July 1 – October 31. Thinning activities may occur earlier in October if freezing temperatures are present.
- g. In the unlikely event that a salamander is observed surface active during thinning activities, all activities shall cease, and the Service will be notified.

Utility Corridors

- a. Cutting trees that threaten power lines may occur within 26 feet (8 meters) of either side of an existing utility line at LANL
- b. New utility lines and utility lines requiring clearance of a right-of-way greater than 52 feet (16 meters) total in core habitat is not part of the action under this consultation.

Habitat alterations other than the fuels management practices and utility corridor maintenance described above will not occur in undeveloped core areas under the guidelines of the Site Plan or this consultation. The Service concurs with DOE's determination regarding the salamander for the following reasons:

Within the Site Plan, DOE has placed the above detailed restrictions to ensure that any effects to the salamander and its habitat remain insignificant and discountable. Canopy cover will remain at 80% or greater in undeveloped core areas and fire management actions will occur outside of the salamander surface activity period. Maintaining utility line corridors in areas with existing infrastructure (the utility lines) by removing individual hazard trees is not expected to have any measurable effect on salamanders or their potential habitat. Consequently, we concur that potential effects to the salamander from the proposed action will be insignificant and discountable.

This concludes section 7 consultation regarding the proposed action. If monitoring or other information results in modification or the inability to complete all aspects of the proposed action, consultation should be reinitiated. Please contact the Service if: 1) future surveys detect listed, proposed or candidate species in habitats where they have not been previously observed; 2) the proposed action changes or new information reveals effects of the proposal to listed species that have not been considered in this analysis; or 3) a new species is listed or critical habitat designated that may be affected by the action.

Thank you for your concern for endangered and threatened species and New Mexico's wildlife habitats. In future correspondence regarding this project, please refer to consultation #02ENNM00-2014-I-0014. If you have any questions, please contact Michelle Christman of my staff at (505) 761-4715.

Sincerely,


Wally Murphy
Field Supervisor

cc:

Wildlife Biologist, Cuba Ranger District, Cuba, NM (Attn: Ramon Borrego)
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico

ATTACHMENT L: AUTHORIZED REPRESENTATIVES

*Associate Director for
Environmental Programs*
P.O. Box 1663, MS M991
Los Alamos, New Mexico 87545
(505) 606-2337/Fax (505) 665-1812

Date: JUL 17 2013
Refer To: EP2013-0147

07-17-13 P01:48 RCVD

Mr. Ron Curry, Regional Administrator
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Mail Code: 6RA
Dallas, TX 75202-2733

**Subject: Notification of Los Alamos National Security, LLC, Signatory Official and
Authorized Representatives for Los Alamos National Laboratory's National
Pollutant Discharge Elimination System Permit No. NM0030759**

Dear Mr. Curry:

The purpose of this letter is to inform the U.S. Environmental Protection Agency (EPA) Region 6 of a change in signatory authority for the operator of Los Alamos National Laboratory (the Laboratory). Los Alamos National Security, LLC (LANS) has been the Laboratory's management and operation contractor since June 1, 2006, and is a copermittee under the Laboratory's Individual Permit (National Pollutant Discharge Elimination System Permit No. NM0030759).

The Associate Director of the Environmental Programs Directorate (ADEP) is hereby identified as LANS's primary signatory official under 40 Code of Federal Regulations (CFR) 122.22(a) for certifying and signing permit applications and reports required under the Individual Permit. The position of Deputy Associate Director is further identified as a signatory official under 40 CFR 122.22(a) for the Individual Permit.

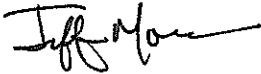
With respect to the Laboratory's Individual Permit, the following position is hereby designated as the authorized representative under 40 CFR 122.22(b) to sign reports required by the Permit and provide other information requested by EPA:

- Program Director responsible for the overall operation of the regulated facility or activity.

This letter supersedes and replaces the signatory authority letter dated March 2, 2009 (see Attachment 1) with respect to the Individual Permit only and is hereby submitted to notify EPA of the current authorized representative pursuant to 40 CFR 122.22(c).

Please contact Steve Veenis, Individual Permit Project Leader, at (505) 667-0013 (veenis@lanl.gov) should you have any questions.

Sincerely,



Jeff Mousseau, Associate Director
Environmental Programs
Los Alamos National Laboratory

JM/DM:sm

Attachment: Letter dated March 2, 2009

Cy: (w/att.)
Laurie King, EPA Region 6 (date-stamped letter emailed)
Diana McDonald, EPA, Region 6 (date-stamped letter emailed)
Isaac Chen, EPA, Region 6 (date-stamped letter emailed)
Brent Larsen, EPA, Region 6 (date-stamped letter emailed)
Bruce Yurdin, NMED-SWQB (date-stamped letter emailed)
Tom Blaine, NMED-Environmental Health (date-stamped letter emailed)
Steve Yanicak, NMED-DOE-OB, MS M894
Annette Russell, DOE-NA-00-LA (date-stamped letter emailed)
Gene Turner, NA-00-LA (date-stamped letter emailed)
David Rhodes, DOE-NA-00-LA (date-stamped letter emailed)
David Sosinski, LC-DO (date-stamped letter emailed)
Alison Dorries, ENV-DO (date-stamped letter emailed)
Anthony Grieggs, ENV-CP (date-stamped letter emailed)
Michael Saladen, ENV-CP (date-stamped letter emailed)
Terrill Lemke, ENV-CP (date-stamped letter emailed)
Deborah Woitte, LC-LESH (date-stamped letter emailed)
Brett Henrikson, LC-LESH (date-stamped letter emailed)
Alexander Purdue, LC-BL (date-stamped letter emailed)
Dave McInroy, ADEP-CAP (date-stamped letter emailed)
Jeff Mousseau, ADEP (date-stamped letter emailed)
ADESH (date-stamped letter emailed)
ENV-DO (date-stamped letter emailed)
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epccat@lanl.gov
Public Reading Room (hard copy)
RPF (electronic copy)



Associate Directorate for ESH&Q
P.O. Box 1663, Mail Stop K491
Los Alamos, New Mexico 87545
(505) 667-4218/Fax: (505) 665-3811

Date: March 2, 2009
Refer To: ESH&Q-09-009

Mr. Lawrence E. Starfield, Regional Administrator
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Dear Mr. Starfield:

**SUBJECT: DELEGATION OF "AUTHORIZED REPRESENTATIVE" FOR THE
CLEAN WATER ACT (CWA) AND NPDES STORM WATER PERMITS
AND INDUSTRIAL OUTFALL PERMIT BY LOS ALAMOS NATIONAL
SECURITY, LLC (LANS)**

The purpose of this letter is to inform the Environmental Protection Agency (EPA) Region 6 of a change in signatory authority for operator of Los Alamos National Laboratory (LANL). Los Alamos National Security, LLC (LANS) has been the Laboratory's management and operation contractor since June 1, 2006. This letter delegates authority as the LANS "authorized representative" for certifying and signing permits and documents required under the Clean Water Act and associated National Pollutant Discharge Elimination System (NPDES) storm water permits (Construction General Permit, Multi-Sector General Permit, LANL Individual Permit), and the NPDES Industrial Outfall Permit. This letter replaces the two LANS' delegation of "authorized representative" letters dated June 1, 2006 (ESH&Q: 06-001) and June 19, 2006 (ESH&Q: 06-002).

As the designated LANS signatory official for Clean Water Act and associated NPDES Permit Programs (please see Enclosure 1), I wish to further identify the position of Division Leader of the Laboratory's Environmental Protection Division (ENV-DO) as certifying official for NPDES standard permit requirements with the authority to certify, review, approve and/or sign as certifying official of all permit applications (e.g. Notice of Intent (NOIs) and Notice of Termination (NOTs)), permit modifications, registrations, certifications, reports and other information as required by EPA. The following is a detailed breakdown of this delegation of signatory authorities.

The following positions are hereby designated as authorized representatives to sign reports, plans, certifications, notices of changed conditions, discharge monitoring reports, and other information as required by the EPA:

NPDES Storm Water Construction General Permit

- Group Leader or Deputy Group Leader of the Laboratory's Water Quality & RCRA Group.
- Cognizant Project Manager, Project Leader, or Subcontractor Technical Representative for the regulated construction activity.
- Responsible Facility Operations Director (FOD), Deputy FOD, or Operations Manager responsible for the overall operation of the regulated facility or activity.

Multi-Sector General Permit & LANL Individual Permit

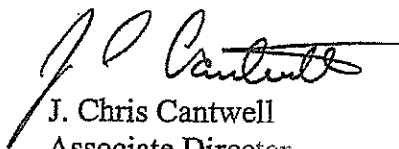
- Group Leader or Deputy Group Leader of the Laboratory's Water Quality & RCRA Group.
- Director, Deputy Director, or Group Leader of the Laboratory Division responsible for the overall operation of the regulated facility or activity.
- Responsible FOD, Deputy FOD or Operations Manager responsible for the overall operation of the regulated facility or activity.
- Program Director, Program Manager or Project Leader responsible for the overall operation of the regulated facility or activity.

NPDES Outfall Permit No. NM0028355

- Group Leader or Deputy Group Leader of the Laboratory's Water Quality & RCRA Group.
- Director or Deputy Director of the Laboratory Division responsible for the overall operation of the regulated facility or activity.

Please contact Tori George, Division Leader for Environmental Protection, at (505) 667-2211, if you have questions.

Sincerely,

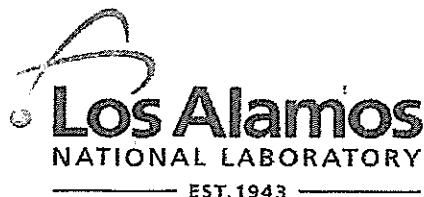


J. Chris Cantwell
Associate Director
Environment, Safety, Health and Quality

Enclosures: a/s

Cy: M. Flores, U.S. EPA, Region 6, Dallas, TX, w/enc.
C. Hosch, U.S. EPA, Region 6, Dallas, TX, w/enc.
W. Lane, U.S. EPA, Region 6, Dallas, TX, w/enc.
I. Chen, U.S. EPA, Region 6, Dallas, TX, w/enc.
B. Larsen, U.S. EPA, Region 6, Dallas, TX, w/enc.
G. Saums, NMED/SWQB, Santa Fe, NM, w/enc.
R. Powell, NMED/SWQB, Santa Fe, NM, w/enc.
D. Winchell, NNSA-LASO, w/enc., MS A316
G. Rael, NNSA-LASO, w/enc., MS A906
G. Turner, NNSA-LASO, w/enc., MS A316
D. Sosinski, LC-DO, MS A183
D. Woitte, LC-LESH, MS A187
P. Wardwell, LC-LESH, w/enc., MS A187
T. George, ENV-DO, w/enc., MS J978
T. Grieggs, ENV-RCRA, w/enc., MS K490
M. Saladen, ENV-RCRA, w/enc., MS K490
T. Lemke, ENV-RCRA, w/enc., MS K490
ESH&Q File, w/enc., MS K491
ENV-DO, File, w/enc., MS J978
ENV-RCRA, File, (09-024), w/enc., MS K490
IRM-RMMSO, w/enc., MS A150

(ENCLOSURE 1)



Office of the Director

March 4, 2009

J. Chris Cantwell
Associate Director
Environment, Safety, Health and Quality
Los Alamos National Security

Dear Mr. Cantwell:

SUBJECT: CONTRACT NUMBER: DE-AC52-06NA25396, DELEGATION OF AUTHORITY FOR PERMITS, AUTHORIZATIONS AND OTHER DOCUMENTS AS AN OPERATOR OR CO-OPERATOR UNDER ENVIRONMENTAL PERMITS FOR THE LOS ALAMOS NATIONAL LABORATORY

I, Michael R. Anastasio, Director of Los Alamos National Laboratory and President of Los Alamos National Security, LLC (LANS), the "Company," hereby delegate authority to you, J. Chris Cantwell, Associate Director, Environmental, Safety and Health and Quality (ADESH&Q), to execute on behalf of the Company permits, authorizations, or other documents necessary for the Company to become an operator or co-operator under the environmental permits for the Los Alamos National Laboratory, which permits are currently in the name of the Los Alamos National Security.

This delegation shall remain in effect while you are in the position of Associate Director, ADESH&Q or until revoked by me.

Sincerely,

Michael R. Anastasio
Director

Cy: I. E. Richardson III, DIR, A100
M. Mallory, PADOPS, A102
M. Graham, ADEP, M991
T. George, ENV-DO, J978
D. Sosinski, LC-DO, A183

D. Woitte, LC-LESH, A187
R. Madison, LANS, T009
M. Rafferty, PCM-DO, M722
IRM-RMMSO, A150
DIR-09-085

ATTACHMENT M: ENVIRONMENTAL REFERENCE/DOCUMENTS

EPC-CP-QP-048

Revision: 3



Effective Date: 10/05/2017

Next Review Date: 10/05/2020

Environment, Safety, and Health Directorate

Environmental Protection and Compliance—Compliance Programs

Quality Procedure

Processing MSGP Stormwater Samples

Document Owner/Subject Matter Expert:

Name:	Organization:	Signature:	Date:
Holly L. Wheeler	EPC-CP	Signature on File	10-4-17

Derivative Classifier: ☐ Unclassified or ☒ **DUSA ENVPRO**

Name:	Organization:	Signature:	Date:
Ellena Martinez	EPC-CP	Signature on File	10-3-17

Approval Signatures:

Subject Matter Expert:	Organization:	Signature:	Date:
Holly L. Wheeler	EPC-CP	Signature on File	10-4-17
Responsible Line Manager:	Organization:	Signature:	Date:
Terrill W. Lemke	EPC-CP Team Leader	Signature on File	10-5-17
Responsible Line Manager:	Organization:	Signature:	Date:
Michael Saladen	EPC-CP Group Leader, Acting	Signature on File	10-5-17

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*Users are responsible for ensuring they work to the latest approved version.
To document a required read, Login to UTrain, and go to the Advanced Search.*

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	Revision: 3	Effective Date: 10/05/2017

REVISION HISTORY

Document Number and Revision <i>[Include revision number, beginning with Revision 0]</i>	Effective Date <i>[Document Control Coordinator inserts effective date]</i>	Description of Changes <i>[List specific changes made since the previous revision]</i>
ENV-RCRA-QP-048, Rev. 0	07/2011	New document
ENV-CP-QP-048, Rev. 1	09/2013	Annual Review and Revision, new format, process change, and new organization name.
EPC-CP-QP-048, Rev. 2	06/05/2017	Review and Revision, new format, and new organization name, clarified steps, updated attachments.
EPC-CP-QP-048 R3	10/05/2017	Updated Sample Collection Log instructions, added step describing evidence of flow, and added section for addressing excess stormwater material.

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1.0 INTRODUCTION

Los Alamos National Security, LLC (LANS) through Environmental Protection and Compliance-Compliance Programs (EPC-CP) conducts stormwater monitoring activities required pursuant to the National Pollutant Discharge Elimination System (NPDES), Multi-Sector General Permit (MSGP) at Los Alamos National Laboratory (LANL). The MSGP requires LANL to monitor stormwater runoff from industrial sites relative to potential pollutants.

1.1 Purpose

This procedure describes the process for filtering, preserving and preparing stormwater samples for shipment to an analytical laboratory from monitored outfall locations.

1.2 Scope

This procedure applies to the EPC-CP technical staff and subcontractor personnel (as applicable) who conduct processing and chemical preservation of stormwater samples either in the TA-59-1 Stormwater Laboratory or in the field.

The MSGP Program Lead is the primary person responsible for developing and updating this procedure. EPC-CP personnel will be appointed with responsibility for a subset of sampling stations.

1.3 Applicability

Stormwater samples are collected in the field either with a refrigerated Avalanche® or ISCO 3700 automated sampler, single stage sampler or grab sample. When in-line filtration is not possible, sample filtration along with chemical preservation will be conducted immediately following sample retrieval in the field or in the EPC-CP Stormwater Laboratory (TA-59-01).

Sample collection, submission, and analysis is conducted using EPA and New Mexico Water Quality Control Commission guidelines. Monitoring samples are collected and analyzed according to test procedures approved under Title 40 of the Code of Federal Regulations (40 CFR) Part 136 unless other test procedures have been specified in the MSGP permit. Quantitation limits associated with these test procedures are sufficiently sensitive to meet MSGP permit limits.

2.0 PRECAUTIONS AND LIMITATIONS

Hazards in the work described in this procedure are controlled through site specific Integrated Work Documents (IWDs). The hazard level for the activities in this procedure is **moderate**.

Use only sample containers that are documented to meet or exceed "US EPA Specification and Guidance for Contaminant-Free Sample Container" (Publication 9240.05A, EPA/540/R-93/051, December 1992). Never clean or re-use sample containers. Keep containers in a clean, dry place until a sample is ready for processing and transfer to the appropriate container(s).

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3.0 PREREQUISITE ACTIONS

3.1 Planning and Coordination

Promptly schedule and complete all stormwater processing to meet the analytical holding time requirements identified in the MSGP Sampling and Analysis Plan or as requested by the MSGP Program Lead.

The MSGP Data Manager will generate Sample Collection Log/Field Chain of Custody (SCL) form(s) at the beginning of the MSGP monitoring season and/or the beginning of each MSGP monitoring quarter. The MSGP Data Manager will generate Chain of Custody/Analysis Request(s) from the Environmental Information Management (EIM) database as stormwater is collected. If the MSGP Data Manager is not available, forms may be obtained from the Sample Management Office (SMO).

3.2 Tools and Equipment

Ensure the following equipment is available:

- Safety glasses with side shields
- Nitrile gloves
- Lab coat
- Eyewash in Stormwater Lab (or portable eyewash in the field)
- Sample Collection Log/Field Chain of Custody Form
- Chain of Custody/Analysis Request
- Copy of the MSGP Sampling and Analysis Plan
- Sample containers (glass and poly bottles)
- Sample container lids
- Acid and base preservatives
- Clean silicon (e.g. Tygon) tubing
- Portable peristaltic pump (e.g. Geopump or equivalent)
- 0.45 micron and/or 0.10 micron cartridge filters (where applicable)
- Paper Towels
- Coolers with ice, Blue Ice[®], or equivalent
- Ball point pen
- Permanent marker
- Chain-of-custody seals/tape
- Copy of this procedure
- Copy of the Integrated Work Documents (IWDs)
- Cell phone (only government cell phones with batteries removed are allowed in secure areas)

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4.0 PROCESSING SAMPLES

In this procedure, sample collection bottles are the bottles in which the sample was collected in the field. Sample containers are containers into which the original sample may be transferred (as necessary) during processing and shipped to the analytical laboratory.

4.1 Preparation for Processing Samples

1. Don nitrile gloves, safety glasses with side shields, and lab coat. Long pants are required and no open toed shoes are allowed. Prior to processing samples, confirm eyewash is operational.
2. On the work bench arrange sample collection bottles in order from one MSGP sampling location according to the ISCO carousel number marked on the bottle.

CAUTION

Process only one sample set (i.e., samples listed on one Sample Collection Log/Field Chain of Custody form) at a time to ensure stormwater from different locations is not co-mingled.

3. Cross check the Location ID (e.g. MSGP00201) on the sample bottles with the requested analysis for that location on the SCL form (see example in Attachment 1).
4. Write the following information on the SCL:
 - Sampler Inspection and Sample Retrieval form (QP-047) identification number (e.g. Work Order: MSGP-xxxx)
 - Date and time the sample was collected in the field (e.g., date/time automated sampler filled sample bottles or a grab sample was taken)
 - pH measurement taken at the time the sample was collected in the field (as necessary)
 - Indicate if evidence of flow was recorded by writing "Y" for Yes or "N" for No
 - Indicate if a visual assessment was performed by writing "Y" for Yes or "N" for No
 - Visual Assessment form (QP-064) identification number (e.g., Visual WO#: MSGP-xxxx) if applicable
 - Date and time the visual assessment was performed if applicable
 - Printed name of person collecting the sample
 - Date and time the sample was RETRIEVED
5. Ensure the sample container type and chemical preservation type is correct for the analysis requested on the SCL (e.g., 500 ML POLY, HNO₃). Note any deviation from the planned sample container volume or type on the SCL.
6. Indicate if each sample on the SCL was collected by writing Y for Yes or N for No under "Collected Y/N".

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7. Determine which samples require filtration and chemical preservation as requested on the SCL. Refer to Sections 4.2 and 4.3 as needed. Requirements are also identified in the most current revision of the MSGP Sampling and Analysis Plan.
8. Mark on each container lid the 3-digit outfall ID, required analysis, filtration requirement, and preservative requirement."
9. Document any other deviations from "As Planned" conditions in the "As Collected" column on the SCL (e.g., change the Field Matrix code from rain (WT) to snowmelt (WM)).

4.2 Filtering Samples

Filter samples if specified on the SCL or if an in-line filter was not used during sample collection.

1. Don nitrile gloves and safety glasses with side shields. Long pants are required and no open toed shoes are allowed. Prior to filtering samples, confirm eyewash is operational.
2. Ensure the sample container volume and container type (e.g., 1 L GLASS) is correct for the analysis requested on the SCL. Note any deviation from the planned sample container volume or type on the SCL.
3. Select the appropriate sized cartridge filter (e.g., 0.10µm or 0.45µm).
4. Attach an appropriate amount of silicone tubing to both ends of the cartridge filter. Place the filter upstream of the peristaltic pump to prevent over-pressurization. If the sample contains a significant amount of sediment, a pre-filter of the same size or larger micron capacity may be used.
5. For split samples(filtered and unfiltered), turn the sample collection bottle upside down multiple times to ensure all sediment is loose from the bottom of the bottle and move the intake tube up and down through the sample during filtration. A sample collected solely for filtration can be filtered without being homogenized by shaking.
6. Replace the filter if flow diminishes, the pump begins to make a grinding sound, or the tubing is forced off the filter by back pressure.
7. Add a check mark next to the filtered requirement previously marked on the lid to indicate that filtration has been completed.
8. Clean and dry the exterior of sample container and check sample container for leakage and breakage.
9. If no further processing is required (e.g., chemical preservation), apply a chain-of-custody seal/tape around the bottle and lid and sign and date the seal/tape.
10. Remove filter and tubing when filtration of one sample set (location) has been completed. A new filter must be used with each new sample ID.

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4.3 Preserving Unfiltered and Filtered Samples

Preservation entails the addition of acid or base to a sample. Acids used include hydrochloric acid (HCl), nitric acid (HNO₃), and sulfuric acid (H₂SO₄). Bases used in preservation include sodium hydroxide (NaOH).

CAUTION

The preservatives are strong acids and bases that can cause severe burns. Extreme care should be taken when using these acids and bases. **Review the appropriate Material Safety Data Sheet or Safety Data Sheet for specific guidelines prior to preserving samples.**

1. Don nitrile gloves, safety glasses with side shields, and a lab coat. Long pants are required and no open toed shoes are allowed. Prior to chemically preserving samples, confirm eyewash is operational.
2. Ensure the sample container volume, type, and preservation type is correct for the analysis requested on the SCL or Sampling and Analysis Plan (e.g., 500 ML POLY, HNO₃). Note any deviation from the planned sample container volume or type on the SCL.
3. Select the pre-measured preservative size that matches the sample container size.
Note: If you only have one size pre-measured preservative that does not match the sample container size you may need to use more than one. For example, if you have a 1 liter sample container and 500 ml pre-measured preservative vial, you would need to add two preservative vials to the sample container.

Never "split" a larger volume pre-measured vial to preserve a smaller volume container (e.g., do not pipette from a 1 liter pre-measured preservative vial to preserve a 500 mL sample) as error in measurement precision may lead to a risk of violating Department of Transportation shipping requirements.
4. Add the preservative (acid or base) to the sample and securely affix the lid to the container.
5. Agitate the preserved sample by turning the container upside down two to three times.
6. Add a check mark next to the preservation type previously marked on the lid to indicate that preservation has been completed.
7. Clean and dry the exterior of sample container and check sample container for leakage and breakage.
8. Apply a chain-of-custody seal/tape around the bottle and lid and sign and date the seal/tape.

4.4 Handling Excess Stormwater

All efforts will be made to minimize the amount of stormwater sample brought into the TA-59-1 Stormwater Lab. Field personnel will attempt to retrieve only the volumes needed to fulfill the requested analyses from the current MSGP Sampling and Analysis Plan.

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If any excess stormwater sample exists after processing has been completed:

- Ensure the container is labeled with the site of origin, date and time sample was collected, and "Return to Site".
- Place the container in the designated storage location in the MSGP Stormwater Lab,
- Return the sample to the site of origin as soon as possible and discharge at the sampler location.

If the excess stormwater has been altered (e.g. tap water or preservative added) contact the Waste Management Coordinator for TA-59-1 for further instruction.

4.5 Submit Samples for Shipping to Offsite Analytical Laboratory

1. Deliver completed SCL(s) to the MSGP Data Manager.
2. The MSGP Data Manager will process the sample information in the EIM system, capturing any documented deviations from planned conditions (as noted on the SCLs), and generate Chain of Custody/Analysis Request (COC) form(s) and sample container labels to reflect the "as collected" samples (see examples in Attachments 2 and 3).
3. In the "Received By" section of the SCL, enter the COC number (e.g., 2017-XXXX).
4. Don nitrile gloves and safety glasses.
5. Ensure the sample containers are securely sealed and wiped dry.
6. Cross check that the Sample ID on the SCL matches the Field Sample ID on the COC.
7. Carefully compare the information from the SCL and lid of each container to apply the correct labels to the sample containers.
8. Place the sample(s) in the cooler with sufficient Blue Ice® (or equivalent) to maintain the required preservation temperature ($\leq 4^{\circ}\text{C}$). Cushioning material (e.g., bubble wrap) may be used to separate containers to avoid breakage during transport.
9. Place the SCL(s) and COC(s) in a zip lock type bag, seal, and place in the cooler with samples.
10. Transport samples to the Sample Management Office (SMO) using a government vehicle or approved subcontractor vehicle only. Samples may be delivered during SMO business hours, but must be delivered by 2pm for same day shipping. Coordinate with the SMO for delivery during other times or for delivery of samples that have limited holding times.

Note: If submitting samples to the SMO will be delayed, place sample containers with SCL(s) in the Stormwater Laboratory refrigerator and ensure the refrigerator is locked.
11. On the COC, the person submitting the sample(s) will print and sign their name, date, and record the time under "Relinquished By." The SMO personnel accepts the sample(s) by printing and signing their name, dating, and recording the time under "Received By."
12. Retain a copy of the signed Chain of Custody/Analysis Request.

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13. On the SCL, the person submitting the sample(s) will enter the data and time under "Relinquished By" that matches the data and time "Relinquished by" on the COC and write the COC/Lab Request# (e.g., 2017-xxxx) under "Received by."
14. Ensure the SMO makes a copy of the SCL(s) to accompany the COC and samples. Retain the original SCL(s) for the MSGP program.
15. Deliver the copy of the signed COC and original SCL(s) to the MSGP Data Manager.

5.0 TRAINING

The training method for this procedure is "self-study" (reading). The following personnel require training before implementing this procedure:

- EPC-CP technical staff and subcontract or other personnel who process stormwater samples for the MSGP.

Personnel performing this procedure will be familiar with the most current versions of the following procedures and operation manuals:

- EPC-CP MSGP Sampling and Analysis Plan for the current monitoring year
- EPC-CP-QP-047 Inspecting Stormwater Runoff Samplers and Retrieving Samples for the MSGP

6.0 RECORDS

Records generated by this document will be submitted to the ADESH Records Management designated point of contact or document manager in accordance with P1020-1, *Laboratory Records Management* and with ADESH-AP-006, *Records Management Plan*. Below is a list of records generated as a result of implementing this procedure.

- Sample Collection Log/Field Chain of Custody Form
- Copy of the Chain of Custody/Analysis Request
- Copy of log book entry(s) (if a log book is used)
- Other pertinent field or lab notes

7.0 DEFINITIONS AND ACRONYMS

7.1 Definitions

See LANL *Definition of Terms*.

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7.2 Acronyms

See LANL *Acronym Master List*.

40 CFR	Title 40 of the Code of Federal Regulations
COC	Chain of Custody/Analysis Request
EIM	Environmental Information Management
EPC-CP	Environmental Protection and Compliance – Compliance Programs
IWD	Integrated Work Document
LANL	Los Alamos National Laboratory
LANS	Los Alamos National Security, LLC
MSGP	Multi-Sector General Permit
NPDES	National Pollutant Discharge Elimination System
SCL	Sample Collection Log/Field Chain of Custody
SMO	Sample Management Office

8.0 REFERENCES

None

9.0 ATTACHMENTS

Attachment 1: Sample Collection Log/Field Chain of Custody Example

Attachment 2: Sample Container Labels Example

Attachment 3: Chain of Custody/Analysis Request Example

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ATTACHMENT 1: SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY EXAMPLE

Page 1 of 1

Los Alamos National Laboratory

MSGP Quarter 3

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 11198

EVENT NAME: MSGP 2017

SAMPLE ID: MSGP-17-131989

WORK ORDER: MSGP-59823

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):		<u>4/01/17</u>	FIELD MATRIX:	WT	
TIME COLLECTED (HH:MM):		<u>16:03</u>	MEDIA:		
PRS ID:		<u>1</u>	SAMPLE TECH CODE:	APS	
LOCATION ID:	MSGP05301		FIELD PREP:	UF	
LOCATION TYPE:			FIELD QC TYPE:	REG	
TOP DEPTH:			SAMPLE USAGE:	COMP	
BOTTOM DEPTH:			EXCAVATED:		YES / NO / <u>NA</u>

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	MSGP-CN(TOTAL)	500 ML POLY	1	NAOH	<u>Y</u>	
	MSGP-COD+NH3	500 ML POLY	1	H2SO4 ICE	<u>Y</u>	
	MSGP-Mg+Se+Hg	500 ML POLY	1	HNO3 ICE	<u>Y</u>	

SAMPLE COMMENTS:

LOCATION COMMENTS:

FIELD PARAMETERS:

pH 6.7 Flow (Evidence) Y Visual Inspection Y SU Visual WO# MSGP-58866 Visual performed Date/Time 4/3/17 14:36

COLLECTED BY (PRINT): Jane Doe Retrieved 4/3/17 14:36

RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
		<u>See COC</u> <u>2017-1326</u>	<u>4/12/17</u> <u>15:10</u>
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 07/21/2017

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ATTACHMENT 2: SAMPLE CONTAINER LABELS EXAMPLE

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Los Alamos National Laboratory	
Sample ID: MSGP-17-131786	
Container: 500 ML POLY	1 of 1
Preservative: HNO3 ICE	
Analysis: NPDES-AI-Total Recoverable	
Date: 04/01/2017	Time: 16:03

Los Alamos National Laboratory	
Sample ID: MSGP-17-131787	
Container: 500 ML POLY	1 of 1
Preservative: HNO3 ICE	
Analysis: NPDES-AI-Total Recoverable	
Date: 04/01/2017	Time: 16:03

[illegible]

EPC-DO-QP-101Revision: **3**

Effective Date: 08/07/2017

Next Review Date: 08/07/2020

Environment, Safety, and Health Directorate**Environmental Protection and Compliance Division – Compliance Programs****Quality Procedure****Environmental Reporting Requirements for Releases or Events****Document Owner/Subject Matter Expert:**

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REVISION HISTORY

Document Number and Revision <i>[Include revision number, beginning with Revision 0]</i>	Effective Date <i>[Document Control Coordinator inserts effective date]</i>	Description of Changes <i>[List specific changes made since the previous revision]</i>
0	02/09	New document
1	4/10	Revision and update
ENV-DO-QP-101 R2	6/12	Biennial Review/Revision, new template implemented.
EPC-DO-QP-101 R3	08/07/17	Revision and update. This document replaces ENV-DO-QP-101 R2. New document number reflects organizational name change.

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1.0 INTRODUCTION

This Environmental Protection and Compliance Division (EPC-DO) procedure describes how to determine whether an unplanned release, spill, fire, or other event needs to be reported under environmental regulations and how to fulfill all immediate reporting requirements (within the first 24 hours). Emergency and abnormal event notification requirements for reporting to Laboratory and DOE management are specified in [PD1200, Emergency Management](#), and [P322-4, Performance Improvement from Abnormal Events](#). Environmental reporting requirements regarding releases or other events are included in this procedure.

1.1 Purpose

This procedure describes the actions that must be performed within the first 24 hours of the release. This procedure does **not** cover the response procedures for “continuous releases” under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Emergency Planning and Community Right-to-Know Act (EPCRA) (see definitions) nor the follow-up notifications and reports.

1.2 Applicability

This procedure applies to EPC-DO on-call representatives and subject matter experts (SMEs) who must respond to any release, spill, or event at the Laboratory that may require immediate notification to local, state or federal regulatory agencies. For notifications to Pueblo Environmental Departments refer to [ENV-DO-QP-111, Reporting Environmental Releases to Pueblo Governments](#).

2.0 PRECAUTIONS AND LIMITATIONS

The work described in this procedure includes field work that does not require an Integrated Work Document (IWD) and is rated as having a **LOW hazard** level.

3.0 RESPONSIBILITIES

The following personnel require training before implementing this procedure:

- EPC managers, designated on-call representatives, and SMEs who may be asked to fulfill immediate reporting requirements during release-related exercises or during actual releases

Annual retraining to this procedure is required. This procedure will be reviewed biennially by all affected personnel and updated as necessary.

Training to this procedure will be by “self-study” (reading) and is documented in accordance with the trainee’s organization’s procedure for training.

Actions specified within this procedure, unless preceded with “should” or “may”, are to be considered mandatory (i.e., “shall”, “will”, “must”).

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4.0 WORK PROCESSES

Events covered by this procedure include detonation or burns of unstable material, leaking or compromised gas cylinders, puncturing of bulging containers, fires, explosions, chemical or radiological spills, wastewater spills, potable water discharges, and other unplanned releases at the Laboratory.

On a semi-annual basis, EPC-DO will prepare a list of individuals designated as on-call representatives and will designate the week each will be on-call. This list will be distributed to on-call representatives and Laboratory managers including Principal Associate Directorate for Operations (PADOPS), Associate Directorate for Environment, Safety, and Health (ADESH), Associate Directorate for Environmental Management (ADEM), Emergency Operations (SEO-DO), EPC-DO, Environmental Protection and Compliance Division Compliance Programs Group (EPC-CP), and Environmental Protection and Compliance Division Environmental Stewardship Group (EPC-ES). The on-call representative can be reached by pager at 505-664-7722.

4.1 Responsibility of On-Call Representative

The EPC on-call representative is the party primarily responsible for:

- determining if the incident will require immediate notification to external agencies in accordance with LANL, state, and federal regulatory reporting requirements
- notifying EPC Division management of immediate reporting requirements
- if needed, coordinating with other on-call SMEs and the Emergency Operations Center (EOC) to ensure the required notifications for environmental reporting and abnormal events are being addressed for the Laboratory

The EPC on-call representative is not responsible for the following and EOC will make these determinations:

- determining if the Resource Conservation Recovery Act (RCRA) Contingency Plan must be implemented
- if a shock-sensitive material or leaking or compromised gas cylinder constitutes an emergency

However, in order to ensure that the appropriate expertise is available for the affected media, the EPC on-call representative may immediately confer with an SME of the EPC group that has programmatic responsibility. If an SME from the responsible group is able to respond to the event, the remaining steps in this procedure may be passed to that person.

A list of contact numbers for on-call representatives and SMEs for EPC-CP and EPC-ES groups is available in the EPC-CP group office. The EPC-DO and SEO-DO may also be contacted to determine the on-call representative for each group.

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4.2 Follow-Up Reporting

This procedure describes the initial external notifications (within the first 24 hours) to regulatory agencies. After completion of the steps in this procedure, the EPC group specifically responsible for compliance with the relevant regulations will complete the required notifications and reports, as applicable under the appropriate regulations, according to established procedures.

4.3 Summary of Policy Reporting

The EPC on-call representative and spill response SMEs have the authority and responsibility for deciding when to report an event and for making notifications to regulatory agencies within the applicable regulatory deadlines.

LANL management and Department of Energy Los Alamos Field Office (DOE LAFO) must be informed as soon as possible that a report was or will be made, but their approval is not required prior to the report being made to the regulatory agency. LANL management, with input from EPC SMEs, will determine if an ORPS (Occurrence Reporting Processing System) report or other type of Lessons Learned will be necessary.

NOTE: SEO-DO maintains a current list of on-call LANL managers.

4.4 Using this Procedure

This procedure has seven separate paths (and corresponding sections) to follow for determining if a release or event is reportable. Follow each of these paths to determine if one or more are applicable:

- Resource Conservation and Recovery Act (RCRA)
- Toxic Substances Control Act (TSCA)
- Clean Water Act (CWA), New Mexico Water Quality Act (NMWQA), and New Mexico Water Quality Control Commission (NMWQCC) Regulations
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Emergency Planning and Community Right-to-Know Act (EPCRA)
- Clean Air Act
- Endangered Species Act
- Bald and Golden Eagle Protection Act
- Migratory Bird Treaty Act
- New Mexico Wildlife Conservation Act
- National Environmental Policy Act
- National Historic Preservation Act
- Native American Graves Protection and Repatriation Act

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- Archaeological Resources Protection Act

Each release needs to be evaluated for all potential reporting requirements. For example, a Reportable Quantity (RQ), defined under CERCLA or EPCRA may not be met, **but the release may be reportable** under RCRA, New Mexico Water Quality Control Commission (NMWQCC), and/or Clean Water Act (CWA) requirements.

NOTE: The 24-hour deadline (immediate in some cases) applies regardless of whether it occurs during business hours, after business hours or on non-business days.

4.5 Determining if a Release is Reportable under RCRA

Follow the flow chart in Attachment 1 to determine if an event is reportable under RCRA regulations.

Under the RCRA permit requirements, the SEO-DO manager determines if the “RCRA Contingency Plan” provisions should be implemented. The EPC on-call representative or an EPC-CP SME performs notifications that may be required.

The SEO-DO Manager will normally attempt to contact the EPC-CP SME for guidance in making this decision. If the EPC-CP SME is successfully contacted, the completion of the remainder of this procedure may be passed on to this individual.

The EPC on-call representative makes the determination that one or more of these conditions occurred through consultation with EPC-CP and appropriate SMEs. 24-hour notification can be made by the EPC on-call representative or by an EPC SME.

The Emergency Operations Center (EOC) manager makes the determination that unstable chemicals, leaking or compromised gas cylinders represent an emergency situation and, typically with EPC-CP, how best to respond. 24-hour notification can be made by the on-call representative or EPC-CP SME.

If a release/event is reportable under RCRA rules, determine if the release/event is reportable under other rules and proceed to the Section 4.10 *Reporting a Release or Event*.

4.6 Determining if a Release is Reportable under TSCA

In practice, only spills of Polychlorinated Biphenyls (PCBs) or PCB-suspect untested mineral oil to the environment (generally outdoors or with the potential to reach the outdoors) are reportable. Spills that are contained indoors are generally not reported.

A discharge of PCBs is reportable to the Environmental Protection Agency (EPA) under TSCA if 1 pound of PCBs by weight is released [40 Code of Federal Regulations (CFR) 761.125(a)(1)]. Notify the EPA regional office and proceed with the immediate clean up requirements noted in 40 CFR 761.125(a)(1) in the shortest possible time after discovery, but in no case later than 24 hours after discovery. Additionally, reporting requirements are triggered if over 270 gallons of untested mineral oil suspected of containing PCBs has been spilled.

Follow the steps in *Determining if a Release is Reportable under CERCLA, EPCRA, or Other Regulations* to determine if the RQ for PCBs has also been exceeded.

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There are six items containing PCBs that are out of service at the Chemistry and Metallurgy Research (CMR) Building. All other known PCB equipment at the Laboratory has been taken out of service and disposed of in accordance with TSCA regulations.

If a release is reportable under TSCA, continue through the next sections to determine if the release/event is reportable under other rules and proceed to *Reporting a Release or Event* and determine if additional reporting is necessary.

If the spill is ...	Then...
equal to or over 1 pound by weight of PCBs (TSCA) or greater than 270 gallons of untested mineral oil suspected of containing PCBs	Report to the National Response Center (1-800-242-8802) immediately (within 15 minutes of discovery). Additionally, contact EPA Region 6 (Office of Prevention, Pesticides and Toxic Substances Branch) through EPA's 24-hour spill response number 866-372-7745 as soon as possible after discovery but no later than 24 hours after discovery.

4.7 Determining if a Release is Reportable under the NM Water Quality Act or the CWA

20.6.2.1203 New Mexico Administrative Code (NMAC) Reporting

The NM Water Quality Act (NMWQA) does not use Reportable Quantities (as described in the next section). Instead the NM Water Quality Control Commission (NMWQCC) regulations state: *"With respect to any discharge from any facility of oil or other water contaminant, in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property, notifications (to the New Mexico Environment Department (NMED)) and corrective actions are required."*

The above rule requires the use of professional judgment to determine if reporting is required. No quantifiable metric is available to assist in making this determination. The EPC on-call representative or SME has the authority and responsibility to make this determination.

Additionally, unplanned releases of potable water or steam condensate require reporting pursuant to 20.6.2.1203 NMAC if the release is greater than 5,000 gallons, reaches a watercourse, or if the release adversely impacts a Solid Waste Management Unit (SWMU) or Area of Concern (AOC) as directed in the LANL Liquid Discharge Reporting Guidance (Decision Tree), dated March 10, 2009. Contact ADEM to confirm the location and potential impacts to SWMUs or AOCs from any releases that may occur.

Groundwater Discharge Permit Reporting

The Laboratory has four current Groundwater Discharge Permits (DPs) that include notification and reporting requirements in the event of an unpermitted discharge. Spills of **any volume** associated with any of the Groundwater DPs require reporting to NMED pursuant to 20.6.2.1203 NMAC.

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1. DP-857: Sanitary Waste Water System (SWWS) Plant, Sanitary Effluent Reclamation Facility (SERF), and Sigma Mesa Evaporation Basins. Permit Condition No. 44.

The unauthorized release of untreated and treated sanitary wastewater, reuse wastewater, blended wastewater, and reject wastewater would be subject to reporting under Condition No. 44.

2. DP-1589: Septic Tank/Disposal Systems. Permit Condition No. 23.

The unauthorized release of untreated wastewater, septage, treated wastewater surfacing from failing disposal systems (leach fields), and treated wastewater surfacing from overflowing septic tanks would be subject to reporting under Condition No. 23.

3. DP-1793: Land Application of Treated Groundwater. Permit Condition No. 17.

The unauthorized release of untreated or treated groundwater that does not constitute land application, as defined in [EPC-CP-QP-010: Land Application of Groundwater](#), would be subject to reporting under Condition No. 17.

4. DP-1835: Injection of Treated Groundwater to Class V Underground Injection Control (UIC) Wells. Permit Condition No. 22.

The unauthorized release of treated or untreated groundwater that does not constitute injection into a Class V UIC well, as defined in Discharge Permit DP-1835, would be subject to reporting under Condition No. 22.

Clean Water Act Reporting

Oil discharges (film/sheen/discoloration) to water in stream channels must also be reported to the National Response Center (NRC) immediately (within 15 minutes of discovery) pursuant to 40 CFR §110.6.

National Pollutant Discharge Elimination System (NPDES) Outfall Reporting

The EPC-DO on-call SME must provide notification to the NPDES Outfall Permit Program Lead and/or the EPC-CP Water Quality Team Leader in the event of a leak or unplanned release from an NPDES permitted outfall upon discovery in order to meet applicable reporting requirements.

4.7.1 Reporting Requirement for Petroleum Storage Tanks

As defined in 20.5.7 NMAC, the NMED requires verbal reporting within 24 hours of a petroleum product release from regulated tanks to the NMED Petroleum Storage Tank Bureau (PSTB) when there is:

- any suspected or confirmed release of regulated substances
- evidence of release of regulated substances
- unusual operational conditions (that would cause concern about a release)
- monitoring results that show loss from the system

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Regulated tanks include those with a capacity between 1,320 gallons and 55,000 gallons. Regulated substances for Aboveground Storage Tanks includes, but is not limited to petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading and finishing, such as motor fuels (including ethanol-based motor fuels), jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

Notice of any suspected or confirmed release from a storage tank system needs to be completed within 24 hours. Contact the EPC-CP Aboveground Storage Tank (AST) Program Lead and/or the EPC-CP Water Quality Team Leader prior to completing any external notifications. The PSTB can be reached at 476-4397 during business hours and 827-9329 (NMED Emergency Spill Hotline) during non-business hours. A written report describing the spill, release or suspected release and any investigation or follow-up action needs to be submitted to the PSTB within 14 days of the incident.

4.7.2 Additional Reporting Requirements under the NPDES Pesticide General Permit

Adverse incidents require reporting to the EPA under the NPDES Pesticide General Permit (PGP). An adverse incident is defined as an unusual or unexpected incident resulting from pesticide applications that an Operator has observed upon inspection or of which the Operator otherwise becomes aware, in which:

1. There is evidence that a person or non-target organism has likely been exposed to a pesticide residue, and
2. The person or non-target organism suffered a toxic or adverse effect.

The phrase toxic or adverse effect includes effects that occur within Waters of the United States on non-target plants, fish, or wildlife that are unusual or unexpected (e.g., effects are to organisms not otherwise described on the pesticide product label or otherwise not expected to be present) as a result of exposure to a pesticide residue, and may include:

- Distressed or dead juvenile and small fishes
- Washed up or floating fish
- Fish swimming abnormally or erratically
- Fish lying lethargically at water surface or in shallow water
- Fish that are listless or nonresponsive to disturbance
- Stunting, wilting, or desiccation of non-target submerged or emergent aquatic plants
- Other dead or visibly distressed non-target aquatic organisms (amphibians, turtles, invertebrates, etc.)

The phrase toxic or adverse effects also includes any adverse effects to humans (e.g. skin rashes) or domesticated animals that occur either from direct contact with or as a secondary effect from a discharge (e.g., sickness from consumption of plants or animals containing pesticides) to Waters of the United States that are temporally and spatially related to exposure to a pesticide residue (e.g. vomiting, lethargy).

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If an Operator observes or otherwise becomes aware of an adverse incident due to pesticide application, the Operator must notify the EPA Incident Reporting contact within 24 hours of the Operator becoming aware of the adverse incident. EPA Incident Reporting Contacts are listed at <https://www.epa.gov/npdes/pesticide-permitting>.

If an Operator becomes aware of an adverse incident affecting a federally listed threatened or endangered species or its federally designated critical habitat, which may have resulted from a discharge from the Operator's pesticide application, the Operator must immediately (within 15 minutes of discovery) notify the U. S Fish and Wildlife Service. This notification must be made by phone to the contact listed on the EPA's website (<https://www.epa.gov/npdes/pesticide-permitting>).

4.8 Determining if a Release is Reportable under CERCLA or EPCRA

Under CERCLA or EPCRA, an RQ is the threshold which requires regulatory notification of a release. An RQ is based on the quantity of chemical released within any 24-hour period. CERCLA RQs of hazardous substances are listed in 40 CFR § 302.4. If an RQ is met or exceeded, an immediate (within 15 minutes of discovery) notification must be made to the NRC (1-800-424-8802) pursuant to 40 CFR §302.6. If a release of an airborne radioactive material exceeds an RQ, the EPA Region 6 Health Physicist (Office-(214) 665-8541; Mobile-(214) 755-1530; Home-(972) 937-1900) must also be verbally notified after the NRC notifications have been completed.

A release is reportable under EPCRA if a release of a hazardous or extremely hazardous substance listed in 40 CFR Part 355 Appendices A and B occurs. The chemicals that have not been assigned RQs by the EPA have been given statutory RQs of one pound by Congress. If an RQ established under EPCRA is met or exceeded, an immediate (within 15 minutes of discovery) notification must be made to the Local Emergency Planning Committee (LEPC) community emergency coordinator and to the State Emergency Response Commission (SERC) (see Attachment 2).

The lists of CERCLA hazardous substances and EPCRA extremely hazardous substances are two separate lists that include a number of common substances. However, not all extremely hazardous substances are listed hazardous substances. In some instances, a release of an extremely hazardous substance may be reportable under EPCRA but not reportable under CERCLA.

Releases that occur within a closed space with no emissions to the ambient environment are exempt from EPCRA and CERCLA reporting requirements.

NOTE: Response procedures for "Continuous Releases" are not covered in this procedure.

4.8.1 Regulatory Classification of the Released Material

The on-call EPC SME will determine the regulatory classification of the substance released with respect to the hazard classifications:

- Extremely Hazardous Substance (EHS) and/or Hazardous Substance (HS)

Often during the course of an emergency, complete information will not be available regarding type and amount of material released. In this case, best professional judgment must be used to establish the level of confidence associated with the estimates. If the uncertainty is high enough that future

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estimates may require reporting, it is best to be conservative and report the release following the reporting requirements detailed in Section 4.10 *Reporting a Release or Event*.

After determining the RQ of a released material, the EPC on-call representative or SME will perform the following steps to determine if an RQ has been released.

Step	Action						
1	Obtain an estimate of the quantity and type of material released (e.g. 4 pounds of chlorine gas or 150 curies of tritium).						
2	Compare this quantity against the RQs provided in 40 CFR Table 302.4 and 40 CFR §355, Appendices A and B.						
3	<p>If this is an airborne release of radioactive materials, immediate (within 15 minutes of discovery) reporting to the NRC and the EPA Region 6, Regional Health Physicist is required if the RQ has been exceeded. Note that for radioactive materials, the RQ is provided in activity units (curies or becquerels). Also note that some materials have an RQ value for both chemical exposure (Table 302.4) and for radiological exposure (Appendix B to §302.4). In these cases, the RQ applying to the smallest quantity of material will apply.</p> <p>For all radioactive material releases, a radiological dose assessment must also be performed within 24 hours of the release. This dose assessment should be made by an environmental health physicist in EPC-CP or EPC-ES. The on-call individual should contact an EPC health physicist for this evaluation.</p> <p>Immediate evaluation – RQ comparison (of a radioactive material release)</p> <table> <tr> <td>If the release...</td><td>Then...</td></tr> <tr> <td>Is equal to or greater than the RQ</td><td>Proceed to section 4.10 <i>Reporting a Release or Event</i>.</td></tr> <tr> <td>Is less than the RQ</td><td>No immediate reporting is required; contact EPC environmental health physicist to complete follow-up dose assessment.</td></tr> </table>	If the release...	Then...	Is equal to or greater than the RQ	Proceed to section 4.10 <i>Reporting a Release or Event</i> .	Is less than the RQ	No immediate reporting is required; contact EPC environmental health physicist to complete follow-up dose assessment.
If the release...	Then...						
Is equal to or greater than the RQ	Proceed to section 4.10 <i>Reporting a Release or Event</i> .						
Is less than the RQ	No immediate reporting is required; contact EPC environmental health physicist to complete follow-up dose assessment.						
4	<p>If this is a release of non-rad material, it is reportable if the RQ is exceeded.</p> <table> <tr> <td>If the amount released is..,</td><td>Then...</td></tr> <tr> <td>Equal to or greater than the RQ</td><td>Proceed to Section 4.10 <i>Reporting a Release or Event</i>.</td></tr> <tr> <td>Less than the RQ</td><td>Proceed to Step 5</td></tr> </table>	If the amount released is..,	Then...	Equal to or greater than the RQ	Proceed to Section 4.10 <i>Reporting a Release or Event</i> .	Less than the RQ	Proceed to Step 5
If the amount released is..,	Then...						
Equal to or greater than the RQ	Proceed to Section 4.10 <i>Reporting a Release or Event</i> .						
Less than the RQ	Proceed to Step 5						
5	Continue to re-evaluate the release as new data becomes available. Perform Steps 1 through 4 as necessary.						

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4.9 Determining Release Impacts to Biological or Cultural Resources

There are laws and regulations related to protection of biological and cultural resources which are applicable to the Laboratory. These laws and regulations include:

- National Environmental Policy Act
- Endangered Species Act
- Bald and Golden Eagle Protection Act
- Migratory Bird Treaty Act
- New Mexico Wildlife Conservation Act
- New Mexico Endangered Species Act
- National Historic Preservation Act
- Native American Graves Protection and Repatriation Act
- Archaeological Resources Protection Act

Reporting of impacts to biological or cultural resources under the preceding federal laws is not specifically defined. However, the EPC on-call SME should utilize the Decision Support Application (DSA) to determine if the release impacted a Biological or Cultural Site. The DSA layer 'Federally Listed Species Habitat' contains Endangered Species habitat boundaries. The DSA 'Cultural Resources-Buffered Sites' layer contains the boundaries of the Cultural Sites (Please note- information contained in these layers is Official Use Only). Notify the respective Biological or Cultural SME within one business day if the release impacted either of these areas. The Biological or Cultural SMEs will handle any additional reporting requirements.

Additionally, if there is a release of contaminants to a wetland or destruction of a wetland, OR if the event could result in the "take" of a threatened or endangered species (i.e., a wildfire), the EPC on-call representative or SME will notify the Biological SME within one business day of the event. The Biological SME will complete any additional reporting requirements.

4.10 Reporting a Release or Event

If a release or event is reportable (as determined by one or more of the previous sections), the Laboratory is required to meet certain reporting requirements. The emergency notification requirements must be followed upon determination that a release or event is reportable.

For informational purposes, a Summary of Emergency Release or Event Reporting Requirements is provided in Attachment 2. This document summarizes the primary statutes and the associated reporting requirements.

Maintain a notebook to record pertinent information about the release and to document the actions taken (see Section 5.0 *Records*).

Any release to the environment that has been determined to be reportable by the EPC on-call representative or SME shall be reported through the LANL management chain in accordance with [PD1200, Emergency Management](#) and [P322-4, Performance Improvement from Abnormal Events](#).

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Los Alamos National Security (LANS) management and DOE shall be notified if a release notification to state or federal regulatory agencies is required. Management approval is not required prior to completing environmental notifications to the regulatory agencies in order to assure that the deadline for reporting is not exceeded.

Perform the following steps immediately after establishing that reporting is required:

Step	Action
1	Compile release information including : <ul style="list-style-type: none"> • The source, cause, type and quantity of the release • Time and duration of the release • Extent of any protective and corrective actions taken • Name, address, and telephone number of the person to contact for further information • Whether the substance is an HS or EHS • Associated health risks and medical attention necessary for exposed individuals • If available, information concerning the release of any hazardous and/or mixed waste which may endanger public or private drinking water supplies • Assessment of actual or potential hazards to human health or the environment outside the facility • If available, estimated quantity and disposition of recovered material that resulted from the incident • Precautions to take due to the release/event, including, in the case of fire, those associated with special hazards due to hazardous and/or mixed waste • Any other information which may help emergency personnel responding to the incident • Environmental media impacted from the release
2	Notify LANL management, DOE, and the respective Facilities Operations Division (FOD). Note: Management approval is not required prior to completing environmental notifications to the regulatory agencies in order to assure that the deadline for reporting is not exceeded.
3	Provide notification to the regulatory agency as required by the applicable regulation(s) detailed in Sections 4.5 - 4.9. Reference Attachment 2 for a summary of the applicable reporting requirements.
4	Notify programmatic SMEs that may be impacted or required to complete follow up reporting.

4.10.1 Steps to Notify LANL Management and DOE

The EPC on-call representative will complete the following steps to provide notification to LANL Management and DOE.

Step	Action
1	Determine that a release to the environment is reportable to state or federal entities as

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	required under applicable regulations. NOTE: Occurrence Reporting and Procession System (ORPS) reporting is a FOD and Responsible Associate Director (RAD) responsibility and commonly they will seek advisement from EPC SMEs.
2	Provide notification to the EPC-CP Water Quality Team Leader, the EPC-CP Group Leader, the EPC-DO Division Leader, and DOE LAFO program contact of the release and the required external notifications.
3	Complete environmental reporting to state and federal agencies in accordance with all applicable regulations.
4	Notify the appropriate program SME that may be impacted or be required to complete following up release reporting.

After all the above notifications have been made, or when requested, the EPC on-call representative or SME will hand off responsibility for additional actions and follow-up to the affected environmental group. (The group that will be responsible will depend on the type and location of the release and the governing regulations or statutes.)

In order to communicate events at LANL which may impact the public and or the environment, EPC staff may provide a courtesy notification to New Mexico Environment Department of events that may not require formal regulatory notification. Examples of such events in the past have been small wild land fires.

5.0 RECORDS

The following records are generated as a result of this procedure and are maintained in accordance with ADESH-AP-006 Records Management Plan and [P1020-1, Laboratory Records Management:](#)

- Field documentation of the release, including:
 - Time and date of the release
 - Time, date, and description of notifications
 - Location and source of the release
 - Type of material released
 - Quantity of material released
 - Impacted media
 - Time release was stopped
 - Any immediate mitigation actions taken to contain or control the release
 - Documentation of any verbal notifications
 - Samples taken
- Copies of any written notifications generated

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- Documentation of any analytical results, and quality assurance of results
- Contingency and / or emergency plan documentation
- Documentation of any RCRA permit non-compliance that threatens human health and environment
- Documentation of treatment of any RCRA unstable chemicals, leaking or compromised gas cylinders

6.0 DEFINITIONS AND ACRONYMS

6.1 Definitions

ADESH – Associate Directorate for Environment, Safety, and Health

ADEM – Associate Directorate for Environmental Management

AOC – Area of Concern

AST – Aboveground Storage Tank

CAA – Clean Air Act

CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act

CMR – Chemistry and Metallurgy Research

CFR – Code of Federal Regulations

Continuous Release – A release is continuous if it “occurs without interruption or abatement or if it is routine, anticipated, intermittent, and incidental to normal operations or treatment processes.” The release must also be “stable in quantity and rate,” which means that it must be predictable and regular in the amount and rate of emission. The response procedures for continuous releases are not covered by this document. See guidance in Reporting Continuous Releases of Hazardous and Extremely Hazardous Substances under CERCLA and EPCRA.

CWA – Clean Water Act

DOE LAFO – Department of Energy Los Alamos Field Office

DSA – Decision Support Application

Environment – Includes "water, air, land, and the interrelationship which exists among and between water, air, land, and all living things." (40 CFR 355.20)

EOC – Emergency Operations Center

EPA – Environmental Protection Agency

EPC-DO – Environmental Protection and Compliance Division

EPCRA – Emergency Planning and Community Right-to-Know Act

EPC-CP – Environmental Protection and Compliance Division Compliance Programs Group

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EPC-ES – Environmental Protection and Compliance Division Environmental Stewardship Group

Extremely Hazardous Substance (EHS) – EPCRA establishes emergency reporting requirements for extremely hazardous substances in 40 CFR 355, Appendix A. All of these substances are also CWA and CERCLA “hazardous” substances.

FOD – Facility Operations Director

GWDP-Ground Water Discharge Permit

Hazardous Substance (HS) – These substances are summarized in 40 CFR Part 302. As used in this context, refers to: (1) any elements, compounds, mixtures, solutions, or substances specially designated by EPA under Section 311 of the Clean Water Act (CWA) (40 CFR 116.4); (2) any toxic pollutants listed under Section 307(a) of the CWA; (3) any hazardous substances regulated under Section 311 (b)(2)(A) of the CWA; (4) any listed or characteristic RCRA hazardous waste (40 CFR 261), (5) any hazardous air pollutants listed under Section 112 of the Clean Air Act (CAA); or (6) any imminently hazardous chemical substances or mixtures regulated under Section 7 of the Toxic Substances Control Act (TSCA).

IWD – Integrated Work Document

LANL – Los Alamos National Laboratory

LANS – Los Alamos National Security

LEPC – Local Emergency Planning Committee

NMAC – New Mexico Administrative Code

NMED – New Mexico Environment Department

NMWQA – New Mexico Water Quality Act

NMWQCC – New Mexico Water Quality Control Commission

NPDES – National Pollutant Discharge Elimination System

NRC – National Response Center

ORPS – Occurrence Reporting and Processing System

OSC – On-Scene Commander

PADOPS – Principal Associate Directorate Operations

PCBs – Polychlorinated Biphenyls

PGP – Pesticide General Permit

PST – Petroleum Storage Tank

PSTB – Petroleum Storage Tank Bureau

RAD – Responsible Associate Director

RCRA – Resource Conservation and Recovery Act

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Release – Any unpermitted spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of contaminants into the environment, excluding: (1) emissions from the engine exhaust of any vehicle, (2) certain releases of source, byproduct, or special nuclear material from a nuclear incident, or (3) normal application of fertilizer.

RQ – Reportable Quantity

SARA – Superfund Amendments and Reauthorization Act

SDS – Safety Data Sheet

SERC – State Emergency Response Commission

SERF – Sanitary Effluent Reclamation Facility

SEO-DO –Security and Emergency Operations Division

SME – Subject Matter Expert

SWMU – Solid Waste Management Unit

SWWS - Sanitary Waste Water System

TSCA – Toxic Substances Control Act

UIC – Underground Injection Control

7.0 REFERENCES

The following documents are referenced in this procedure:

- 40 CFR 302, Designation, Reportable Quantities, and Notification
- 40 CFR 261, 264 Subpart D 270.30
- DOE guidance document PCB Spill Response and Notification Requirements
- (EH-231-059/1294), available on the EPC-CP web page
- DOE – Office of Environmental Guidance, CERCLA Information Brief, EH-231-001-0490 (April 1990)
- EPA Web Site: <http://www.epa.gov/>
- EPCRA Information Web Site: <http://www.chemicalspill.org/EPCRA-facilities/spill.html>
- Federal Register, Volume 67, No. 47, Notices FRL-7172-4, Guidance on the CERCLA Section 101(10)H, Federally Permitted Release Definition for Certain Air Emissions
- [PD1200, Emergency Management](#)
- P322-3, Performance Improvement from Abnormal Events
- LANL RCRA Permit No. NM0890010515-1
- LANL NPDES Permit No. NM0028355

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- National Response Center (NRC) Web Site: <http://www.nrc.uscg.mil/>
- NMWQCC Regulations, 20.6.2 NMAC, dated December 1, 2001
- P407, Water Quality
- P1020-1, Laboratory Records Management
- ADESH-AP-006, Records Management Plan

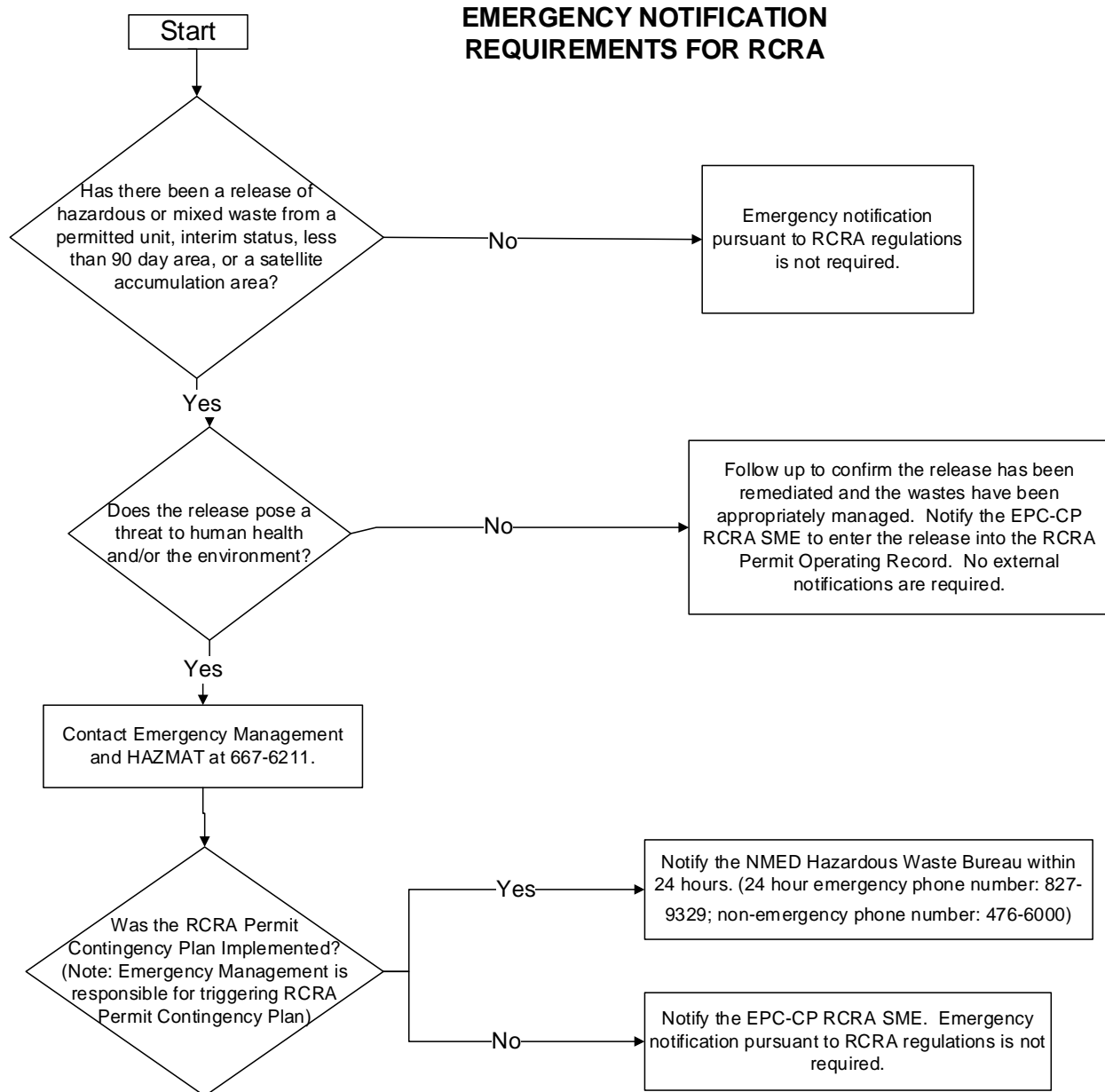
8.0 ATTACHMENTS OR APPENDICES

Attachment 1: Emergency Notification Requirements for RCRA

Attachment 2: Summary of Emergency Release or Event Reporting Requirements

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Attachment 1: Emergency Notification Requirements for RCRA



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Attachment 2: Summary of Emergency Release or Event Reporting Requirements

NOTE: This is only a guide and does not cover all federal, state, or permit reporting requirements. Refer to the Code of Federal Regulations and the RCRA Permit for more details regarding these regulations.

STATUTE	REGULATIONS	INCIDENT	Immediate Reporting Requirements	Follow Up Reporting Requirements
Clean Water Act	40 CFR §110.6	Oil discharge (film/sheen/discoloration) to water surface or shoreline, or violation of water quality standards.	Immediately (within 15 minutes of discovery) notify the National Response Center.	Follow-up not required.
Clean Water Act	Part III of NPDES Permit No. NM0028355	Leak or unplanned release from an NPDES permitted outfall.	Notify the NPDES Outfall Permit Program Lead and EPC-CP Water Quality Team Leader upon discovery. The program lead or the EPC-CP Water Quality Team Leader will complete initial reporting requirements as required.	Required follow up reporting will be completed by the NPDES Outfall Permit Program Lead and EPC-CP Water Quality Team Leader.
Clean Water Act (CWA)-NPDES Pesticide General Permit	40 CFR §122.28	Adverse incident which includes evidence that a person or non-target organism has been exposed to a pesticide residue or the person or non-target organism suffered a toxic or adverse effect.	Notify the EPA Region 6 Pesticide Permitting contact (214)665-7500 within 24 hours.	Submit a 30 Day Adverse Incident Written Report to the EPA Regional Office.
New Mexico Water Quality Control Commission Regulations (NMWQCC Regulations)	20.6.2.1203 NMAC	Discharge from any facility of oil or other water contaminant, in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or use of the property.	Notify the New Mexico Environment Department 505-827-9329 within 24 hours.	Submit 7 and 15 Day written follow up Corrective Action Reports (Copy EPA Region 6 on the 7 and 15 Day Reports).

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STATUTE	REGULATIONS	INCIDENT	Immediate Reporting Requirements	Follow Up Reporting Requirements
New Mexico Water Quality Control Commission Regulations (NMWQCC Regulations)	20.6.2.3104 NMAC	Unplanned release of any volume from an activity or facility covered under an active Groundwater DP: DP-857: SWWS Plant, SERF, and Sigma Mesa Evaporation Basins DP-1589: Septic Tank/Disposal Systems DP-1793: Land Application of Treated Groundwater DP-1835: Injection of Treated Groundwater to Class V UIC Wells	Notify the New Mexico Environment Department 505-827-9329 within 24 hours.	Submit 7 and 15 Day written follow up Corrective Action Reports (Copy EPA Region 6 on the 7 and 15 Day Reports)
New Mexico Environmental Improvement Board Regulation	20.5.7 NMAC	A release of a petroleum product from regulated aboveground storage tank.	Contact the EPC-CP AST Program Lead and/or the EPC-CP Water Quality Team Leader prior to completing any external notifications. If required, the Petroleum Storage Tank Bureau (476-4397) or NMED Emergency Spill Hotline (827-9329) must be contacted within 24 hours.	A written report describing the spill, release or suspected release and any investigation or follow-up action needs to be submitted to the PSTB within 14 days of the incident.
Comprehensive Environmental, Response, Compensation, and Liability Act (CERCLA)	40 CFR §302.6(a)	Hazardous substance (listed in 40 CFR Table 302.4) release (Equal to or greater than an RQ).	Immediately (within 15 minutes of discovery) notify the National Response Center 1-800-424-8802.	Follow-up not required.
Emergency Planning and Community Right- to-Know Act (EPCRA)	40 CFR§ 355.40	Release of an extremely hazardous substance (listed in 40 CFR Part 355 Appendices A and B) or CERCLA hazardous substance (listed in 40 CFR Table 302.4) equal to or greater than RQ.	Immediately (within 15 minutes of discovery) notify the LEPC (505-662-8283) the SERC (505-476-9635). Immediately notify the 911 operator for a release that occurs during transportation or from storage incident to transportation.	A written follow-up emergency notice must be submitted to the LEPC and SERC as soon as practicable after the release.

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STATUTE	REGULATIONS	INCIDENT	Immediate Reporting Requirements	Follow Up Reporting Requirements
Resource Conservation and Recovery Act (RCRA)	40 CFR 262.34, 263.30, 264.51, 264.56 & .196, 265.51, .56 & .196, 270.14, & .30, 273.17, .37 & .54, 279.43 & .53, 280.50, .52, .53, .60, & .61	Release of hazardous or mixed waste from a permitted unit, interim status, less than 90 day area or a satellite accumulation area which the RCRA Permit Contingency Plan was triggered.	Notify NMED Hazardous Waste Bureau within 24 hours (24 hour emergency phone number: 827-9329; Non-emergency phone number: 476-6000) See Attachment 1 for additional details.	Submit written report to NMED HWB within 5 days.
Clean Air Act/ Radionuclide NESHAP	40 CFR 61, Subpart H	Airborne release of radioactive material in excess of an RQ.	Notify the EPA Region 6 Health Physicist (Office- (214) 665-8541; Mobile- (214) 755-1530; Home – (972) 937-1900) immediately after providing notification to the NRC.	Follow-up not required.
Toxic Substance Control Act (TSCA)	40 CFR 761.120, 761.125	Over 1 pound by weight of PCBs (TSCA) or greater than 270 gallons of untested mineral oil suspected of containing PCBs.	Contact the National Response Center (1-800-242-8802) and the EPA Region 6 Office of Prevention, Pesticides, and Toxic Substances Branch (1-866-372-7745) as soon as possible after discovery, but no later than 24 hours after discovery.	Within 24 hours. Follow-up: as required by agency.

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Environment, Safety, and Health Directorate

Environmental Protection and Compliance-Compliance Programs

Quality Procedure

MSGP Stormwater Visual Assessments

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REVISION HISTORY

Document Number and Revision <i>[Include revision number, beginning with Revision 0]</i>	Effective Date <i>[Document Control Coordinator inserts effective date]</i>	Description of Changes <i>[List specific changes made since the previous revision]</i>
ENV-RCRA-QP-064, R0	7/09	New document <i>MSGP Storm Water Visual Inspections</i> .
ENV-RCRA -QP-064, R1	3/10	Clarifications and added attachments.
ENV-RCRA -QP-064, R2	2/12	Biennial review/revision
EPC-CP-QP-064, R0	10/04/2017	This document replaces ENV-RCRA-QP-064 R2. Converted into new format, and new organization name, clarified steps, updated attachments.

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1.0 INTRODUCTION

Los Alamos National Security, LLC (LANL) through Environmental Protection and Compliance-Compliance Programs (EPC-CP) conducts stormwater monitoring activities required pursuant to the National Pollutant Discharge Elimination System (NPDES), Multi-Sector General Permit (MSGP) at Los Alamos National Laboratory (LANL). The MSGP requires LANL to monitor stormwater runoff from industrial sites relative to potential pollutants.

1.1 Purpose

This procedure describes the process for conducting visual assessments of stormwater from outfall locations monitored under the MSGP for industrial facilities at LANL.

Assessments conducted under this procedure should be documented using the Maintenance Connection Express™ (MC Express) web application. (In the event of electronic hardware or web application failure, personnel may use a printed hard copy to conduct inspection and sample retrieval.)

1.2 Scope

Requirements set forth in this document apply to Los Alamos National Laboratory industrial facilities covered by the MSGP. These facilities include, a warehouse, several metal fabrication areas/shops, a heavy equipment yard, an asphalt batch plant, roads and grounds, a foundry, a power plant, a material recycling facility, a carpenter shop, and several hazardous waste treatment, storage or disposal (TSD) facilities. Inspection waivers may be granted by EPC-CP for adverse weather conditions and unstaffed or inactive sites.

At least once each MSGP monitoring quarter a stormwater sample must be collected from each discharge point covered by the MSGP and site specific SWPPP and visually inspected for water quality characteristics. Stormwater samples can be collected with an automated sampler, single stage sampler, or by taking a grab sample.

1.3 Applicability

This procedure applies to the EPC-CP technical staff and subcontractor personnel (as applicable) who conduct stormwater visual assessments during or after measurable storm events at MSGP outfalls.

Note: *A measurable storm event is identified as one what results in an actual discharge from your site that follows the preceding measurable storm event by at least 72 hours (3 days).*

2.0 PRECAUTIONS AND LIMITATIONS

Hazards in the work described in this procedure are controlled through site specific Integrated Work Documents (IWDs). The hazard level for the activities described in this procedure is **low**, however the cumulative hazard rating for activities described in the IWD is **moderate**.

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Assessments may be discontinued during periods or conditions that make sites dangerous for worker safety or prevent personnel from safely accessing sites (e.g., weather-related events such as flash floods, flooding, lightning, wildfires, hail, icy roads, deep snow, or LANL operations such as firing shots or burns).

Click the “Save” bar after all entries for a task line have been completed and before proceeding to the next question. Failure to “Save” results in lost data entries.

Some terminology varies between the MC Express software and the Maintenance Connection desktop software.

- The “Reading” field in MC Express is the same field as “Reading Final” in Maintenance Connection desktop and “Meas.” on a hard copy (printed) work order.
- The “Complete” option in MC Express is the same as a “Yes” answer; the “Failed” option in MC Express is the same as a “No” answer. Maintenance Connection desktop and hard copy (printed) work orders use “Yes” and “No” terminology.

Throughout this procedure the field inspector should document comments and notations in the “Reading” field of the associated task line. Any additional comments not documented in a “Reading” field can be entered in the “Comments” field of the same task line. If the inspector needs more space, additional comments can be entered in the “Labor Report Update” field (see Section 4.3) when the work order is updated to “Complete” status.

3.0 PREREQUISITE ACTIONS

3.1 Planning and Coordination

1. Schedule work to be completed by the target date appearing on the work order(s) or as requested by the MSGP Program Lead if a form is not issued.
2. Inform (e.g., by e-mail) Facility contacts, as specified in the IWD, of the schedule for inspection work and locations up to a week (preferred) before but no later than the day before (for minor changes) to be added to the appropriate plan of the day.

Note: For some Facility Operations Divisions (FODs) like the Utilities and Institutional Facilities FOD, MSGP stormwater monitoring activities are on a standing plan of the day. However, this must be requested each year at the beginning of the monitoring season.

3. The IWD Part II (2101 Form) addresses specific requirements and training for FODs.
4. Obtain any necessary additional paperwork before conducting this work, including IWD’s, and excavation permits (as necessary).
5. Gather the required equipment (see section below) for the work to be done.
6. Using the Safari web browser on a tablet or notebook style computer, navigate to <http://express.maintenanceconnection.com> and select English from the available dropdown menu.

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7. Log into the MC Express application using your login credentials. Contact the MSGP Data Management Team if MC Express generates any message stating the field inspector does not have access.
8. Confirm that the work order list displayed in the “My Open Work Orders” section matches your sites. If work orders are not displayed, click the “Refresh” bar at the bottom of the page. The page will refresh and any work orders issued since you logged in will be loaded to the application. If the work order lists still do not match, contact the MSGP Data Management Team for clarification.
9. Ensure that field personnel have access to accurate time measurement at the Site. When at the site, the clock time on the ISCO sampler must be set to Mountain Standard Time at all times, with no daylight saving time adjustment.

3.2 Tools and Equipment

Ensure the following equipment is available in the field vehicle:

- Safety glasses with side shields
- Nitrile gloves
- Sturdy hiking boots or steel toed shoes with soles that grip
- Cell phone (only government cell phones with batteries removed are allowed in secure areas)
- Copy of this procedure
- Copy of the Integrated Work Documents (IWDs)
- Copy of the MSGP Sampling and Analysis Plan
- Site Map(s) (as needed)
- Current electronic or paper inspection form EPC-CP-Form-1021, MSGP Stormwater Visual Assessments
- Necessary access and station keys
- Clean replacement sample bottles (clear glass or clear poly)
- Paper Towels

4.0 VISUAL ASSESSMENT OF STORMWATER

1. Take the sample bottle with water out of automated sampler or single stage jar off the ground, or fill a clear sample bottle with a grab sample and wipe off exterior.

Note: If a grab sample is collected it shall be collected during daylight hours in a wide mouth clear glass bottle or plastic container within 30 minutes of discharge from a storm event.

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2. In MC Express, open the work order issued for the current location by clicking on the appropriate line. If needed, use the expand arrow located on the right side of the display to expand the work order detail information. The work order will open in the display to the work order Summary page.
3. Click on the “Tasks” bar to navigate to the work order Tasks page. See MC Express screen shot example in Attachment 1 and a hard copy example in Attachment 2.

4.1 Documenting Sample Information

4. **Item 1:** Verify the monitoring period by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Describe the monitoring period (e.g., Apr-May, Jun-Jul, Aug-Sep, Oct-Nov).

Note: If the discharge collected is from a rain event from the previous monitoring period but the visual assessment is made in the following monitoring period, document monitoring period on the inspection to correspond to the period in which the rain event took place.

CAUTION

Click the “Save” bar after all entries for a task line have been completed and before proceeding to the next question. Failure to “Save” results in lost data entries.

Note: Any additional comments not documented in a “Reading” field can be entered in in the “Comments” field of the same task line. If the inspector needs more space additional comments can be entered in the “Labor Report Update” field.

5. **Item 2:** Verify the visual assessment is performed on an unfiltered sample and document by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. If the sample was filtered, conduct the visual assessment and document “Filtered sample”.
6. **Item 3:** Verify the date and time stormwater discharge began and document by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”.

Enter the date and time in the following date formats: MM/DD/YY, or MM-DD-YY. Time must be entered in 24-hr format.

Note: If the discharge date/time is not available (e.g. precipitation report) when the visual is performed in the field, leave this Task Line incomplete and complete when the information is available.

7. **Item 4:** Verify the date and time the sample was collected and document by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”.

Enter the date and time in the following date formats: MM/DD/YY, or MM-DD-YY. Time must be entered in 24-hr format.

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Note: If the collection date/time is not available (e.g. precipitation report) when the visual is performed in the field, leave this Task Line incomplete and complete when the information is available.

8. **Item 5:** Verify the date and time stormwater was visually assessed and document by clicking on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”.

Enter the date and time in the following date formats: MM/DD/YY, or MM-DD-YY. Time must be entered in 24-hr format.

9. **Item 6:** Verify the nature of the discharge and document by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Describe the discharge (e.g., rainfall or snowmelt) and the TOTAL amount of precipitation from the event.

Note: If the total amount of precipitation is not available (e.g., precipitation report) when the visual is performed in the field, leave this Task Line incomplete and complete when the information is available.

10. **Item 7:** Verify the sample was collected in the first 30 minutes of discharge and document by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes. The field inspector will document the reason a sample could not be collected within the first 30 minutes.

4.2 Assessing Parameters

While conducting the visual examinations, personnel should constantly be attempting to relate any pollutant that is observed in the sample to a pollutant source on the site.

Note if there are any potential sources of pollutants on site. If yes, contact an MSGP representative of EPC-CP and document the following:

- Potential sources;
 - Indicate if there are any BMPs on site and evaluate and note effectiveness; and
 - If no BMPs, determine if installation could correct future pollutant migration.
11. **Item 8:** Verify the color of the discharge in the sample container and document by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Describe the color.
 12. **Item 9:** Verify any odors detected from sample and document by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Describe the odor (e.g., musty, sewage, sulfur, sour, solvents, petroleum/gas, etc.).

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13. **Item 10:** Verify the clarity of the discharge and document by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Describe the clarity (e.g., slightly cloudy, cloudy, opaque).

Clarity can be described as the depth in which you can look into or through water. For example an individual can see through a clear glass of clean water in daylight. Generally the clarity of the water is a good visual indicator of the purity of water. If the water is poor in clarity there is most likely suspended solids throughout the water.

14. **Item 11:** Verify any floating solids and document by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Careful examination should determine whether the solids are raw materials (e.g., product used to fabricate something, or ingredients used in a formulation) or waste materials (e.g., shavings, woodchips and sawdust, trash). Describe any floating solids observed.
15. **Item 12:** Verify any settled solids in the sample and document by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Describe any settled solids observed (e.g., fine, coarse).

Settled solids may be an indicator of unstable ground cover combined with a high intensity stormwater runoff event.

16. **Item 13:** Verify any suspended solids in the sample and document by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Describe any settled solids observed (e.g., fine, coarse).

Most often suspended solids include fine sediment. This may be an indication of an unstable channel that may have eroding banks. Some water appears to be colored because of relatively coarse particulate material in suspension such as sediment.

17. **Item 14:** Verify the sample is free of foam and document by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Gently shake the sample container. Describe any bubbles in or on the surface of the water and the color of the foam.

CAUTION

Contact the EPC-CP Project Leader for MSGP **immediately if it is determined that the foam is caused by a pollutant.** Follow-up action is required within 24 hours.

18. **Item 15:** Verify the sample is devoid of any oil sheen and document by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. If an oil sheen is present, describe the thickness and consistency (e.g., flecks, globs).

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CAUTION

Contact the EPC-CP Project Leader for MSGP **immediately**. Then determine the nature of the discharge (rain, snow, hail), the source of the sheen and if existing BMPs are effective in mitigation of potential pollutants or if a new BMP needs to be installed. Follow-up action is required within 24 hours.

19. **Item 16:** Verify the discharge is free of any other indicators of stormwater pollution not described in any other task line above and document by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Describe any observations.
20. When all task lines have been completed, click the “Back” arrow button in the upper left hand corner to exit the work order Tasks page and return to the work order Summary page.

4.3 Completing the Assessment Form

1. Ensure the inspection form has been filled out completely including information not available during the field inspection (e.g., date/time of discharge, date/time of sample collection, total precipitation amount).
3. Click the checkered flag in the upper right corner of the work order Summary page. MC Express auto-populates the date and time fields.

CAUTION

MC Express automatically changes the work order status to “Closed.”

4. **Item 17:** Click on the expand arrow located on the right side of the “New Status” field and select “Completed” from the available dropdown menu.

Ensure the “Date” field has the date and time the **form was completed**. The completion date and time may be different from the date and time the visual assessment was performed if precipitation information was added to the form after the on-site field inspection.

If these fields need to be updated, click the “Date” field to modify it. Make necessary adjustments using the available timestamp application and click “Set” to apply changes.

6. **Item 18:** The inspector must type in his/her name in the “Labor Report Update” field.
Any additional notes, observations, or site conditions not documented in a task line “Reading” or “Comments” field can also be documented in the “Labor Report Update” field.
7. Scroll down the page to the “Signature” bar and click the expand arrow on the left side of the bar to open the “Signature” field.

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8. **Item 19:** Capture an electronic signature by drawing with a finger on the tablet screen. The Lead Inspector is certifying that the information submitted is “true, accurate, and complete” by electronically signing the work order.

Note: If using MC Express on a desktop screen (not a tablet), the mouse must be used to sign electronically.

9. Click on the “Save” bar at the bottom of the page to close the “Signature” field.
10. Click on the “Back” button located in the upper left hand corner to return to the “My Open Work Orders” page.
11. Once you have completed an inspection, click on the Menu button again, and then click the “Logout” bar. Close the browser. All work will automatically upload from the MC Express application to the MC database.

Always log out of MC Express when you have finished work OR if work is interrupted.

4.4 Completing the Certification Statement

1. Using the Safari web browser on a desktop computer, navigate to <http://www.maintenanceconnection.com>. Log into the MainConn desktop application using your login credentials.
2. Click “Open” in the tool bar at the top of the page to open the MainConn module selections. Click on the “Work Orders” module (see Attachment 3).
3. Click on the “Search” tab at the top left of the page and enter the work order number in the “Search Value” field. Click the arrow to the right of the “Search Value” field to open the work order in the right split screen.
4. Click on the “Report” tab at the top of the page and click the “Work Order Statement” sub-tab.
5. Click the Tools drop down menu in the top right corner of the page and select “Print” from the options. The print dialog box will open. Select the print options as appropriate for your local printer.
6. **Item 20:** Obtain a printed name and title, signature, and date on the certification statement. The visual assessment form must be certified with a signature from a duly authorized representative of the facility as defined in Appendix B of the MSGP Permit, Section B.11.A (e.g., FOD, Operations Manager, DSESH Group Leader, EPC Group Leader). The duly authorized representative of the facility is certifying the information submitted is “true, accurate, and complete” by signing the form.

EPC-CP will send out completed visual assessment forms at the end of each quarter that will contain a certification statement in the cover memorandum. The duly authorized signatory may sign and date this certification statement rather than the certification line associated with each attached form. However, the memorandum and associated completed forms must remain together.

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7. Place the completed and signed visual assessment into the facility SWPPP.

5.0 EVIDENCE OF STORMWATER POLLUTION

If stormwater contamination is identified through visual assessment personnel should attempt to identify the pollutant source. Personnel should evaluate whether or not BMPs have already been implemented and evaluate whether or not these are working correctly or need maintenance. A design change could also be incorporated into the stormwater pollution prevention plan to eliminate or minimize the contaminant source from occurring in the future. Personnel should evaluate whether or not additional BMPs should be implemented in the pollution prevention plan to address the observed contaminant.

A clean up of the site should be conducted if the pollutant source is known and well defined. The FOD, ESH Manager, and MSGP representative of EPC-CP should also be contacted and made aware of the situation.

Corrective actions **MUST** be taken if BMPs are not performing effectively. Refer to EPC-CP-QP-022, *MSGP Stormwater Routine Facility Inspections and Corrective Actions*.

6.0 TRAINING

The following personnel require training before implementing this procedure:

- EPC-CP technical staff and subcontract or other personnel who retrieve stormwater samples and conduct visual assessments at automated or single stage stormwater samplers for the MSGP.

For EPC-CP staff the training method for this procedure is “self-study” (reading). Other participating groups may require training documentation pursuant to local procedures.

Personnel performing this procedure will be familiar with the most current versions of the following procedures and operation manuals:

- EPC-CP MSGP Sampling and Analysis Plan for the current monitoring year

7.0 RECORDS

Records generated by this document and signed by the EPC-CP certifier will be submitted to the EPC-CP Records Management designated point of contact or document manager in accordance with P1020-1, *Laboratory Records Management* and with ADESH-AP-006, *Records Management Plan*.

- EPC-CP-Form-1021, *MSGP Quarterly Visual Assessment*

All other MSGP Quarterly Visual Assessment forms generated are forwarded to the duly authorized representative of each facility for submittal to that facility’s Records Management designated point of contact or document manager.

8.0 DEFINITIONS AND ACRONYMS

See LANL *Definition of Terms*.

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8.1 Definitions

Adverse weather conditions – Weather that prohibits collection of samples such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc. Could also include drought, extended frozen conditions, etc.

Best Management Practices (BMPs) – Schedules of activities, practices, prohibitions of practices, structures, vegetation, maintenance procedures, and other management practices to prevent or reduce pollution. BMPs can also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Clarity – Clearness or cleanness of appearance. This includes the visual observation of suspended sediment.

Color – Unpolluted water will be clear and colorless. Color should not be confused with clarity.

Floating solids – Particulate material floating on the surface of the water. Examples include: raw or waste materials and common trash.

Foam – An accumulation of fine frothy bubbles formed in or on the surface of water. A mass of bubbles of air in a matrix of liquid film.

Odor – The property or quality of waters that affects or stimulates the sense of smell. Examples of odors that may be present are burnt oil, petroleum hydrocarbon, sewage, diesel, sulfuric, or detergent odors.

Oil sheen – The presence of rainbow-like colors glistening on the surface of a liquid. The color of oil sheen will vary dependent on thickness and consistency.

Settled solids – Settled particulate material i.e., heavier than water. Examples include sand, gravel, metal turnings, and glass.

Suspended solids – Particulate materials that are floating between the bottom of the sample and the surface of the water.

Unstaffed and Inactive Sites – A facility maintaining certification with the SWPPP that it is inactive and unstaffed and visual examinations are not required.

8.2 Acronyms

See LANL *Acronym Master List*.

EPC-CP	Environmental Protection and Compliance – Compliance Programs
IWD	Integrated Work Document
LANL	Los Alamos National Laboratory
LANS	Los Alamos National Security, LLC
MC Express	Maintenance Connection MC Express web application
MSGP	Multi-Sector General Permit

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NPDES	National Pollutant Discharge Elimination System
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9.0 REFERENCES

P1020-1, Laboratory Records Management

ADESH-AP-006, Records Management Plan

EPC-CP-QP-022, MSGP Stormwater Routine Facility Inspections and Corrective Actions

10.0 ATTACHMENTS

Attachment 1: *Screenshot Examples of EPC-CP-Form-1021 in MC Express*

Attachment 2: *Crosswalk of EPC-CP-Form-1021 Hard Copy Format to Electronic Format*

Attachment 3: *Screenshot Examples of Printing from Maintenance Connection*

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Attachment 1: Screenshot Examples of EPC-CP-Form-1021 in MC Express

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MC Express

WORK ORDER: MSGP-1423

Tasks

The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.

Sample information

- 30 Document the monitoring Period (e.g., Apr-May)
- 35 Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)
- 40 Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).
- 50 Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).
- 60 Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).
- 70 Document the nature of discharge (e.g., rain, snowmelt). Document the TOTAL amount (in) in the "Reading" field of this line.
- 80 Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide a reason.

Refresh List

MC Express

WORK ORDER: MSGP-1423

Edit Task

30 Document the monitoring Period (e.g., Apr-May)

Reading

Jun-July

Initials

Failed?

No

Not Applicable?

No

Complete?

Yes

Comments

Cancel Save

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Attachment 1: Screenshot Examples of EPC-CP-Form-1021 in MC Express (cont.)

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MC Express

WORK ORDER: MSGP-1423

Tasks

Parameters

110	Is sample colorless? If "Failed", describe.	8
120	Is sample odorless? If "Failed", provide description (e.g. musty, sewage, sulfur, sour, solvent, petroleum/gas)	9
130	Is sample clear? If "Failed", provide description (e.g., slightly cloudy, cloudy, opaque).	10
140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.	11
150	Is sample free of settled solids? If "Failed", provide description (e.g., fine, coarse).	12
160	Is sample free of suspended solids? If "Failed", provide description (e.g., fine, coarse).	13
170	Is sample foamless after gently shaking? If "Failed" describe foam color and location ('on the surface' or 'in the sample').	14
180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs).	15
190	Is sample free of other obvious indicators of pollution? If "Failed", describe.	16

Refresh List

MC Express

WORK ORDER: MSGP-58534

Summary

[MSGP Program] MSGP Program
LANL-STORM
Requested

MSGP Single Stage Sampler Inspection

Tasks	11
Assignments	1
Labor	0
Parts	0
Other Costs	0
Attachments	1
Asset History	32

More Work Order Detail...

Refresh List

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Attachment 1: Screenshot Examples of EPC-CP-Form-1021 in MC Express (cont.)

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MC Express

WORK ORDER: MSGP-1423
Status Update

Issued

New Status **17**

Completed

Date

6/28/2017 03:12 PM

Percent Complete 100%

Labor Report Update **18**

Select Comments to Add.....

Jane Admin

Cancel Save

MC Express

WORK ORDER: MSGP-1423
Status Update

Signature **19**

(Remove)

Jane Admin

Cancel Save

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Attachment 2: Crosswalk of EPC-CP-Form-1021 Hard Copy Format to Electronic Format

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Los Alamos National Lab - ADESH

Work Order MSGP-1423

MSGP Monitoring Stations
Printed 7/12/2017 - 10:57 AM (Duplicate Copy)

Maintenance Details

Requested By: Admin, Jane on 7/11/2017 1:25:00 PM
Procedure: MSGP Quarterly Visual Assessment (EPC Sig) (EPC-CP-Form-1021.02 3)
Last PM: N/A
Reason: Hard Copy MSGP Visual Assessment Example

Target: 12/31/2017
Priority/Type: / Inspection
Department: Utilities and Infrastructure

MSGP Program
 RG121.9
 TA-3-38 Carpenter Shop
 Monitored Outfall (073)
 MSGP07302


Contact: Admin, Jane
Phone: 123-4567

Tasks

#	Description	Meas.	No	N/A	Yes
The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.					
Sample information					
1 30	Document the monitoring Period (e.g., Apr-May)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 70	Document the nature of discharge (e.g., rain, snowmelt). Document the TOTAL amount (in) in the "Reading" field of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide a reason.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parameters					
8 110	Is sample colorless? If "Failed", describe.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 120	Is sample odorless? If "Failed", provide description (e.g. musty, sewage, sulfur, sour, solvent, petroleum/gas)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 130	Is sample clear? If "Failed", provide description (e.g., slightly cloudy, cloudy, opaque).		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 150	Is sample free of settled solids? If "Failed", provide description (e.g., fine, coarse).		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13 160	Is sample free of suspended solids? If "Failed", provide description (e.g., fine, coarse).		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14 170	Is sample foamless after gently shaking? If "Failed" describe foam color and location (e.g., 'on the surface' or 'in the sample').		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15 180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs).		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16 190	Is sample free of other obvious indicators of pollution? If "Failed", describe.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Labor Report

17 **Completed:** 6/28/2017 3:23:00 PM
 18 **Report:** Jane Admin

19  6/28/2017
 Signature / Name Date Signature / Name Date

I confirm the information as recorded is true, accurate and complete.

EPC-CP-Form-1021.1 07/2017

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Attachment 2: Crosswalk of EPC-CP-Form-1021 Hard Copy Format to Electronic Format (cont.)

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CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg. FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

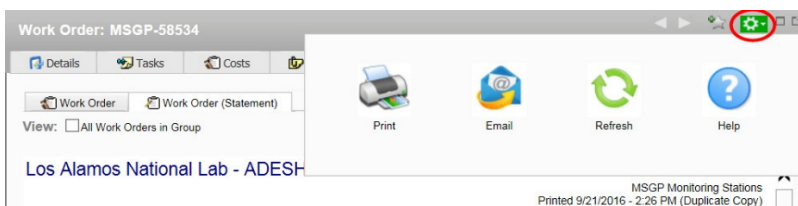
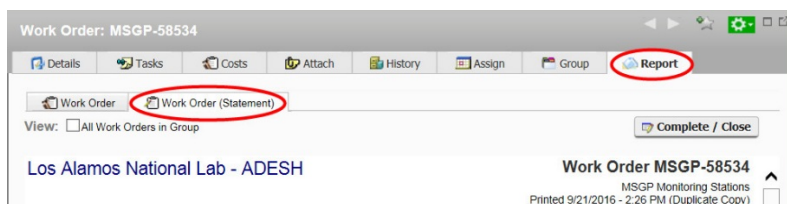
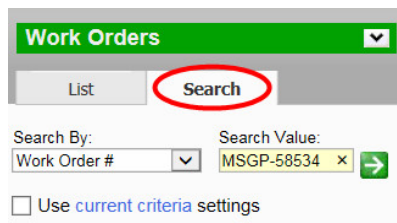
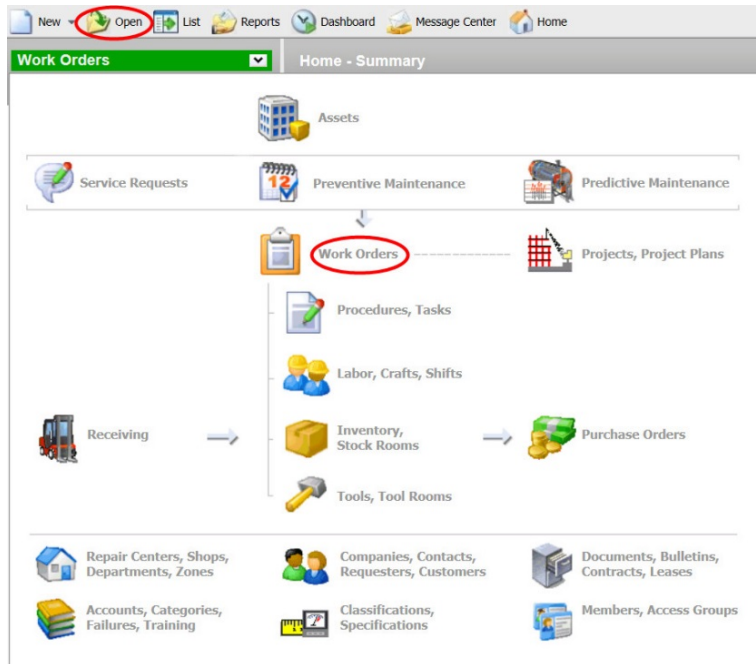
20 Print name and title: _____


Signature: _____ Date: _____

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Attachment 3: Screenshot Examples of Printing from Maintenance Connection

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EPC-CP-QP-047	Revision: 2	
Effective Date: 09/06/2017	Next Review Date: 09/06/2020	

Environment, Safety, and Health Directorate

Environmental Protection and Compliance Division – Compliance Programs

Quality Procedure

Inspecting Stormwater Runoff Samplers and Retrieving Samples for the MSGP

Document Owner/Subject Matter Expert:

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Derivative Classifier: ☐ Unclassified or ☒ DUSA ENVPRO

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Responsible Line Manager:	Organization:	Signature:	Date:
Anthony R. Grieggs	EPC-CP Group Leader	Signature on File	9-6-17

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To document a required read, Login to [UTrain](#), and go to the Advanced Search.*

Inspecting Storm Water Runoff Samplers & Retrieving Samples for the MSGP	EPC-CP-QP-047	Page 2 of 26
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REVISION HISTORY

Document Number and Revision <i>[Include revision number, beginning with Revision 0]</i>	Effective Date <i>[Document Control Coordinator inserts effective date]</i>	Description of Changes <i>[List specific changes made since the previous revision]</i>
ENV-RCRA-QP-047, Rev. 0	03/11	New Document.
ENV-RCRA-QP-047, Rev. 1	02/13	Annual Review and Revision
EPC-CP-QP-047, Rev. 2	09/06//2017	Review and revision. Updated document to new template and new group name. Clarified steps, modified inspection form EPC-CP-Form-1010, and added crosswalk to electronic form in MC Express. This document replaces ENV-RCRA-QP-047 R1.

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1.0 INTRODUCTION

Los Alamos National Security, LLC (LANS) through Environmental Protection and Compliance-Compliance Programs (EPC-CP) conducts stormwater monitoring activities required pursuant to the National Pollutant Discharge Elimination System (NPDES), Multi-Sector General Permit (MSGP) at Los Alamos National Laboratory (LANL). The MSGP requires LANL to monitor stormwater runoff from industrial sites relative to potential pollutants.

1.1 Purpose

This procedure describes the process for inspecting ISCO stormwater samplers and retrieving stormwater runoff samples from monitored outfall locations where LANS conducts stormwater monitoring activities pursuant to the NPDES, MSGP at LANL.

Inspections and sample retrieval conducted under this procedure should be documented using the Maintenance Connection Express™ (MC Express) web application on a tablet or notebook style computer. (In the event of electronic hardware or web application failure, personnel may use a printed hard copy to conduct inspection and sample retrieval.)

1.2 Scope

This procedure applies to the EPC-CP technical staff and subcontractor personnel (as applicable) conducting activities at automated stormwater sampling stations used for monitoring industrial stormwater discharge under the MSGP.

The MSGP Program Lead is the primary person with responsibility for the steps in this procedure. EPC-CP personnel will be appointed with responsibility for a subset of sampling stations.

1.3 Applicability

Stormwater runoff samples are collected at MSGP Program stations either with a refrigerated Avalanche® or ISCO 3700 automated sampler, single stage sampler or grab sample. ISCOs are designed to automatically collect water when the water surface is high enough to trigger a liquid level actuator and fill the sample bottles. Field personnel are required to inspect the sampling station while retrieving water samples during MSGP stormwater monitoring periods and at other intervals determined by the program or as directed by program personnel.

2.0 PRECAUTIONS AND LIMITATIONS

Hazards in the work described in this procedure are controlled thorough site specific Integrated Work Documents (IWDs). The hazard level of the activities in this procedure is **moderate**.

Personnel performing steps in this procedure that involve electrical equipment **MUST** be trained to LANL electrical safety standards as prescribed in the IWD before performing those steps.

Inspections may be discontinued during periods or conditions that make sites dangerous for worker safety or prevent personnel from safely accessing sites (e.g., weather-related events such as flash

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floods, flooding, lightning, wildfires, hail, icy roads, deep snow, or LANL operations such as firing shots or burns).

Some terminology varies between the MC Express software and the Maintenance Connection desktop software.

- The “Reading” field in MC Express is the same field as “Reading Final” in Maintenance Connection desktop and “Meas.” on a hard copy (printed) work order.
- The “Complete” option in MC Express is the same as a “Yes” answer; the “Failed” option in MC Express is the same as a “No” answer. Maintenance Connection desktop and hard copy (printed) work orders use “Yes” and “No” terminology.

3.0 PREREQUISITE ACTIONS

3.1 Planning and Coordination

1. Schedule work to be completed by the target date appearing on the work order(s) or as requested by the MSGP Program Lead if a form is not issued.
2. Inform (e.g., by e-mail) Facility contacts, as specified in the IWD, of the schedule for sampler inspection work and locations up to a week (preferred) before but no later than the day before (for minor changes) to be added to the appropriate plan of the day.

Note: For some Facility Operations Divisions (FODs) like the Utilities and Institutional Facilities FOD, MSGP stormwater monitoring activities are on a standing plan of the day. However, this must be requested each year at the beginning of the monitoring season.

3. The IWD Part II (2101 Form) addresses specific requirements and training for FODs.
4. Obtain any necessary additional paperwork before conducting this work, including IWD’s, and excavation permits (as necessary).
5. Gather the required equipment (see section below) for the work to be done.
6. Using the Safari web browser on a tablet or notebook style computer, navigate to <http://express.maintenanceconnection.com> and select English from the available dropdown menu.
7. Log into the MC Express application using your login credentials.
8. Confirm that the work order list displayed in the “My Open Work Orders” section matches your sites (see example in Attachment 1). If work orders are not displayed, click the “Refresh” bar at the bottom of the page. The page will refresh and any work orders issued since you logged in will be loaded to the application. If the work order lists still do not match, contact the MSGP Data Management Team for clarification.
9. Ensure that field personnel have access to accurate time measurement at the Site. When at the site, the clock time on the ISCO sampler must be set to Mountain Standard Time at all times, with no daylight saving time adjustment.

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3.2 Tools and Equipment

Ensure the following equipment is available in the field vehicle:

- Safety glasses with side shields
- Sturdy hiking boots or steel toed shoes with soles that grip
- Nitrile gloves
- Cell phone (only government cell phones with batteries removed are allowed in secure areas)
- Copy of this procedure
- Copy of the Integrated Work Documents (IWDs)
- Copy of the MSGP Sampling and Analysis Plan
- Site Map(s) (as needed)
- Current electronic or paper inspection form EPC-CP-Form-1010, MSGP ISCO Sampler Inspection and Sample Retrieval
- Sample Collection Log/Field Chain of Custody (see EPC-CP-QP-048)
- Government issued iPad equipment with Safari web browser and Good™ app.
- Necessary access and station keys
- Charged spare battery(s)
- Battery voltage tester
- Clean spare tubing (pump, suction, discharge types, sampler specific)
- Certified clean replacement sample bottles (glass and poly)
- Spare/replacement sampler parts (liquid level actuator, distributor arm)
- Shovel
- Wooden stakes
- Plastic wire “zip” ties
- Coolers with ice or Blue Ice®
- Paper Towels
- Marker pen (permanent, waterproof)
- Ball point pen
- Zip lock bags
- Chain of custody seals

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- 0.45 micron filter (where applicable)

4.0 INSPECTING STORMWATER SAMPLERS AND RETRIEVING SAMPLES

Throughout this procedure the field inspector should document comments and notations in the “Reading” field of the associated task line. Any additional comments not documented in a “Reading” field can be entered in the “Comments” field of the same task line. If the inspector needs more space additional comments can be entered in the “Labor Report Update” field (see Section 4.3) when the work order is updated to “Complete” status.

4.1 Inspecting the Sampler

1. If conditions prevent a sampler inspection, document the conditions in the “Labor Report Update” field on the work order and notify the Program Lead or designee within 24 hours. Multiple attempts can be documented on the original inspection work order. If the target date cannot be met, the inspector must contact the MSGP Program Lead no less than 24 hours before target date for guidance.
2. In MC Express open the work order issued for the current location by clicking on the appropriate line. If needed, use the expand arrow located on the right side of the display to expand the work order detail information. The work order will open in the display to the work order Summary page.
3. Click on the “Tasks” bar to navigate to the work order Tasks page.
4. Remove the top cover from the sampler.

4.1.1 On Arrival

5. **Item 1:** Verify and document the sampler is ON and its condition upon arrival by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes” (see example in Attachment 1). Explain any non-functional status (remember to use the “Reading” field unless more space is needed for comments). A hard copy inspection example is provided in Attachment 2 as a crosswalk to the electronic format.

If a sampler has been inactivated (e.g., sample collection completed) prior to this inspection but continues to appear on the inspection form, change the “N/A” line to “Yes”. Subsequent questions regarding this sampler may be left unanswered in this section.

CAUTION

Click the “Save” bar after all entries for a task line have been completed and before proceeding to the next question. Failure to “Save” results in lost data entries.

6. **Item 2:** Verify and document the ISCO programming displays the following by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”.

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ISCO 3700 sampler display should indicate “Sampler Inhibited”

OR

Avalanche sampler display should indicate “Program Disabled”

If the display does not indicate these messages, describe the messages (e.g., “Done X samples”, “sampler off”, etc.). If there is no indication of flow and the sampler triggered due to a non-flow event (e.g., animal, tumbleweed, etc.), describe this. Document any messages from the ISCO display.

7. **Item 3:** Verify and document the sampler is set to the correct Mountain Standard Time +/- no more than 1 minute by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. If the sampler is set incorrectly, reprogram for the correct Mountain Standard Time. Describe the work performed and correction applied (e.g., “ISCO clock was X minutes slow”).
8. If the location has more than one sampler complete Steps 5 through 7 for each sampler.
9. Don nitrile gloves and safety glasses.
10. Remove the center section from the sampler.

4.1.2 Water Collection Information

11. **Item 4:** Document any evidence of storm water flow at the sampling location by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Describe the evidence of flow (e.g. sediment or vegetation movement, erosion, standing water).
 - If the sampler did not trip but there is evidence of flow, document the date and time storm water discharge began from the precipitation report.
 - If the sampler tripped or collected storm water, document the date/time stamp from the sampler if available or from the precipitation report.
12. **Item 5:** Document if any storm water was collected (from either a sampler or by grab sample) by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. If any water was collected, complete the Bottle Information section (**Item 20**). Document if the water is taken by grab sample. Follow the steps in Section 4.2 of this procedure to retrieve samples.
13. **Item 6:** For Avalanche samplers only, verify and document the current refrigerator temperature of the sampler if water was collected by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Record the temperature. If unable to review temperature, check “No” and describe the condition (e.g. dead battery, electrical short).

If no water was collected the field inspector may change the “N/A” line to “Yes”.

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14. **Item 7:** For Avalanche samplers equipped with an ISCO pH and Temp Module, verify and document a pH measurement was taken on the collected water by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Record the pH measurement taken at the time of Bottle 1 as “Average: Minimum:Maximum.” If unable to review pH, check “No” and describe the condition (e.g. damaged meter).

If no water was collected the field inspector may change the “N/A” line to “Yes”.

4.1.3 Water Retrieval Information

15. **Item 8:** Verify and document whether a sample volume was retrieved (from either a sampler or by grab sample) and taken off site by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. If sample volume was retrieved, record the total volume **taken off site**.
16. **Item 9:** Verify and document whether a visual assessment of the water was performed by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. The MSGP program visual assessment form is not included in this procedure (see EPC-CP-QP-064). Ensure this form is submitted with the sampler inspection form. If the sample was filtered, conduct the visual assessment and document “Filtered sample.”

4.1.4 On Departure

17. **Item 10:** Verify all cable and electrical connections are attached and firmly tightened (not loose) upon departure from the site by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”.

Connections may work loose over time due to temperature changes and if there are dissimilar metals at the connection points. The loose connections can introduce voltage spikes which inherently cause current spikes that may result in blown fuses.

If the cables require replacement, connections require tightening, or other maintenance performed, describe the work performed (e.g., “tightened connectors on battery”).

If maintenance cannot be completed at the time of inspection, then describe the condition (e.g. cables chewed through by animal) and follow-up work needed (e.g., replace cables).

18. **Item 11:** Verify and document power supply function. Use a voltage meter to check the voltage of the battery(s) and record the voltage(s). Change the “Complete” or “Failed” line to “Yes” to indicate if battery voltage is acceptable upon departure from the station (≥ 11.7 for non-floating charged batteries at ISCO 3700 samplers and ≥ 11.0 for floating-charged batteries at Avalanche samplers).

Check the voltage of the solar panel if access can be gained to the weather protected terminal covers on the back of the panel.

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4.1.5 Equipment Specific Tasks

19. **Item 12:** Verify and document the sampler passes the diagnostic test by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Directions for running the diagnostics test is provided in ENV-CP-QP-045.

If a sampler has been inactivated (e.g., sample collection completed) prior to this inspection but continues to appear on the inspection form, change the “N/A” line to “Yes” on this task line. Subsequent questions regarding this sampler may be left unanswered in this section.

Warning

The internal pump tubing must be replaced if the pump tubing life has reached or exceeded the preset pump counts. The internal pump tubing life is set 500,000 pump counts for the 3700 and 1,000,000 for the Avalanche.

Only reset the pump counts after replacing the internal tubing.

If maintenance is necessary and can be performed at the time of inspection, describe the work performed. If maintenance cannot be completed at the time of inspection, then describe the condition and follow up with a description of work needed.

If a sampler has been inactivated (e.g., sample collection completed) prior to this inspection but continues to appear on the inspection form, change the “N/A” line to “Yes” on this task line. Subsequent questions regarding this sampler may be left unanswered in this section.

20. **Item 13:** Verify and document the sample tubing is free or clear of debris by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”.

Check the physical condition of the sampler including the actuator and intake line for correct location and height in the channel. The actuator, intake line and strainer (if used) should be placed on the cutting side of the channel to help minimize the possibility of sediment burying the intake line/strainer. Adjust as necessary to capture flow within the channel. The actuator, intake line and strainer must be clear of debris (sediment, pine needles, etc.).

If maintenance (e.g., clearing the tube, reposition tubing intake) is necessary and can be performed at the time of inspection, perform the work and describe. If maintenance cannot be completed at the time of inspection (e.g., can’t clear intake tubing and spare intake tubing not on hand to replace) then describe the condition and follow up with description of work needed.

21. **Item 14:** Verify and document the sample tubing has passed a suction test by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. Check the condition of sample tubing and vent tubing.

If maintenance (e.g., replace internal pump tubing) is necessary and can be performed at the time of inspection, perform the work and describe. If maintenance (e.g., replace sampler

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pump) cannot be completed at the time of inspection then describe the condition and follow up with description of work needed.

22. **Item 15:** Verify and document the sampler is ON prior to departing the site by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”.
23. **Item 16:** Verify and document the liquid level actuator has been set to “Latch” prior to departing the site by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”. If the sampler tripped and requires reset of the sampling program, reset the actuator by toggling the switch to “Reset” and then back to “Latch”.
24. **Item 17:** Verify and document the ISCO programming displays the following by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” line to “Yes”.

ISCO 3700 sampler display should indicate “Sampler Inhibited”

OR

Avalanche sampler display should indicate “Program Disabled”

If an error occurs, reconfigure the sampler per EPC-CP-QP-045.

25. If the location has more than one sampler complete Steps 19 through 24 for each sampler.

4.1.6 Maintenance Information

26. **Item 18:** Verify and document any maintenance completed while on site that is not documented elsewhere on work order by changing the “Complete” or “Failed” line to “Yes”. Describe the work performed.

Maintenance items may include (but are not limited to) site clearing, installing new or additional equipment, removing equipment, animal/pest mitigation, problems with equipment location, etc.

If a battery was replaced record the voltage of the new battery and the battery identification number. If the battery does not have an identification number, contact the MSGP Program Manager to have one assigned. Once assigned, the number must be painted or written in a permanent manner on the battery.

27. **Item 19:** Verify and document any maintenance needed that could not be completed while on site that is not documented elsewhere on work order by changing the “Complete” or “Failed” line to “Yes”. Describe any work needed. Refer to EPC-CP-QP-045 for sampler operation and maintenance.

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4.1.7 Bottle Information

28. **Item 20:** Document water collected by clicking the expand arrow located on the right side of each bottle's task line and change the "Complete" or "Failed" line to 'Yes'. Record the following information for each bottle by position number in the carousel.

- Date (MM/DD/YY or MM-DD-YY) and time the ISCO collected water.
- Volume of water in the bottle
- Type of bottle (e.g. G for glass, P for poly)
- Specific ISCO displayed message, if present

If the sampler(s) did not trigger, change the "N/A" line to 'Yes' for Bottle #1 of each sampler and leave the other Bottle task lines unanswered.

If a sampler has been inactivated (e.g., sample collection completed) prior to this inspection but continues to appear on the inspection form, change the "N/A" line to "Yes" on this task line. Subsequent questions regarding this sampler may be left unanswered in this section.

29. If the location has more than one sampler complete Step 28 for each sampler.
30. Replace and secure the sampler top cover and secure the sampler shelter (if sampler is in a shelter).

4.2 Retrieving Samples

1. Don nitrile gloves and safety glasses.
2. Add up the volume of water collected (see flow chart in Attachment 3) and check that the total volume of water in glass and poly matches the required volume for the specific location identified in the MSGP Sampling and Analysis Plan. The volume of water required to complete analytical may vary by monitored location.
 - If sample volume is sufficient to fulfill all analytical requirements, continue with Step 3.
 - If sample volume is sufficient to fulfill part of the analytical requirements, consult the prioritization order on the MSGP Sampling and Analysis Plan to determine which analytical to fulfill OR contact the MSGP Data Manager, continue with Step 3 but retrieve only the volume needed.
 - If the collected sample will NOT fulfill the minimum required volume for any analytical:
 - Record total volume retrieved as "0" in **Item 8**
 - Complete a Visual Assessment (see EPC-CP-QP-064)
 - Pour out all water on the ground
 - Skip to Step 10 below

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CAUTION

ISCO Avalanche samplers are programmed to cool samples to 4°C. If water is collected and the refrigerator temperature reads higher than 6°C, **do not** retrieve samples that require ICE preservation. Refer to the MSGP Sampling and Analysis Plan for preservation requirements.

3. Remove filled and partially-filled bottles from the carousel.
4. For samples retrieved, immediately place lids onto the sample bottles and securely seal. Place custody seal tape on each bottle.
5. Write the date and time collected, Sampler Location number, and the corresponding carousel number on each retrieved sample bottle. Retrieve the sample collection date and time from the ISCO sampler.
6. Record total volume retrieved in **Item 8**.
7. Conduct a Visual Assessment (see EPC-CP-QP-064).
8. Place retrieved sample bottles in a cooler with blue ice (or equivalent).
9. Return any excess water or collected volume that exceeded the amount required to the ground at the location collected.
10. Install new certified clean sample bottles in the carousel to replace those bottles that collected stormwater. The number and type of bottles may vary. Ensure bottles match the configuration specified in the MSGP Sampling and Analysis Plan.
11. The 0.45 micron filter may also need to be replaced. Consult the most current revision of the Sampling and Analysis Plan for specifics. If the sampler is turned off for the quarter but new certified clean sample bottles and/or the filter have not been replaced, note this as follow-up maintenance required (see **Item 19**).
12. Replace and secure the center section of the sampler.
13. Return to steps in Section 4.1.

4.3 Completing the Inspection Form

1. When all task lines have been completed, make sure you have clicked the “Save” bar at the bottom of the page.
2. Click the “Back” arrow button in the upper left hand corner to exit the work order Tasks page and return to the Work Order Summary page.
3. Click the checkered flag in the upper right corner of the work order Summary page.

CAUTION

MC Express automatically changes the work order status to “Closed” and auto-populates the date and time fields.

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4. **Item 21:** Click on the expand arrow located on the right side of the “New Status” field and select “Completed” from the available dropdown menu. Ensure the date and time auto-populated are the date and time the inspection was completed.

If these fields need to be updated, click the “Date” field to modify it. Make necessary adjustments using the available timestamp application and click “Set” to apply changes.

6. **Item 22:** The inspector must type in his/her name in the “Labor Report Update” field.
Any additional notes, observations, or site conditions not documented in a task line “Reading” or “Comments” field can also be documented in the “Labor Report Update” field.
7. Scroll down the page to the “Signature” bar and click the expand arrow on the left side of the bar to open the “Signature” field.
8. **Item 23:** Capture an electronic signature by drawing with a finger on the tablet screen. The Lead Inspector is certifying that the information submitted is “true, accurate, and complete” by electronically signing the work order.

Note: If using MC Express on a desktop screen (not a tablet), the mouse must be used to sign electronically.

9. Click on the “Save” bar at the bottom of the page to close the “Signature” field.
10. Click on the “Back” button located in the upper left hand corner to return to the “My Open Work Orders” page.
11. Once you have completed an inspection, click on the Menu button again, and then click the “Logout” bar. Close the browser. All work will automatically uploaded from the MC Express application to the MC database.

Always log out of MC Express when you have finished work OR if work is interrupted.

4.4 REMOVING STORMWATER SAMPLES FROM THE FIELD

1. If samples were collected, deliver the samples and corresponding Sample Collection Log/Field Chain of Custody form to the EPC-CP Stormwater Program Laboratory at TA-59-1.
2. Sign the Sample Collection Log/Field Chain of Custody and place it with the sample(s) in the refrigerator. Ensure custody seal tape is intact on each sample bottle. Lock the refrigerator to prevent tampering. Refer to EPC-CP-QP-048, *Processing MSGP Stormwater Samples* for instruction on processing samples and submitting samples for shipping to an analytical laboratory.

5.0 TRAINING

The following personnel require training before implementing this procedure:

- EPC-CP technical staff and subcontract or other personnel who inspect automated stormwater samplers and retrieve stormwater samples for the MSGP.

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For EPC-CP staff the training method for this procedure is “self-study” (reading). Other participating groups may require training documentation pursuant to local procedures.

Personnel performing this procedure will be familiar with the most current versions of the following procedures and operation manuals:

- EPC-CP MSGP Sampling and Analysis Plan for the current monitoring year
- Manual for Teledyne ISCO Sampler Model 3700
- Manual for Teledyne ISCO Avalanche® sampler
- Manual for Teledyne ISCO 701 pH/Temperature module (if equipped at station)

Personnel performing steps in this procedure that involve electrical equipment **MUST** be trained to LANL electrical safety standards as prescribed in the IWD before performing those steps.

6.0 RECORDS

Records generated by this document will be submitted to the EPC-CP Records Management designated point of contact or document manager in accordance with P1020-1, *Laboratory Records Management* and with ADESH-AP-006, *Records Management Plan*.

- Completed ISCO Sampler Inspection and Sample Retrieval form(s)

7.0 DEFINITIONS AND ACRONYMS

7.1 Definitions

See LANL *Definition of Terms*.

7.2 Acronyms

See LANL *Acronym Master List*.

EPC-CP	Environmental Protection and Compliance-Compliance Programs
IWD	Integrated Work Document
LANL	Los Alamos National Laboratory
LANS	Los Alamos National Security, LLC
MC Express	Maintenance Connection MC Express web application
MSGP	Multi-Sector General Permit
NPDES	National Pollutant Discharge Elimination System

8.0 REFERENCES

None.

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9.0 ATTACHMENTS

Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express

Attachment 2: Crosswalk of EPC-CP-Form-1010.02 Hard Copy Format to Electronic Format Example

Attachment 3: Flow Chart for Sample Retrieval

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Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express

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MC Express

WORK ORDERS
All Repair Centers / All Shops

- My Open Work Orders**
Open work orders assigned to me **3**
- My Completed Work Orders**
Completed work orders assigned to me **1**
- All Open (Unassigned)**
All open work orders that are unassigned **13**
- All Open (Not Complete)**
All open work orders that are not complete **115**
- All Open (Overdue)**
All overdue work orders that are not complete **9**
- All Open**
All open work orders **200**
- All Closed**
All closed work orders **6,662**

ASSETS
All Repair Centers / All Shops

- Asset Hierarchy**
Hierarchical view of assets
- Asset List**
List view of all assets **2,955**

Refresh

MC Express

WORK ORDERS
My Open Work Orders

- #MSGP-59941**
MSGP07302
ISCO Sampler Inspection and Sample Retrieval
12/31/2017
- #MSGP-4342**
TA-3-22 Power & Steam Plant
MSGP Single Stage Sampler Inspection
12/30/2016
- #MSGP-1423**
MSGP07302
MSGP Visual Assessment Example
12/31/2017

3 Records

Refresh

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Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express (cont.)

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MC Express

WORK ORDER: MSGP-59941
Summary

[MSGP07302] MSGP07302
TA-3-38 Carpenter Shop
Issued

Hard Copy Inspection Example

- Tasks 44
- Assignments 1
- Labor 0
- Parts 0
- Other Costs 0
- Attachments 2
- Asset History 52

More Work Order Detail...

Refresh List

MC Express

WORK ORDER: MSGP-59941
Tasks

ON ARRIVAL

- 20
Is sampler ON and functioning properly upon arrival?
Asset: [210C01437] ISCO 3700 Sampler
- 30
Does the sampler display "Sampler Inhibited"? If No, record specific message(s).
Asset: [210C01437] ISCO 3700 Sampler
- 40
Is sampler time delta < 1 min (MST)? If No, record adjustment
Asset: [210C01437] ISCO 3700 Sampler
- 50
Is sampler ON and functioning properly upon arrival?
Asset: [210J01522] ISCO Avalanche Sampler
- 60
Does the Avalanche display "Program Disabled"? If No, record specific message(s).
Asset: [210J01522] ISCO Avalanche Sampler
- 70
Is sampler time delta < 1 min (MST)? If No, record adjustment
Asset: [210J01522] ISCO Avalanche Sampler

Refresh List

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Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express (cont.)

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MC Express

WORK ORDER: MSGP-59941
Edit Task

20
Is sampler ON and functioning properly upon arrival?
[210C01437] ISCO 3700 Sampler

Reading

Sampler knocked over by bear, power disconnected

Initials

Failed?

Yes

Not Applicable?

No

Complete?

No

Comments

Cancel Save

MC Express

WORK ORDER: MSGP-59941
Tasks

Water Collection Information

90
Is there evidence of flow? If YES (but no water collected), describe and record date/time of discharge.

100
Is any water collected? If YES, complete Bottle Information section.

110
If water was collected, record current refrigerator temperature (C).
Asset: [210J01522] ISCO Avalanche Sampler

120
If water was collected, record the pH measurement corresponding to the sample date/time: AVERAGE:...
Asset: [211C01137] ISCO pH and Temp Module

Water Retrieval information

140
Was sample volume RETRIEVED? If Yes, record total volume retrieved.

150
Was a Visual Assessment performed? If Yes, complete the MSGP Visual Assessment form (EPC-CP-TP-064).

Refresh List

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Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express (cont.)

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This screenshot shows the 'ON DEPARTURE' section of the MC Express interface. At the top, there is a header bar with a back arrow, the text 'MC Express', and a menu icon. Below this is a grey bar containing 'WORK ORDER: MSGP-59941' and 'Tasks' on the left, and a checkered flag icon and a dropdown arrow on the right. The main content area has a black header 'ON DEPARTURE'. It lists two tasks, each with a flag icon, a red box containing a number, and a right-pointing arrow. Task 10 asks 'Are electrical connections secure?'. Task 11 asks 'Record voltage of battery(ies) powering sampler. Voltage(s) >=11.7V?'. At the bottom is a blue bar with an information icon, 'Refresh', a grid icon, and 'List'.

Task ID	Task Description
10	Are electrical connections secure?
11	Record voltage of battery(ies) powering sampler. Voltage(s) >=11.7V?

This screenshot shows the 'Equipment specific tasks' section of the MC Express interface. It follows the same header structure as the first screenshot. The main content area has a black header 'Equipment specific tasks'. It lists six tasks, each with a flag icon, a red box containing a number, and a right-pointing arrow. Task 12 asks 'Does the sampler pass the ISCO diagnostics test?' with asset '[210C01437] ISCO 3700 Sampler'. Task 13 asks 'Is intake tubing free/clear of debris?' with the same asset. Task 14 asks 'Does sample tubing pass suction test?' with the same asset. Task 15 asks 'Is sampler on upon departure?' with the same asset. Task 16 asks 'Has the actuator switch been reset to "Latch"?' with the same asset. Task 17 asks 'Does ISCO display "Sampler Inhibited" on departure?' with the same asset. At the bottom is a blue bar with an information icon, 'Refresh', a grid icon, and 'List'.

Task ID	Task Description	Asset
12	Does the sampler pass the ISCO diagnostics test?	[210C01437] ISCO 3700 Sampler
13	Is intake tubing free/clear of debris?	[210C01437] ISCO 3700 Sampler
14	Does sample tubing pass suction test?	[210C01437] ISCO 3700 Sampler
15	Is sampler on upon departure?	[210C01437] ISCO 3700 Sampler
16	Has the actuator switch been reset to "Latch"?	[210C01437] ISCO 3700 Sampler
17	Does ISCO display "Sampler Inhibited" on departure?	[210C01437] ISCO 3700 Sampler

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Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express (cont.)

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The screenshot shows the MC Express interface for Work Order MSGP-59941. The 'Maintenance information' section is active, displaying two tasks. Task 330 asks if maintenance not described above was completed during inspection. Task 340 asks if follow-on maintenance not described above is required. Both tasks have a red flag icon with a number in a box (18 and 19 respectively) and a right arrow icon.

MC Express

WORK ORDER: MSGP-59941

Tasks

Maintenance information

330
18 Is any maintenance not described above completed during inspection? If Yes, describe.

340
19 Is any follow-on maintenance not described above required? If Yes, describe.

Refresh List

The screenshot shows the MC Express interface for Work Order MSGP-59941. The 'Bottle information' section is active, displaying a list of four tasks (360, 370, 380, 390) related to bottle collection. Each task asks for bottle type, collection date & time, volume, and/or any ISCO messages. All tasks have a red flag icon with a number in a box (20 and 21 respectively) and a right arrow icon.

MC Express

WORK ORDER: MSGP-59941

Tasks

Bottle information: IF bottle collected record bottle type (P or G), collection date & time, volume, and/or any ISCO messages

360
20 Bottle #1?
Asset: [210C01437] ISCO 3700 Sampler

370
Bottle #2?
Asset: [210C01437] ISCO 3700 Sampler

380
Bottle #3?
Asset: [210C01437] ISCO 3700 Sampler

390
Bottle #4?
Asset: [210C01437] ISCO 3700 Sampler

Refresh List

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Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express (cont.)

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MC Express

WORK ORDER: MSGP-59941
Edit Task

360
Bottle #1?
[210C01437] ISCO 3700 Sampler

Reading

2/10/17 14:32; 1L poly; no more liquid detected

Initials

Failed?

No

Not Applicable?

No

Complete?

Yes

Comments

Cancel Save

MC Express

WORK ORDER: MSGP-59941
Status Update

Issued

New Status 21

Completed

Date

03/16/2017 12:03 PM

Percent Complete 100%

Labor Report Update 22

Select Comments to Add.....

Jane Admin

Cancel Save

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Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express (cont.)

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MC Express

WORK ORDER: MSGP-59941
Status Update

Signature **23**

[\(Remove\)](#)

James Admin

Cancel Save

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Attachment 2: Crosswalk of EPC-CP-Form-1010.02 Hard Copy Format to Electronic Format

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Los Alamos National Lab - ADESH

Work Order MSGP-59941

MSGP Monitoring Stations
Printed 8/10/2017 - 11:25 AM (Duplicate Copy)

Maintenance Details

Requested By: Admin, Jane on 8/10/2017 11:23:00 AM
Procedure: MSGP ISCO Sampler Inspection and Sample Retrieval (EPC-CP-Form-1010.2 2)
Last PM: 7/20/2017
Project: ISCO Inspections wk 8/7/17 (P-MSGP-5212)
Reason: Hard Copy ISCO Sampler Inspection and Sample Retrieval

Target: 12/31/2017
Priority/Type: / Inspection
Department: Utilities and Infrastructure

 MSGP Program
 RG121.9
 TA-3-38 Carpenter Shop
 Monitored Outfall (073)
 MSGP07302

Contact: Admin, Jane
Phone: 123-4567

Tasks

#	Description	Meas.	No	N/A	Yes
ON ARRIVAL					
1 20	ISCO 3700 Sampler [210C01437] Is sampler ON and functioning properly upon arrival?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 30	ISCO 3700 Sampler [210C01437] Does the sampler display "Sampler Inhibited"? If No, record specific message(s).		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 40	ISCO 3700 Sampler [210C01437] Is sampler time delta < 1 min (MST)? If No, record adjustment		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50	ISCO Avalanche Sampler [210J01522] Is sampler ON and functioning properly upon arrival?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60	ISCO Avalanche Sampler [210J01522] Does the Avalanche display "Program Disabled"? If No, record specific message(s).		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70	ISCO Avalanche Sampler [210J01522] Is sampler time delta < 1 min (MST)? If No, record adjustment		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Collection information					
4 90	Is there evidence of flow? If YES (but no water collected), describe and record date/time of discharge.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 100	Is any water collected? If YES, complete Bottle Information section.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 110	ISCO Avalanche Sampler [210J01522] If water was collected, record current refrigerator temperature (C).		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 120	ISCO pH and Temp Module [211C01137] If water was collected, record the pH measurement corresponding to the sample date/time: AVERAGE: MINIMUM: MAXIMUM:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Retrieval information					
8 140	Was sample volume RETRIEVED? If Yes, record total volume retrieved.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 150	Was a Visual Assessment performed? If Yes, complete the MSGP Visual Assessment form (EPC-CP-TP-064).		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ON DEPARTURE					
10 170	Are electrical connections secure?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 180	Record voltage of battery(ies) powering sampler. Voltage(s) >=11.7V?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Equipment specific tasks					
12 200	ISCO 3700 Sampler [210C01437] Does the sampler pass the ISCO diagnostics test?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13 210	ISCO 3700 Sampler [210C01437] Is intake tubing free/clear of debris?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14 220	ISCO 3700 Sampler [210C01437] Does sample tubing pass suction test?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15 230	ISCO 3700 Sampler [210C01437] Is sampler on upon departure?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16 240	ISCO 3700 Sampler [210C01437] Has the actuator switch been reset to "Latch"?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17 250	ISCO 3700 Sampler [210C01437] Does ISCO display "Sampler Inhibited" on departure?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Attachment 2: Crosswalk of EPC-CP-Form-1010.02 Hard Copy Format to Electronic Format (cont.)


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260	ISCO Avalanche Sampler [210J01522] Does the sampler pass the ISCO diagnostics test?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
270	ISCO Avalanche Sampler [210J01522] Is intake tubing free/clear of debris?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
280	ISCO Avalanche Sampler [210J01522] Does sample tubing pass suction test?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
290	ISCO Avalanche Sampler [210J01522] Is sampler on upon departure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
300	ISCO Avalanche Sampler [210J01522] Has the actuator switch been reset to "Latch"?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
310	ISCO Avalanche Sampler [210J01522] Does Avalanche display "Program Disabled" on departure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintenance information				
18	330	Is any maintenance not described above completed during inspection? If Yes, describe.	<input type="checkbox"/>	<input type="checkbox"/>
19	340	Is any follow-on maintenance not described above required? If Yes, describe.	<input type="checkbox"/>	<input type="checkbox"/>
Bottle information: IF bottle collected record bottle type (P or G), collection date & time, volume, and/or any ISCO messages				
20	360	ISCO 3700 Sampler [210C01437] Bottle #1?	<input type="checkbox"/>	<input type="checkbox"/>
	370	ISCO 3700 Sampler [210C01437] Bottle #2?	<input type="checkbox"/>	<input type="checkbox"/>
	380	ISCO 3700 Sampler [210C01437] Bottle #3?	<input type="checkbox"/>	<input type="checkbox"/>
	390	ISCO 3700 Sampler [210C01437] Bottle #4?	<input type="checkbox"/>	<input type="checkbox"/>
	400	ISCO 3700 Sampler [210C01437] Bottle #5?	<input type="checkbox"/>	<input type="checkbox"/>
	410	ISCO 3700 Sampler [210C01437] Bottle #6?	<input type="checkbox"/>	<input type="checkbox"/>
	420	ISCO 3700 Sampler [210C01437] Bottle #7?	<input type="checkbox"/>	<input type="checkbox"/>
	430	ISCO 3700 Sampler [210C01437] Bottle #8?	<input type="checkbox"/>	<input type="checkbox"/>
	440	ISCO 3700 Sampler [210C01437] Bottle #9?	<input type="checkbox"/>	<input type="checkbox"/>
	450	ISCO 3700 Sampler [210C01437] Bottle #10?	<input type="checkbox"/>	<input type="checkbox"/>
	460	ISCO 3700 Sampler [210C01437] Bottle #11?	<input type="checkbox"/>	<input type="checkbox"/>
	470	ISCO 3700 Sampler [210C01437] Bottle #12?	<input type="checkbox"/>	<input type="checkbox"/>
	480	ISCO Avalanche Sampler [210J01522] Bottle #1?	<input type="checkbox"/>	<input type="checkbox"/>
	490	ISCO Avalanche Sampler [210J01522] Bottle #2?	<input type="checkbox"/>	<input type="checkbox"/>
	500	ISCO Avalanche Sampler [210J01522] Bottle #3?	<input type="checkbox"/>	<input type="checkbox"/>
	510	ISCO Avalanche Sampler [210J01522] Bottle #4?	<input type="checkbox"/>	<input type="checkbox"/>

Labor Report

Completed: 5/30/2017 4:44:00 PM

Report: Jane Admin


5/30/2017
Signature / Name
Date

I confirm the information as recorded is true, accurate and complete.

WO ID: _____ Page ____ of ____

21 Date: _____ Time: _____

22 Name/Z#: _____

Name/Z#: _____

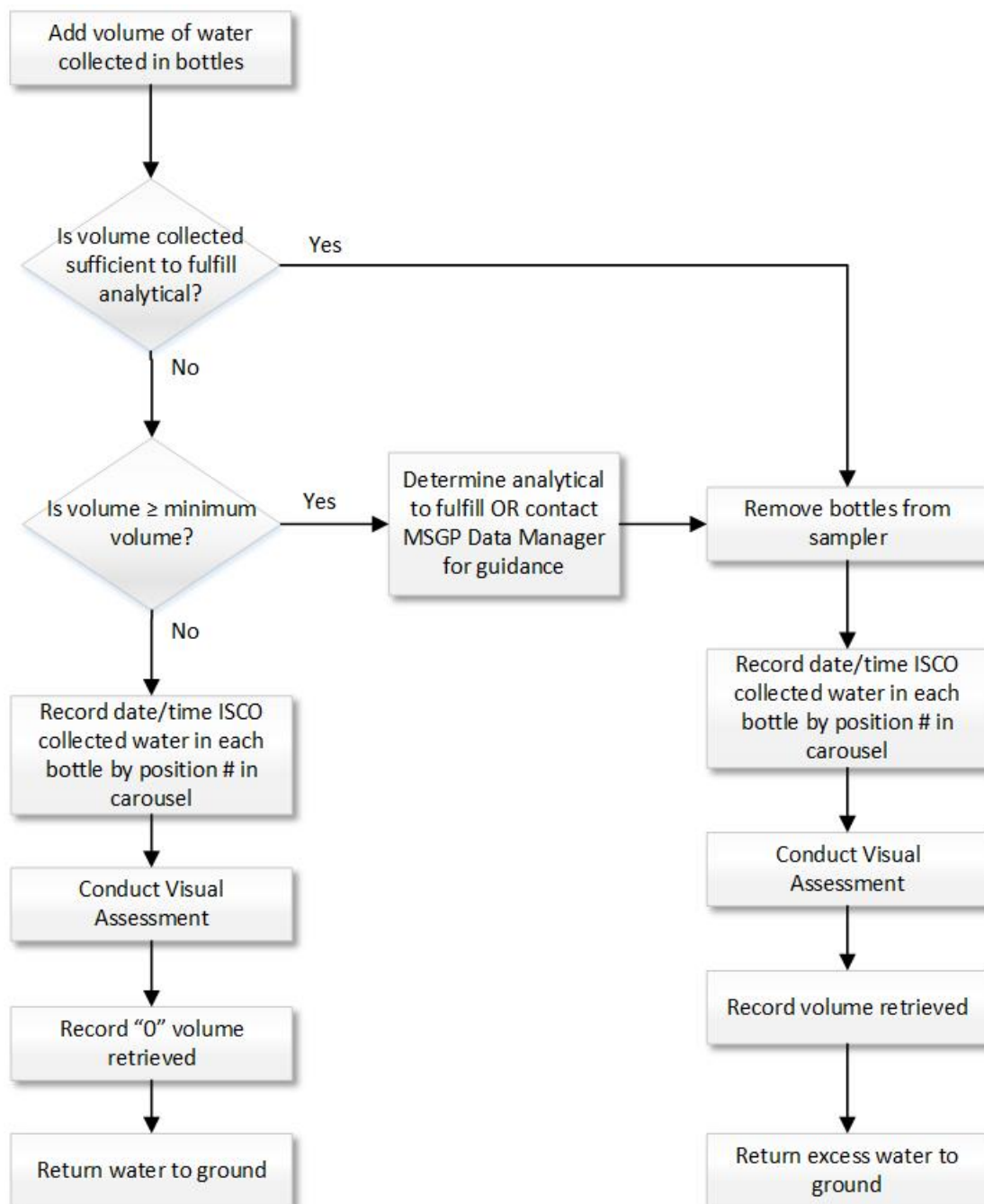
23 Lead Signature: _____

"I confirm the information as recorded is true, accurate and complete."

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Attachment 3: Flow Chart for Sample Retrieval

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ATTACHMENT N: TRAINING

Item ID	Revisor Title	Last Name	First Name	Middle Initial	Completion Status	Completion Date
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Crawford	Arthur		Completed	7/12/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Ortiz	Floyd	Filimon	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Petersen	Robyn	A.	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Vigil	Jackie	J	Completed	6/6/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sanchez	Franklin	A	Completed	6/15/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gonzales	Richard	F	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Maes	Robert	P	Completed	11/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gallegos	Tim	D	Completed	5/19/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Maassen	Larry	W	Completed	8/9/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Mares	Samuel	L	Completed	10/2/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Salazar	Willie	P	Completed	11/13/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lebrun	Donald	Bruce	Completed	9/26/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lucero	Bianca	M	Completed	9/25/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Rios	Robert	E	Completed	10/10/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Fresquez	Eugene	Bernard	Completed	5/31/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Buschman	Pete	E	Completed	8/28/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Honeycutt	Larry	B	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Griego	David	A	Completed	3/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lujan	Leonard	J	Completed	8/1/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lovato	Leonard	Richard	Completed	8/25/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gardner	Mark	A	Completed	5/23/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Padilla	Raul	E	Completed	9/14/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gonzales	Ernest	Dwayne	Completed	6/28/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Leyba	Anthony	R	Completed	5/31/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gallegos	Eppie	L	Completed	3/31/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Chacon	Ivan		Completed	9/19/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Garcia	Darryl	Charles	Completed	11/14/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Pacheco	Edward	R	Completed	5/24/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Roybal	Lionel	C	Completed	1/17/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Zamora	Rudy	Ray	Completed	9/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Stokes	Robert	Cleveland	Completed	11/1/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gonzales	Joseph	Margarito	Completed	9/29/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Shelton	Lori	Ann	Completed	9/19/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Moya	Fred	Pat	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Archuleta	Orlando	R	Completed	3/1/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lopez	Fred		Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Funk	David	John	Completed	6/24/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Trujillo	Jose	Eddie A	Completed	7/10/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Huerta	Ronald	C	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Stevens	Patrice	Ann	Completed	5/9/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Carter	Steven	Dale	Completed	5/16/2016

Item ID	Revisor Title	Last Name	First Name	Middle Initial	Completion Status	Completion Date
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Fernandez	Eric	E	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Ortega	Jose	D	Completed	5/22/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Banar	Alethea	K	Completed	6/8/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gonzales	William	G	Completed	10/7/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Jaramillo	Donald	D	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Ferran	Scott	Garrett	Completed	5/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Manzanares	Leonard	F	Completed	6/27/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Apodaca	Paul	E	Completed	9/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Mark	L	Completed	9/26/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Calderon	Peter	M	Completed	7/31/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Rick		Completed	6/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Diaz	Jeff	M	Completed	6/22/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Vigil	David	Kenneth	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Powell	Mark	E	Completed	5/18/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Stanton	James	Kevin	Completed	5/23/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lovato	Sherrye	L	Completed	8/28/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Coronado	Melissa	A	Completed	5/24/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Garcia y Balkey	Joyce	B	Completed	7/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Newberry	Paul	N	Completed	6/8/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Minton-Hughes	Julia	Elizabeth	Completed	10/3/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Duran	Dennis	A	Completed	6/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lujan	Joan	Julia	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Schumann	Kathie	Ann	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Whitney	Gary	Ellsworth	Completed	5/12/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gonzales	Frank		Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Rhodes	Valerie	A	Completed	9/28/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Arnink	Brian	C	Completed	9/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Cordova	Willie	J	Completed	6/13/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Rivera	Alexander	E	Completed	6/9/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sturgeon	Richard	Wayne	Completed	6/6/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Keller	David	Charles	Completed	5/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Fresquez	Louis	Lawrence	Completed	5/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lalonde	David	M	Completed	5/31/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Cordova	Eloy	D	Completed	9/23/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Helm	Gail	Marie	Completed	5/22/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Downing	Scott	R	Completed	10/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Robinson	Rhonda	Jo	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Reed	Mary	A	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Anast	Kurt	Roy	Completed	5/4/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Baker	Larry	P	Completed	5/19/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Fuehne	David	Patrick	Completed	12/11/2017

Item ID	Revisor Title	Last Name	First Name	Middle Initial	Completion Status	Completion Date
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lujan	Jordan	J	Completed	11/2/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	French	Sean	B	Completed	10/10/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Soderberg	Charles	L	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Bush	Harry	Matthew	Completed	10/26/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gonzales	Juan	Andy	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Marvin	Lawrence	Completed	6/28/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lopez	Joshua	L	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Espinoza	Adam	Christophe	Completed	10/13/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Dixson	David	Paul	Completed	6/21/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gallegos	Lucas	E	Completed	5/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Bustos	Roland	M	Completed	5/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Vigil	John	William	Completed	10/25/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Vigil	Bryan	M	Completed	9/11/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Elicio	Andy	U	Completed	6/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Vigil	Jose	Emit	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Paul	Amos	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Mojica	Tommy		Completed	6/11/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Trujillo	Robert	Andrew	Completed	10/30/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Bishop	Tony	L	Completed	5/16/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Romero	Adrian	Tito	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Harris	Mark	Stephen	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Jalbert	Louis	Eugene	Completed	6/20/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Garcia	Ronnie	A	Completed	5/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Zerbee	Jonetta	J	Completed	4/13/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Herrera	Aaron	James	Completed	5/27/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sparks	Jason	Keith	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Baumgartner	Bruce	Edward	Completed	7/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Ricardo	Benjamin	Completed	4/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Guadagnoli	John	F	Completed	5/22/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Moseley	Jessica	L	Completed	7/21/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Griffis	Robert	L	Completed	5/4/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Archuleta	Bernardo		Completed	7/12/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Rodriguez	James	A	Completed	4/12/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Bernabe	Ben	F	Completed	5/25/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lucero	Randy	Phil	Completed	5/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Staples	Wendy	Ann	Completed	5/30/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Balkey	Brian	J	Completed	10/26/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Van Valkenburg	Taunia	S	Completed	9/28/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Naranjo-Suazo	Amanda	P	Completed	6/16/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Gilbert	David	Completed	5/24/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gurley	Michael	Alan	Completed	5/30/2017

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15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	O'Grady	James	P	Completed	8/3/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Valdez	George	G	Completed	8/29/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Salazar	Joseph	Andrew	Completed	5/15/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Chavez	Daniel	J	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Guy	John	David	Completed	8/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Medina	Jose	A	Completed	8/30/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Vigil	Christopher	J	Completed	6/30/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gonzales	Gabriel	Silas	Completed	10/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Carter	Mitchell	Lynn	Completed	9/12/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Galle	Lane	R	Completed	6/14/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Apodaca	Arthur	C	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Weyerman	Curtis	W	Completed	10/2/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Garcia	Joseph	A.	Completed	9/12/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Wedgeworth	Bruce	S	Completed	7/31/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Aguilar Fernandez	Genevieve	S	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Medina	Billy	J	Completed	7/7/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Shepard	Mark	D.	Completed	6/26/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gonzales	Paul		Completed	5/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Shendo	Maurice	G	Completed	5/19/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Garcia	Juan	Clemente	Completed	5/24/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Medina	Pablo	M	Completed	5/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Ortiz	Jeremy	N.	Completed	5/4/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Mondragon	Gilbert	S	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Case	Kenneth	C	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Courville	Kenneth	Charles	Completed	11/18/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Christine	A	Completed	6/10/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Hands	Lee	William	Completed	9/28/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Allen	Shannon	Purdue	Completed	4/27/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Schultz	Curtis	J	Completed	6/14/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sandoval	Kathryn	L	Completed	10/13/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Onesimo	A	Completed	5/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Rodger	R	Completed	11/21/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Garcia	Terrence	Kerwin	Completed	4/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lopez	Bernadette	M	Completed	1/12/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lobato	Ted	Christophe	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Anaya	Fabian	L	Completed	5/24/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Aguirre	Ernestine	Vera	Completed	5/24/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Madore	John	Douglas	Completed	5/19/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Murphy	Marvin	M	Completed	5/8/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Baca	Manuel	I	Completed	5/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Smith	Louis	Lynn	Completed	5/16/2016

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15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Montoya	Betty	Corina	Completed	10/4/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Aragon	Israel	Ricardo	Completed	6/13/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Roybal	Daniel	Reyes	Completed	7/11/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Jaramillo	Melvin	R	Completed	5/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Fernandez	Jonathan	G	Completed	1/17/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Salazar	Denise	Robin	Completed	6/28/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Aaron	N	Completed	8/8/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Parker	Rex	Allen	Completed	11/30/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gallegos	Kristin	L	Completed	11/10/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sandoval	Leonard	Donaiz	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Quintana	Philip	Anthony	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Montoya	Robert	E	Completed	8/2/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Plaue	Jonathan	W	Completed	10/23/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Monica	R	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Abeyta	Rudy	E	Completed	5/26/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Chinana	Meldon	H	Completed	8/2/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Roybal	Randy		Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Romero	Jacqueline		Completed	5/22/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lopez	Ruxanne		Completed	5/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Trujillo	Joseph	James	Completed	5/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sanchez	Norman	A	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Salazar	Jonathan	P	Completed	9/27/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Mctaggart	Kevin	K	Completed	9/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sterkel	Scott	L	Completed	12/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Woody	Donald	Harland	Completed	1/9/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Guillen	Charles	C	Completed	9/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Aguilar	James	Mitchell	Completed	9/25/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Bustos	Jessica	Geraldine	Completed	5/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Quintana	John	Matthew	Completed	9/27/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Duran	Matthew	S	Completed	6/19/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Valencia-Beckma	Vivian	P	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Montoya	Leon		Completed	5/24/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Glen	Michael	Completed	5/2/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Serrano	Melvin	T	Completed	1/18/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Griego	Anthony	Robert	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Aderhold	Randy	V	Completed	8/2/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Maes	Christopher	R	Completed	9/21/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Jones	Christopher	Shane	Completed	9/12/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lackas	Lance	E	Completed	8/9/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Cordova	Kristopher	Ray	Completed	5/30/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Bullock	Christine	Anne	Completed	6/5/2017

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15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Andersen	Brenda		Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sowders	Michael	H	Completed	5/19/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Osborn	Michael	Scott	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Bynum	William	Randy	Completed	10/31/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Cameron	William	Wiley	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	DiSalle	Camillo	R	Completed	6/12/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Aragon	Jose	D	Completed	5/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Rogers	Sam	A	Completed	5/22/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Earl	James	Completed	10/6/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Taylor	Frank	Joseph	Completed	5/15/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Turner	Michelle	Rene	Completed	11/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Archuleta	Dominic	R	Completed	7/10/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Hoback	Nicholas	L	Completed	6/23/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Weaver	Mark	Alan	Completed	5/23/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martin	Paul	William	Completed	9/26/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Carman	Christopher	Jon	Completed	5/24/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Goldberg	Mitchell	S	Completed	9/28/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Armijo	Alfred	A	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Barton	Timothy	P	Completed	1/8/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martin	Jeffrey	B	Completed	6/21/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Disalle	Salvatore		Completed	6/6/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Malone	Charles	P	Completed	5/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Earls	Bruce	Adam	Completed	5/23/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Vish	Francis	Michael	Completed	8/1/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Fleischacker	Randy	Joe	Completed	5/24/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	McClean	Bret	Douglas	Completed	7/21/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	DeSotel	Ronald	Robert	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Rodriguez	Darlene	S	Completed	5/23/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Griffiths	Richard	J	Completed	10/3/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Padilla	Ralph	Ray	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Carter	Daniel		Completed	3/31/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Kevin	J	Completed	8/10/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Cangelosi	Tracy	Eva	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Allen	Donald	Lee	Completed	12/19/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	DeWees-Lee	Karen	Irene	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Trujillo	Russell	T	Completed	6/13/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Bena	Clare	E	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lopez	Larry	A.	Completed	10/26/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Semon	Robert	Joseph	Completed	9/14/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gutierrez	Evelyn	C	Completed	7/21/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Salazar	Erica	D	Completed	6/19/2017

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15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lattin	Rebecca	Renee	Completed	9/26/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Fernandez	Jose	Robert	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Maestas	Waylon	Patrick	Completed	11/1/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lopez	Mark	Anthony	Completed	4/26/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Vialpando	Rudy	D.	Completed	9/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Montoya	James	Matthew	Completed	6/3/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Anaya	Edward	A	Completed	9/14/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sarnowski	David	Edward	Completed	1/5/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Harder	Robert	Victor	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Boies	Gerald	H	Completed	8/7/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	York	Ronald	L	Completed	9/25/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Rigby	Brandon	Ray	Completed	8/28/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Elliott	J. Aaron		Completed	5/31/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Acosta	Fernando		Completed	5/31/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Thomas	William	Harvey	Completed	9/2/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Mally	Gary	Edward	Completed	5/22/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Archuleta	Frederico	F.	Completed	9/27/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Groover	Edwin	DeLoach	Completed	8/28/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Ulibarri	Teodoro	Joshua	Completed	7/25/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Miller	Joshua		Completed	9/12/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Lydia	Emma	Completed	7/19/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Salerno-Bush	Lisa		Completed	4/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Rodriguez	Alfredo		Completed	7/11/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Kanzleiter	Joseph	Paul	Completed	12/2/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Vigil	Jeremy	T	Completed	6/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Trujillo	Gary	W	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Schrock	David	Edward	Completed	9/7/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gammon	Jeffery	Scott	Completed	6/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Dewulf	Steven	J	Completed	5/26/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	West	Shawn	Ray	Completed	5/23/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Frederici	David	E	Completed	5/30/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gunning	Stephen	B.	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sandoval	Steven	Jay	Completed	6/7/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Baumer	Andrew	Ronald	Completed	8/29/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lietz	Paul	James	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sanzolone	Jeffrey	J	Completed	7/24/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lewis	Travis	D	Completed	1/17/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Houdashelt	Robert	Joseph	Completed	5/31/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Fordham	Gerald	F.	Completed	10/16/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Salazar	Larry	Joseph	Completed	5/24/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Vigil	Thomas	David	Completed	6/1/2016

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15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Churchill	Elizabeth	Anne	Completed	11/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Cano	Ramon	G	Completed	6/1/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	James	Michael	Completed	6/22/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Brownsberger	Christopher	P	Completed	8/29/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Verhaagen	Richard	K.	Completed	7/25/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Branaman	James	D.	Completed	9/25/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Tyson	Michael	Alvin	Completed	10/3/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gonzales	Karl	D	Completed	6/5/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Vasquez	Elidoro	Alfred	Completed	5/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Harvey	Daniel	John	Completed	5/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Molter	Robert	Joseph	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Ulibarri	Richard	Manuel	Completed	10/3/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Bahe	Verges	R.	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Edward	Jesse	Completed	8/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Valerie	Audrey	Completed	5/24/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Moreland	Kenneth	C	Completed	9/6/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Hanlon	James	F	Completed	9/20/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Tapia	Henry	P.	Completed	6/21/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Romero	Nicole	M.	Completed	9/28/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lopez	Billy	A	Completed	2/27/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Story-Hughes	Sandra	Dee	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Walker	Kathy	L	Completed	2/21/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Coronado	Adrian	Enrique	Completed	9/26/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Crumpler	William	Allen	Completed	5/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Bracy	Jermaine	Marsalis	Completed	6/12/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Ferran	Lloyd	M	Completed	10/3/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Baros	Ramon	B.	Completed	9/28/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Cook	Kelly	L	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Riley	Richard	Thomas	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Simmons	Craig	E.	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Villa	Joshua	Phillip	Completed	5/23/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Cabesuela	Garry	G	Completed	6/8/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sedillo	Ricardo	P	Completed	9/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Simpson	Kenneth		Completed	6/26/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Fitzpatrick	Michael	Dean	Completed	5/23/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Matthew	J	Completed	5/31/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Vigil	Jimmy	L	Completed	6/23/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Garcia	Anthony	D.	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Hasselstrom	Thaddeus	Simon	Completed	12/6/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Morris	Stuart	James	Completed	12/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Baros	Jose	F	Completed	9/26/2017

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15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gallegos	Brian	Manuel	Completed	5/18/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Hohs	Wayne	Peter	Completed	6/1/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Dentler	Patricia	Lynn	Completed	4/24/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gallegos	Adam	Dominic	Completed	10/2/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gutierrez	David	R.	Completed	9/18/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Segovia	Adam	Javier	Completed	6/27/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Ramirez	Lorenzo	E	Completed	7/26/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Roberts	Benjamine	Bellem	Completed	10/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Solms	David	Anthony	Completed	6/27/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Chris	T	Completed	5/25/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Kenneth	W	Completed	7/17/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Duran	Elena	G	Completed	6/10/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sager	David	D	Completed	5/16/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Williams	David		Completed	7/1/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Cordova	Brian	Phillip	Completed	7/11/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Santoro	Joseph		Completed	6/19/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Jaramillo	Jesse	G.	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Ronquillo	Paul	M	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Garcia	Chris	J	Completed	9/27/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sonnenberg	Leslie	Keith	Completed	5/26/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Hansel	Robert	J.	Completed	9/21/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Marquez	Eva	Dianne	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Aguilar	Alfredo		Completed	6/13/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Garcia	Lawrence	J	Completed	10/12/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Randy	J	Completed	5/3/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Vigil	Severo	J	Completed	5/31/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Adam	F	Completed	7/10/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Maldonado	Isaiah	J	Completed	1/5/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Purdy	Robert	J	Completed	5/25/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Spencer	Jerry	C.	Completed	5/3/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Herrera	Angel		Completed	6/16/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Rodriguez	Jose	V	Completed	3/2/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Brister	Adam	Ray	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Groberg	Curtis	Jay	Completed	11/1/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Baca	Gilbert	A	Completed	5/24/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Rivera	Tony	N	Completed	1/10/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Hall	Kyle	Lewis	Completed	1/18/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Jacquez	Albert	J	Completed	1/11/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Hinds	Robert	Norton	Completed	6/23/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Begay	Rodger	G	Completed	5/31/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Griego	Reece	Isaiah	Completed	10/25/2016

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15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Begay	Rodrick	G	Completed	6/21/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Baca	Victoria	R.	Completed	9/25/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Stegman	Dustin	Allen	Completed	11/7/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Klagmann	Jamison	E	Completed	10/10/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Hennessy	Daniel		Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Benton	Douglas	James	Completed	5/16/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Jaramillo	Isaac	V	Completed	3/6/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Heselton	John	Henry	Completed	5/1/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gregory	Dakota	James	Completed	7/10/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Smith	Todd	Allen	Completed	9/7/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Ford	Michael	Scott	Completed	6/29/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Strong	Jakie	E	Completed	5/10/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Serrano	Michael	F	Completed	6/5/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Bitsui	Berdie	R	Completed	7/24/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Rush	Jeffrey	T	Completed	10/4/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Beier	Martin	C.	Completed	5/17/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Zocco	Matthew	Victor	Completed	5/24/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	McAllister	Nancy	Sue	Completed	6/27/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sisson	Clinton		Completed	5/20/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Carey	Gregory	Michael	Completed	8/24/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Blakney	John		Completed	8/15/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Clayson	Richard	Aaron	Completed	6/22/2016
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Milliorn	Jared	Lee	Completed	11/8/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Saiz	Noelia		Completed	2/2/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Soto	Aaron	S	Completed	7/11/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Gonzales	Jon	Paul	Completed	10/13/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Betonie	Lucinda	T.	Completed	11/6/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	von Rohr	Jennifer	S.	Completed	10/23/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Bechtel	Gwen	Marie	Completed	11/6/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Contreras	Paul		Completed	12/13/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Duran	Nathaniel	I	Completed	1/17/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lynch	Derek	Joseph	Completed	1/10/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Samayoa	Alvy	Ronaldo	Completed	1/26/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Houdashelt	Lynette	Marie	Completed	7/31/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Barela	Felix	R	Completed	1/5/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Mullally	Donald	P	Completed	9/7/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Penalosa	Nicholas	A	Completed	10/4/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Angelo	Samuel	Christophe	Completed	6/7/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Cisneros	Joseph	Andrew	Completed	6/15/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Swindall	Timothy	Scott	Completed	6/15/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Cisneros	Reyes	G	Completed	7/11/2017

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15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Tenorio	David	R	Completed	8/29/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Saavedra	Juan	D	Completed	11/2/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Begay	Chance	T	Completed	1/9/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Wakefield	Diane	Irene	Completed	10/2/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Dickens	Kaitlyn	Marie	Completed	9/21/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Lederman	Kayleen	Clara	Completed	8/25/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Tsinnie	Arnold		Completed	10/5/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Brantley	Larry		Completed	8/15/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Martinez	Benny	E	Completed	9/11/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Sims	Anthony	Robert	Completed	10/3/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Wilde	Nikolas	Sandquist	Completed	10/16/2017
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Raybon	Sean	D	Completed	1/10/2018
15428	4 Annual MSGP Training for TA-54, Areas L, G, and RANT	Garcia	Andrew	E	Completed	1/5/2018