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Author(s):	Mondragon, Dale W. Schrock, David Edward Wheeler, Holly Lynn
Intended for:	National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP), regulatory compliance document Environmental Programs
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**TA54-PLAN-1307, R1
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 2017

POINT OF CONTACT (POC) / INFORMATION

Environmental & Waste Management Operations (EWMO)
SWPPP Team Leader: Robert (Bob) Stokes
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P.O. Box 1663, Los Alamos, NM 87545

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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 RoadCity: Los Alamos State: NM ZIP Code: 87545County 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: SIC 4231Sector (2015 MSGP, Appendix D and Part 8): Sector PSubsector (2015 MSGP, Appendix D and Part 8): Subsector P1Co-located Industrial Activity SIC code: Not Applicable (N/A)Sector (2015 MSGP, Appendix D): N/ASubsector (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 84Is the facility located in Indian country? ☐ YES ☒ NOIf *yes* to the above question then provide name of ReservationIf *no* to the above question then indicate "N/A" N/AAre 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: Mark (Barry) Walker Z# 238501
 Organization: MSS-EWMFO Maintenance Manager
 Work Phone: (505) 667-3122
 Work Email: mbwalker@lanl.gov

Secondary POC: Louis L. Smith Z# 179942
 Organization: MSS-EWMFO Work Execution Manager
 Work Phone: (505) 667-4282
 Work Email: l_smith@lanl.gov

Site SWPPP:

POC: Holly L. Wheeler Z# 118432
 Organization: EPC-CP MSGP Program Manager
 Work Phone : (505) 667-1312
 Work Email : hbenson@lanl.gov

Facility SWPPP:

Primary POC: David E. Schrock Z# 232597
 Organization: DESHS-EWMS: Environmental & Waste Management Support
 Work Phone : (505) 665- 6547
 Work Email : dschrock@lanl.gov

Secondary POC: Robert (Bob) Stokes Z# 100844
 Organization: DESHS-EWMS: ESH Manager (SWPPP Team Leader)
 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): Robert (Bob) Stokes DESHS-EWMO Mgr.	<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 Water Quality Subject Matter Expert: Holly L. Wheeler	<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: Mark (Barry) Walker MSS-EWMFO 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): Joseph A. Garcia DESHS-EWMO	<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): David E. Schrock DESHS-EWMO	<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****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
Quarterly Benchmark	P	No Benchmark Monitoring Required						

¹F10u - 10 µm filter**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	—	Al

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 ENV-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 Emergency Operations - Emergency Response (EO-ER) Team.

The LANL EO-ER office has been appointed by the Laboratory Director as the organization responsible for Emergency Management at the Laboratory. The LANL EO-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 EO-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 EO-ER Office or EPC-CP in accordance with Environmental Protection Division Procedure ENV-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 EO-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, *Standard Operating 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 ENV-RCRA QP-064, *MSGP Storm Water Visual Inspections*:

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 31 st

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 Inspections, ENV-RCRA-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*
- ENV-RCRA-QP-047, *Inspecting Storm Water Runoff Samplers & Retrieving Samples for the MSGP*
- ENV-RCRA-QP-048, *Processing MSGP Storm Water Samples*
- ENV-RCRA-QP-064, *Multi-Sector General Permit Storm Water Visual Inspections*

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	Analytes	Filtered / Unfiltered	Regulatory Standard	Units	Regulatory Standard Type	Regulatory Standard Reference
Impaired Waters	-	NM-128.A_08	1336-36-3 (Total PCBs)	UF	0.00064	ug/L	NM 2010 HH Persistent	20.6.4.900 NMAC Subpart J
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
Quarterly Benchmark	P	No Benchmark Monitoring Required						

¹F10u – 10 µm filter

²F – 0.45 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.

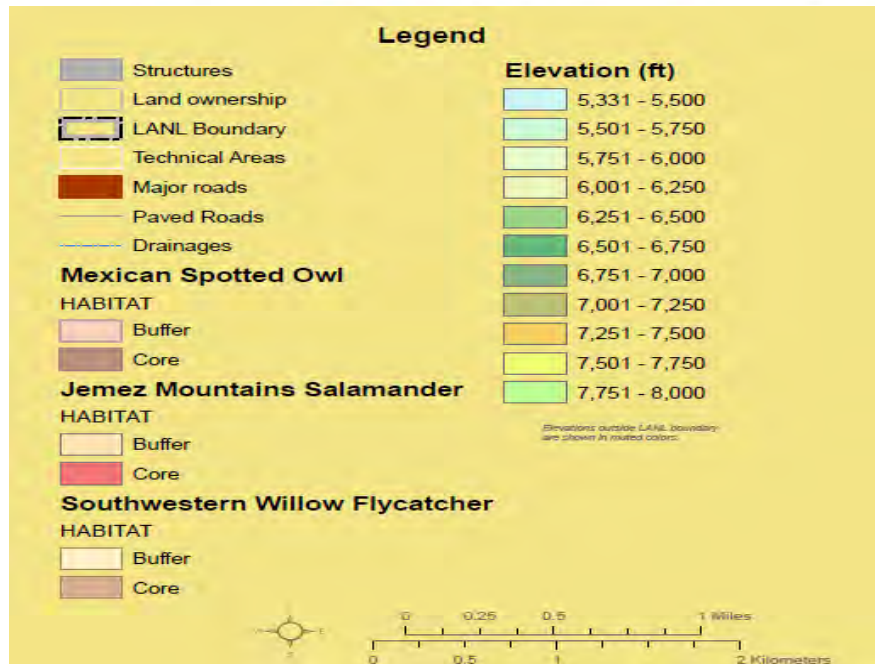
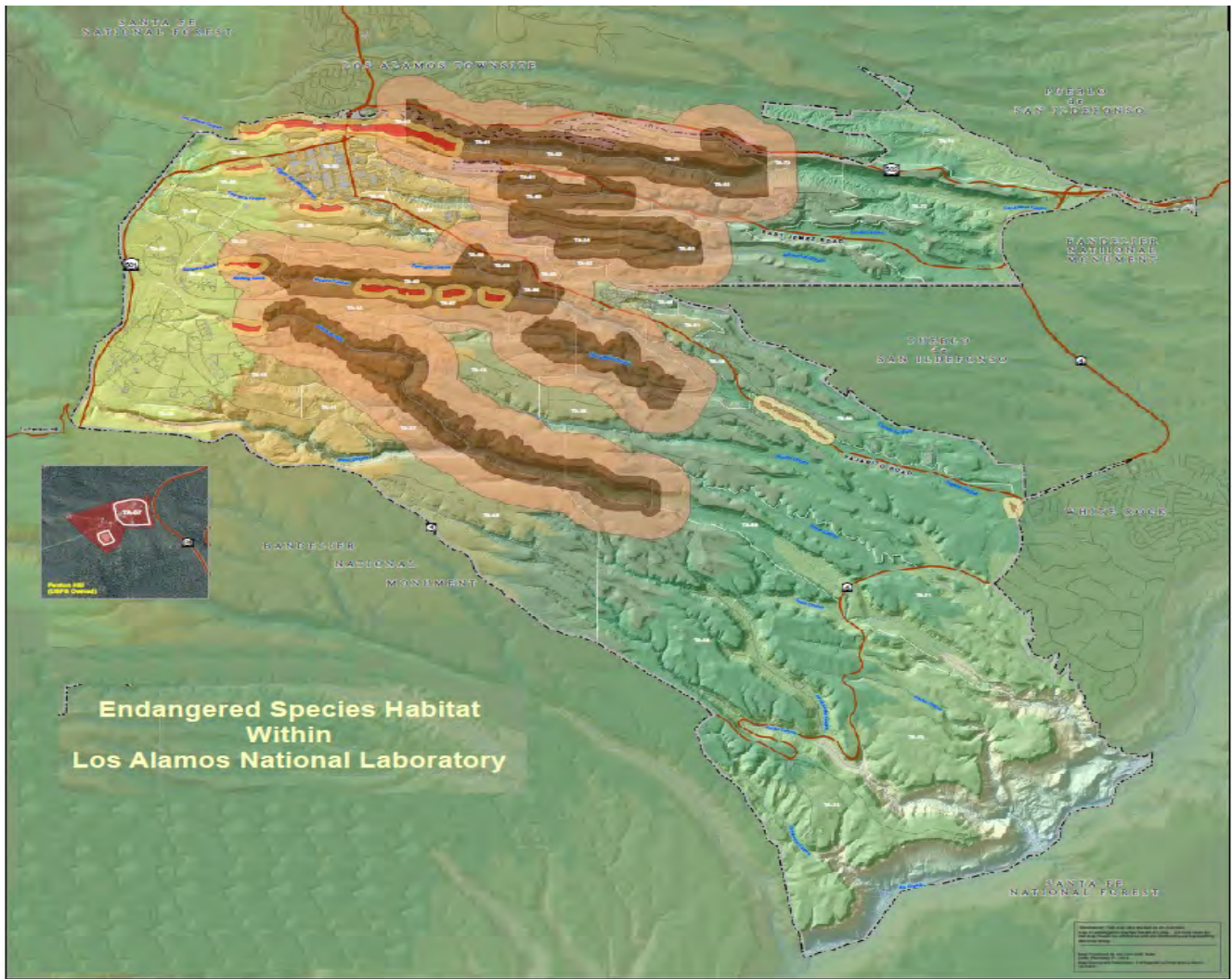
Currently, the only federally-listed species that have habitat or occur at LANL are the Southwestern Willow Flycatcher (*Empidonax trailii extimus*), Jemez Mountains Salamander (*Plethodon neomexicanus*), and Mexican Spotted Owl (*Strix occidentalis lucida*). Suitable habitats for these species, along 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 ENV-RCRA MSGP CAR database maintained by EPC-CP Water Quality team, in accordance with the ENV-CP-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.

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 ENV-RCRA 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 ENV CP.

Copies of the Annual Comprehensive Site inspection reports are kept in separate binders with the SWPPP.

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

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.

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: Robert C. Stokes (Bob)

Title: PTT Team Leader / DESHS-EWMO Manager

Signature: 

Z#: 100844

Date: 1/31/2017

SECTION 8: SWPPP MODIFICATIONS

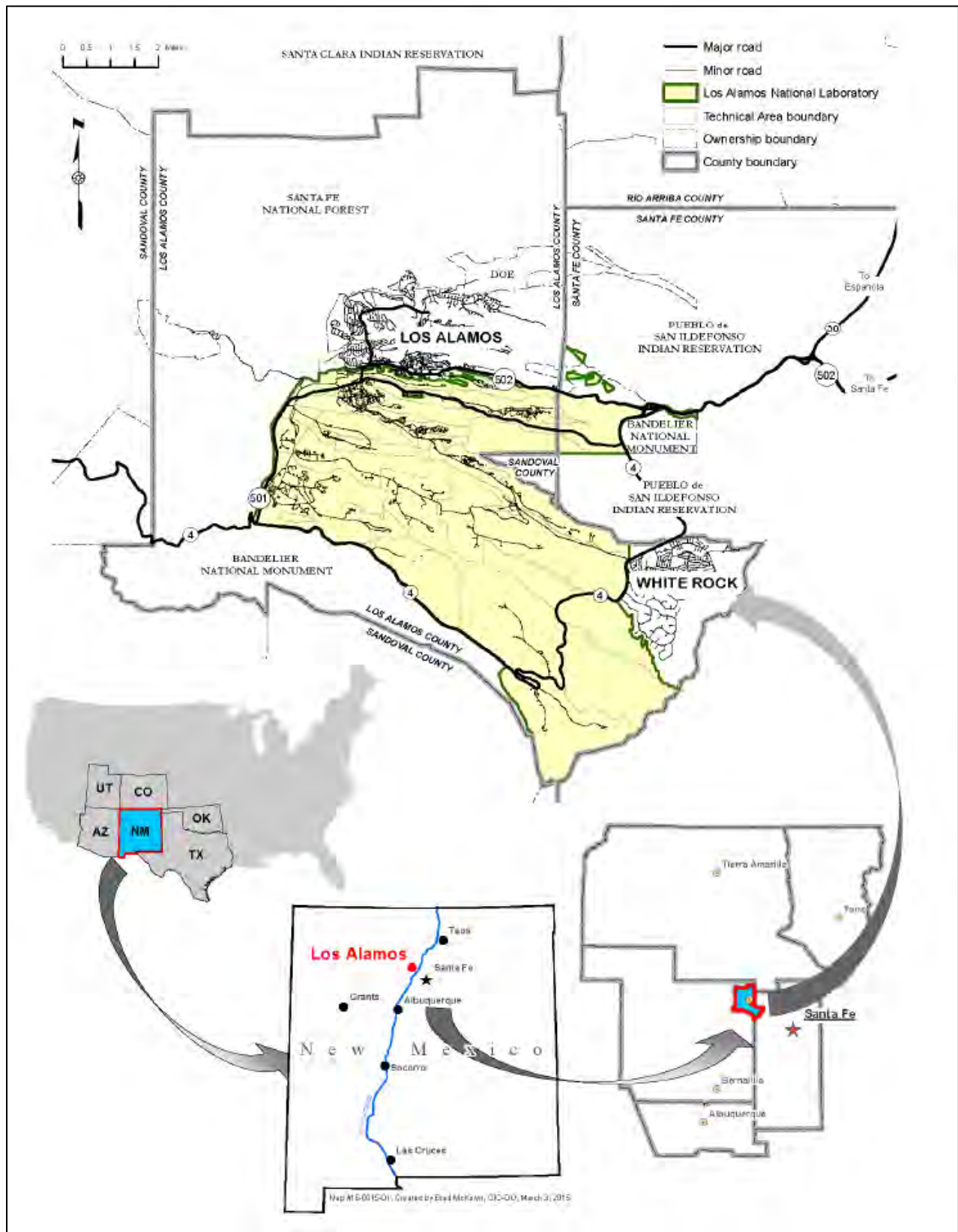
Modification to address any of the triggering conditions for corrective actions listed in §6, *Corrective Actions and Deadline* will be addressed as follows:

- 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

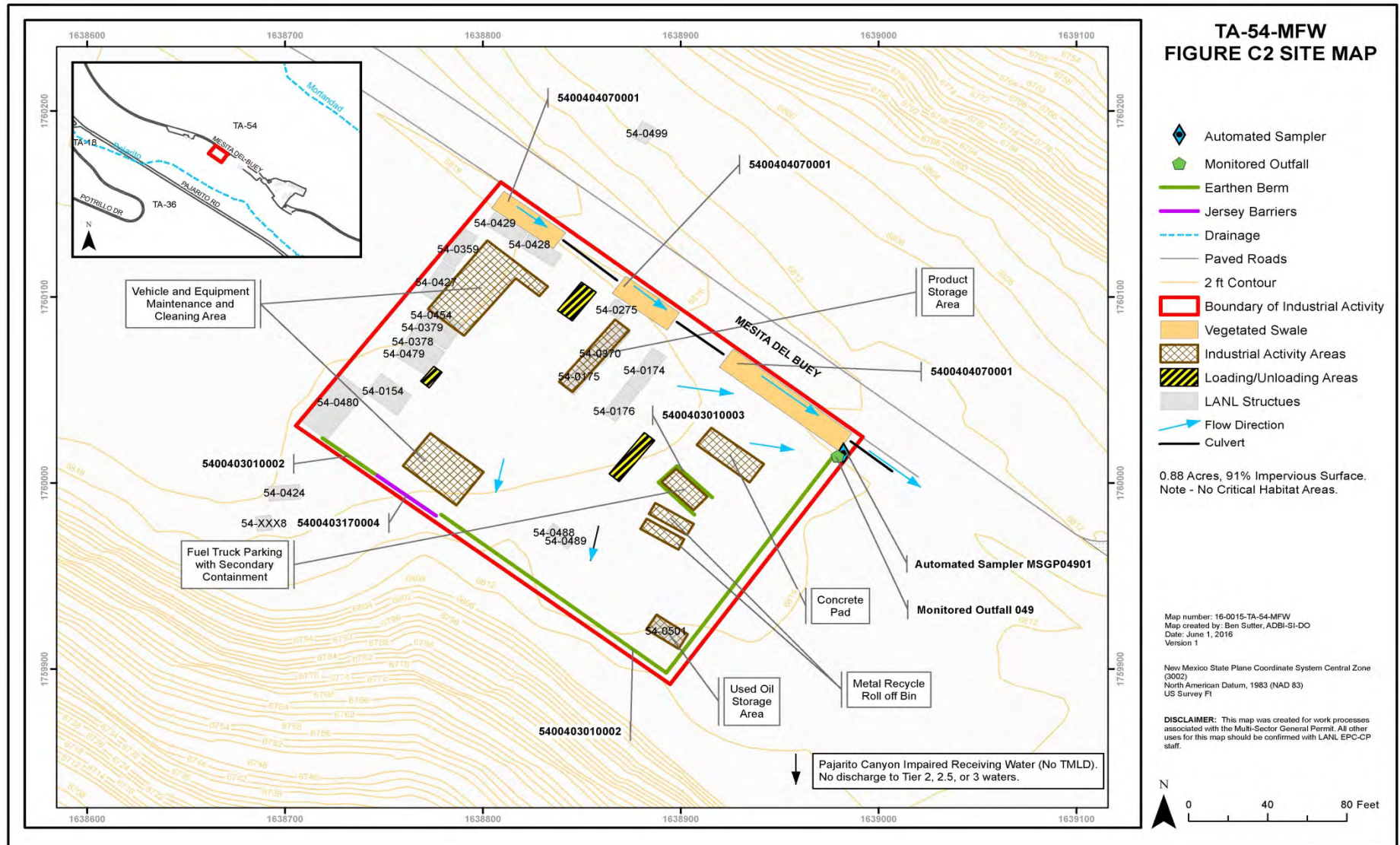
SECTION 9: SWPPP ATTACHMENTS

Attachment	Description / Title
A	General Location Map
B	Site Maps
C	2015 Multi-Sector General Permit (MSGP)
D	SWPPP Amendments
E	Quarterly Visual Assessments
F	Routine Facility Inspections
G	Annual Reports and Corrective Action Documentation
H	Sampling Data
I	Standard Operating and Maintenance Procedures
J	Threatened and Endangered Species Habitat Management Plan for LANL
K	Biological Assessment of Jemez Mtn Salamander Site Plan, Concurrence 8 DEC 2013
L	Authorized Representatives for NPDES Stormwater General Permits
M	Environmental References/Documents
N	Training

Attachment A General Location Map



Attachment B Site Map



Attachment C
2015 Multi-Sector General Permit

MSGP

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.

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

Signed and issued this 4th day of June, 2015

Ken Moraff
Director, Office of Ecosystem Protection,
EPA Region 1

Signed and issued this 4th day of June, 2015

Karen Flournoy
Director, Water, Wetlands, and Pesticides Division, EPA
Region 7

Signed and issued this 4th day of June, 2015

José C. Font
Director, Caribbean Environmental Protection Division,
EPA Region 2

Signed and issued this 4th day of June, 2015

Darcy O'Connor
Acting Assistant Regional Administrator, EPA Region 8

Signed and issued this 4th day of June, 2015

Jon. M Capacasa
Water Protection Division, EPA Region 3

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, 2015

Tinka G. Hyde
Director, Water Division, EPA Region 5

Signed and issued this 4th day of June, 2015

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

Signed and issued this 4th day of June, 2015

William K. Honker
Director, Water Quality Protection Division, EPA Region 6

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.

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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

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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

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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

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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.

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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

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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

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- *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 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.

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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.

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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. 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.
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. 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.
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 Operators of industrial activities located in the State of Idaho (except Indian country), in the State of Washington (except Indian country) if operated by a federal operator, or on Spokane Tribe of Indians lands are not yet eligible for coverage under the MSGP because certifications required by section 401 of the CWA were not received in time. Once permit coverage is available in these areas, the following NOI deadlines will apply:

- For operators of industrial activities that were authorized for coverage under the 2008 MSGP: No later than 90 days after the date of permit issuance in these areas.
- For operators of industrial activities that commence discharging on or after September 30, 2013 and prior to 90 days after the date of permit issuance in these areas: As soon as possible, but no later than 90 days after permit issuance.
- For operators of industrial activities that commence discharging 90 days after permit issuance in these areas: A minimum of 30 days prior to commencing discharge in accordance with the terms of the 2015 MSGP.

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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

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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.

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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;

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- 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

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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

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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;

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- 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

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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.

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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.

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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

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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.

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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

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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

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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.

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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.

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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

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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.

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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;

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- 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-

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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;

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- 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;

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- 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

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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);

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- 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.

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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

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- 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.

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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.

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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.

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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.

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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-EPA's-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);

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- 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

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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 8.5.8.1 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 8.5.8.1 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.

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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;

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- 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.

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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;

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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) Total Arsenic (saltwater) ¹	0.15 mg/L 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

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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.

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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.

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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	Hardness Dependent
	Total Lead (saltwater) ¹	0.21 mg/L
	Total Iron	1.0 mg/L
	Total Zinc (freshwater) ²	Hardness Dependent
Subsector C2. Industrial Inorganic Chemicals (SIC 2812-2819)	Total Zinc (saltwater) ¹	0.09 mg/L
	Phosphorus	2.0 mg/L
	Total Aluminum	0.75 mg/L
Subsector C3. Soaps, Detergents, Cosmetics, and Perfumes (SIC 2841-2844)	Total Iron	1.0 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Zinc (freshwater) ²	Hardness Dependent
Subsector C4. Plastics, Synthetics, and Resins (SIC 2821-2824)	Total Zinc (saltwater) ¹	0.09 mg/L
	Total Zinc (freshwater) ²	Hardness Dependent

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-2¹

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.

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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.

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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.

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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)).

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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
	Total Copper (saltwater) ¹	0.0048 mg/L
Subsector F4. Nonferrous Foundries (SIC 3363-3369)	Total Zinc (freshwater) ²	Hardness Dependent
	Total Zinc (saltwater) ¹	0.09 mg/L
	Total Copper (freshwater) ²	Hardness Dependent
	Total Copper (saltwater) ¹	0.0048 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

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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;

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- 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:

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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

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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.

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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)

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(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.

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- 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.

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- 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

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- 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;

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- 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.

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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;

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- 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

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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.

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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.

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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

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)	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

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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

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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.

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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.

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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

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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

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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.

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- 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

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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

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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/cap2012_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.

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- 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;

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- 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

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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

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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);

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- 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.

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- 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:

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- 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.

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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.

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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.

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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

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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

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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

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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

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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.

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- 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/nodes/stormwater/upload/cap2012_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.

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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.

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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.

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- 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.

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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;

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- 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

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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

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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

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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 Limitation ¹
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.

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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

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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 "H2" (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

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¹Saline 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	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-2 ¹		
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:

- 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;
- 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;
- 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
- 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.

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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.

8.1.1 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.

8.1.2 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.

8.1.3 Limitations on Coverage.

8.1.3.1 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.)

8.1.3.2 Prohibition Stormwater Discharges from Open Dumps. Discharges from open dumps as defined under RCRA are also not authorized under this permit.

8.1.4 Definitions.

8.1.4.1 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.

8.1.4.2 Drained free liquids – aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

8.1.4.3 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.

8.1.4.4 Leachate – liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

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- 8.1.4.5 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.
- 8.1.5 Additional Technology-Based Effluent Limits.**
- 8.1.5.1 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.
- 8.1.5.2 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.
- 8.1.6 Additional SWPPP Requirements.**
- 8.1.5.1 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.
- 8.1.5.2 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.
- 8.1.7 Additional Inspection Requirements.** (See also Part 3)
- 8.1.7.1 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.
- 8.1.7.2 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.

8.1.8 Additional Post-Authorization Documentation Requirements.

8.1.8.1 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.

8.1.9 Sector-Specific Benchmarks. (See also Part 6)

Table 8.1-1 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 8.1-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration ¹
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).

8.1.10. Effluent Limitations Based on Effluent Limitations Guidelines. (See also Part 6.2.2.1)

Table 8.1-2 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 8.1-2 ¹		
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
	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:

- 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;
- 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;
- 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
- 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.

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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.

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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

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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

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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

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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.

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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	0.043	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

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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.

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- 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.

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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.		

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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;

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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.

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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:

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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

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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.

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

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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.

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- 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.

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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;

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- 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):

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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

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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.

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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.

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8.5.6 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.

8.5.7 Sector-Specific Benchmarks. (See also Part 6)

Table 8.5-1 identifies benchmarks that apply to Sector S. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.5-1.		
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 8.5.4.2 when deicing activities are occurring.

8.5.8 Effluent Limitations Based on Effluent Limitations Guidelines and New Source Performance Standards. (See also Part 6.2.2.1)

- 8.5.8.1 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 8.5-2.
- 8.5.8.2 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.
- 8.5.8.3 Monitoring, Reporting and Recordkeeping.** For new and existing airports subject to the effluent limitations in Part 8.5.8.1 or 8.5.8.2 of this permit, you must comply with the applicable monitoring, reporting and recordkeeping requirements outlined in 40 CFR 449.20.

Table 8.5-2		
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

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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.

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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.

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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

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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.

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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., backwashing, 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.

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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.

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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.

8.7.1 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.

8.7.2 Additional Technology-Based Effluent Limits.**8.7.2.3 Good Housekeeping Measures.** (See also Part 2.1.2.2)**8.7.2.3.1 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.

8.7.2.3.2 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.**8.7.2.3.3 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.**8.7.2.3.4 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.**8.7.2.3.5 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.**8.7.2.3.6 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.**8.7.3 Additional SWPPP Requirements.****8.7.3.1 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.**8.7.3.2 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.

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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.

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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

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	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.

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. Assigned a new LA-UR for public release.

Attachment E
MSGP Quarterly Visual Assessments

MSGP Quarterly Visual Assessment Form

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)
locateteam@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
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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 between 20:00-24:00	145 (estimated) - new 05/05/16	<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 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
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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		<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 1458		<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:

[Signature]

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"/>	

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-53771

Page 3 of 3

Signature (collecting sample):

Holly Wheel

Date 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	45 (est. mated) 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 20:00 to 21:00	45 (est. mated) 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 15:19		<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 table		<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 table		<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: 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"/>
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 skill		<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.		Previous storm event occurred 4/28/16, 0.2 in total precip. no skill available		<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"/>

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.

160

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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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[illegible]

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 Whuh Date and Time: 5/2/16 15:17

Signature (conducting visual assessment): Bobby Whuh 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"/>

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**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 (069) MSGP06901**Last PM:** 5/2/2016**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.		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 Solids		<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"	05/16/16	<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.	sample was collected over the weekend	personnel were not present	05/16/16	<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 _{5/19/16} Page 3 of 3

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"			<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):

MSH

Date and Time:

05/19/16 14:53 hrs

Signature (conducting visual assessment):

MSH

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
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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-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 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).	approx. 11:30 05/19/16 11:00 ps					<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 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 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"/>
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 at the time of discharge. PS visual inspection conducted the next business day. PS					<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.	Fine					<input checked="" type="checkbox"/>
160							<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

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 (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 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).	approx 11:30 05/19/16 11:00:05					<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 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 14:10					<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"/>
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"/>

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							<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: _____

[illegible]

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 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 (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" 0.02" approx		<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):

MSLH

Date and Time: 05/19/16 14:33 hrs

Signature (conducting visual assessment):

MSLH

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" approx				<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"/>

170

180

190

Is sample free of other obvious indicators of pollution? If "Failed", describe in the comments of this line.

Completed: _____ **Failure:** _____

Report:

[illegible]

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 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**

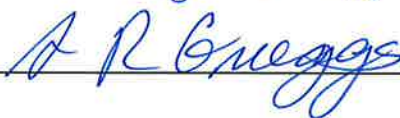
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage 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
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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 15:15			<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. 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 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):

nish

Date and Time: 05/19/16 10:32 hrs

Signature (conducting visual assessment):

nish

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:** _____

[illegible]

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**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: 4/19/2016**Project:** 2016 Q1 Visual Assessments 5/2/16 (P-MSGP-4732)**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).		5/16/16 @ 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).		5/16/16 @ 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>Pollen</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-CD 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
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).	05/18/16 ~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).	05/18/16 ~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.	PR1 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"/>

	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: _____ Meter 1: _____ Meter 2: _____

Report:

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:

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
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 (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 flow. 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
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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.	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. ☐ ☒ ☐

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-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
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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.	<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-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

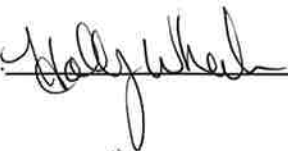
Completed: _____ Failure: _____

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

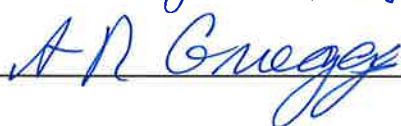
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage 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

Contact:
Phone:

Reason: MSGP 2016 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.		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"/>

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: 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



*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 21116		<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

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☒

35 Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)

WW

☐

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☒

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

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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

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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

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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

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Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide reason in comments of this line.

80

WW

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Parameters

110 Is sample colorless? If "Failed", describe.

WW

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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

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130 Is sample clear? If "Failed", document observation using the Clarity lookup table. If "other" is chosen

WW

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	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

MSGP Stormwater Industrial Routine Facility Inspection Rep

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-R1-58819

Page 5 of 5

Signature (lead inspector):



Date and Time:

9/29/16 15:58

CERTIFICATION STATEMENT

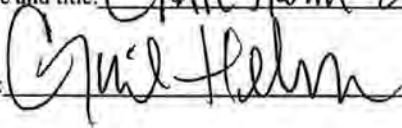
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage 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:

Garl 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

Annual Reports and Corrective Actions



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

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5056671312

Summary of past year's inspections, assessments, and corrective actions

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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

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)

Certifier E-Mail *

grieggst@lanl.gov

Form Action *

Approve

TA-54
Maintenance Facility West

Insp Id	Ca Number	MSGP Facility Desc	Insp Date	RCRA Notify Date	Specific Location	Inspector	Problem Description	Corrective Action Description	Completed	Finding Other Desc	Inspection Type Other	Swppp Modify	Ca Initiate Date	Ca Expected Date	Ca Complete Date	Ca Status Desc
863	45494	TA-54 Maintenance Facility W	22-Jan-16	22-Jan-16	Outfall 049 at TA-54 Maintenance Facility West	118432	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.	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).	Y	Impaired water quality standard exceedance	-	N	22-Jan-16	-	22-Jan-16	N/A
944	48212	TA-54 Maintenance Facility W	26-Jul-16	26-Jul-16	SW corner of the TA-54 MFW.	232597	At TA-54 Maintenance Facility West, stormwater eroded the earthen berm at the southeast corner.	Repaired earthen berm in accordance with the BMP manual.	Y	-	Observation after a rain event	N	26-Jul-16	-	1-Aug-16	N/A
971	49300	TA-54 Maintenance Facility W	23-Sep-16	23-Sep-16	Outfall 049 at TA-54 Maintenance Facility West	118432	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.	Evaluated potential pollutant sources of total recoverable Aluminum Copper then added rip-rap between the bascourse road and vegetative swale before entering the culvert to ensure discharge of this pollutant source in stormwater is minimized. Added rip-rap to the SWPPP map.	Y	Impaired water quality standard exceedance	Impaired water monitoring	Y	23-Sep-16	-	5-Oct-16	na
1039	52023	TA-54 Maintenance Facility W	20-Dec-16	20-Dec-16	Northeast portion of TA-54 Maintenance Facility West	118432	At the Northeast portion of TA-54 Maintenance Facility West, part of the earthen berm between the Jersey barriers was starting to erode.	The earthen berm was rebuilt between the Jersey barriers on the northeast portion of the site.	Y	-	-	N	20-Dec-16	-	20-Dec-16	N/A

MSGP CORRECTIVE ACTION REPORT

Corrective Action Header Corrective Action Details

3. Identify the condition triggering the need for this review. (If other, describe here):
 Other (describe) : Impaired water quality standard exceedance

4. Briefly describe the nature of problem identified (e.g., Facility problem identified during inspection):
 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.

5. How problem was identified: (If other, describe here):
 Comprehensive site inspection

7. Description of corrective action taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications, results to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:
 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

8. Did/Will the corrective action require modification of your SWPPP? Yes/No

9. Date corrective action initiated (MM/DD/YYYY): 01/22/2016

10. Date corrective action completed (MM/DD/YYYY): 01/22/2016 On expected completion:

11. If corrective action not yet completed, provide the status of corrective action at the time of the comprehensive site inspection and describe any remaining steps (including time frames associated with each step) necessary to complete corrective action:
 N/A CAR 063

Test Values Prev Rec. Next Rec. Back To Record Selection Save Cancel

Continuation 7. Description:

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).

Attachment H

Sampling Data



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

Standard Operating Procedures and Maintenance Procedures

Title	Number	Date Modified
EWMO Industrial Truck And Equipment Refueling and Recharging	EWMO-DOP-20085	11/21/16
EWMO Division Specific Forklift and Drum Handler Equipment Operations	EWMO-DOP-20086	11/18/16
Discovery of An Airborne, Liquid and/or Solid Material Release or Spill	EWMO-RM-AOP-20201	09/01/16
Severe Weather	EWMO-RM-AOP-20203	09/16/16
Waste Container Questionable Integrity	EWMO-RM-AOP-20204	09/09/16
EWMO Area Emergency Response	EWMO-RM-ERP-20200	11/23/16
Environmental Programs Directorate Training Program Plan	EWMO-PLAN-10008	03/16/12
EWMO Division Building Emergency Plan	EWMO-BEP-20048	08/29/16
EWMO Snow Removal Plan	EWMO-PLAN-20036	11/18/16
Seasonal Facility Preservation Plan	EM-PLAN-20191	09/22/16
Stormwater Pollution Prevention Plan For TA54 Maintenance Facility West	TA54-PLAN-1307*	01/2017
F-SMA-2 Storm Water Controls	EP-DIV-PLAN-20195	07/07/15
IWD TA-50-54 All Labor Support To Spray Micro Blaze	WO 00512757-01	FY/15
Conduct DEP Related Activities Associated With EWMO Compliance	DESHS-EWMS 08-16	08/14/16
Waste Management Coordinator Daily Activities	DESHS-EWMO-WMC-IWD	FY/16
LANL Waste Management	P409	07/30/15

*This document.

UNCLASSIFIED

EWMO-DOP-20085, R.1

EWMO Industrial Truck and Equipment Refueling and Recharging

Effective Date: November 21, 2016Next Review Date: November 21, 2019

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

Patrice A. Stevens / 106047 / /s/ Patrice A. Stevens / 10-18-16

Name (print) Z# Signature Date

Responsible Manager, Facility Operations Director

Leslie K. Sonnenberg / 290408 / /s/ Leslie K. Sonnenberg / 10-20-16

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: 1

Effective Date: 11/21/16

Page: 2 of 34

Reference

REVISION HISTORY

Document No./Revision No.	Issue Date	Action	Description
SWO-POLICY-0101, R.0	April 2005	Revision 2	Refueling requirements for Area G and L
EP-AREAG-FO-DOP-0603, R.0	Approved for Training	Major Revision	Document has been revised from the previous policy for use in Area G and L. Incorporated are steps for refueling and recharging (Gas diesel, LP, electric Industrial Trucks and Equipment). This procedure supersedes SWO-POLICY-0101.
EP-AREAG-FO-DOP-0603, R.1	Approved for Training	Minor Revision	Language added to capture Set-Up of a Designated Refueling area in Area G. New Attachment for documenting set-up of designated refueling area. Minor editorial changes.
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 TWD 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.

**EWMO Industrial Truck and
Equipment Refueling and Recharging**

Document No.: EWMO-DOP-20085

Revision: 1

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Reference

REVISION HISTORY (continued)

Document No./Revision No.	Issue Date	Action	Description
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 Industrial Truck and
Equipment Refueling and Recharging**

Document No.: EWMO-DOP-20085
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**EWMO Industrial Truck and
Equipment Refueling and Recharging**

Document No.: EWMO-DOP-20085

Revision: 1

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Reference

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 Non-destructive 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 PI01-4, 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

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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 key requirements associated with the facility's safety basis. These steps may not be changed without engineering approval to ensure that the TSRs and other associated requirements are maintained.
- 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 EP-DIV-DOP-20086, EWMO Division Specific Forklift and Drum Handler Equipment Operations.

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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.
- 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 (<http://int.lanl.gov/env/rcra/docs/qa/tools/ENV-CP-504/pdf>).

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 EP-AREAG-FO-AP-1174, TA-54 Area G Establishing Defined Areas. Operational acceptance of the refueling location is performed in accordance with EP-AREAG-FO-DOP-1179, TA-54 Area G Operational Acceptance of Defined Areas and Refueling Locations.

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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]
- EP-AREAG-FO-AP-1190, Access Control for TA-54 Areas G, I, J, and H, 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.

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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 and (2) Equipment with less than 5 gal. 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 of RNS WASTE CONTAINERS and pickup of TRU WASTE CONTAINERS SHALL be allowed at the WCRRF. [SAC 5.10.1.1]
- Electric forklift recharging takes place outside the building.

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3.4 WCRRF Specific Requirements (continued)

- (\$) Control of Forklifts (any power source):
 1. Forklifts are prohibited within the boundary of the Vehicle Access System while RNS WASTE CONTAINERS are present in the yard or airlock;
 2. Forklifts are prohibited in BUILDING TA-50-0069 while RNS WASTE CONTAINERS are in TA-50-0069. [SAC 5.10.5]

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)]

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3.6 LP Powered Vehicles and Equipment (TA-54 Areas G, L, J, Admin only) (continued)

- 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.
- 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)]

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3.7 Battery Powered Vehicles and Equipment (continued)

- 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.
- 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.

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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-evolution briefing is conducted for all personnel involved in the performance of this procedure in accordance with 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.

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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 EP-AREAG-FO-AP-1190.
[SAC 5.7.6]

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5.1 Refueling (TA-54 Areas G, I, 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.

(S) 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

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5.1 Refueling (TA-54 Areas G, I, 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.

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**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.

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5.2 Industrial Truck (Forklift) LP Tank Removal and Replacement (TA-54 Areas G, I, 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.

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.

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5.2 Industrial Truck (Forklift) LP Tank Removal and Replacement (TA-54 Areas G, I, J, Admin only) (continued)

- [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.
- [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.

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**5.2 Industrial Truck (Forklift) LP Tank Removal and Replacement (TA-54 Areas G, I, J,
Admin only) (continued)**

[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].

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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.

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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.

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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.
 - **(S)** 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 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.

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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.

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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"/>

<p>EWMO Industrial Truck and Equipment Refueling and Recharging</p> <p>Reference</p>	<p>Document No.: EWMO-DOP-20085</p> <p>Revision: 1</p> <p>Effective Date: 11/21/16</p> <p>Page: 27 of 34</p>
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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

EP-AP-10003, Records Management

EP-AREAG-FO-AP-1190, Access Control for TA-54 Areas G, L, J, and H

EP-AREAG-FO-AP-1174, TA-54 Area G Establishing Defined Areas

EP-AREAG-FO-DOP-1179, TA-54 Area G Operational Acceptance of Defined Areas and Refueling Locations

EWMO-AP-0112, EWMO Pre-Job Briefings

EP-DIV-DOP-20086, EWMO Division Specific Forklift and Drum Handler Equipment Operations

EP-DIV-POLICY-20057, Health and Safety Policy – Manual Movement

EWMO-AP-20253, EWMO General Site Hazards and Controls

P101-4, Forklifts and Powered Industrial Trucks

P101-18, Procedure for Pause/Stop Work

P300, Integrated Work Management

P322-4, Laboratory Performance Feedback and Improvement Process

P330-6, Nonconformance Reporting

SER-RNS, R.0, Safety Evaluation Report, October 2016

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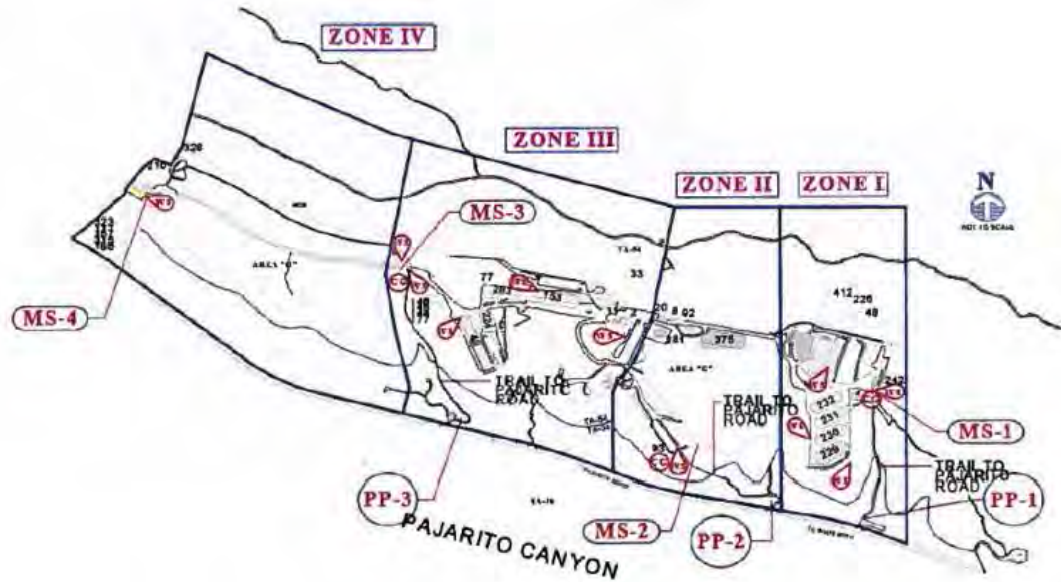
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Reference

APPENDIX A

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DEPICTION OF ZONES AND DESIGNATED REFUELING LOCATION IN ZONE 4



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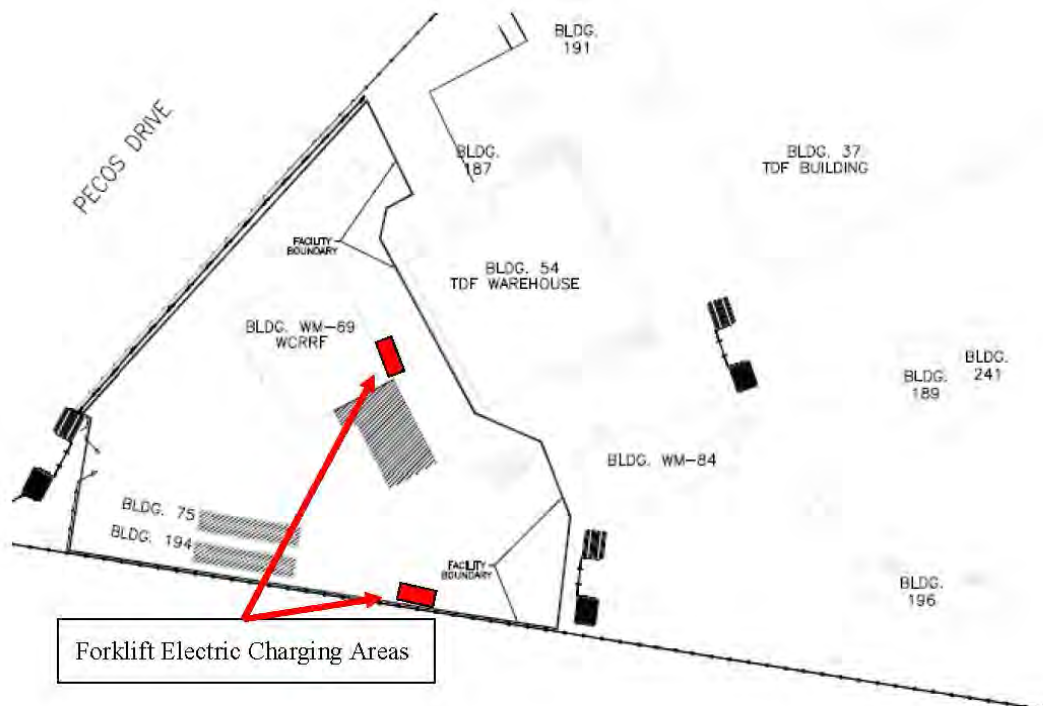
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APPENDIX D

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WCRRF FORKLIFT ELECTRIC CHARGING AREAS



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APPENDIX E

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PROPANE TANK CONFIGURATIONS

OLD SERIES LP TANK



NOTE *Arrow displays proper LP tank position to alignment pin*

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APPENDIX E

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PROPANE TANK CONFIGURATIONS

NEW SERIES LP TANK



NOTE *Arrow displays proper LP tank position to alignment pin*

EWMO-DOP-20086, R.0

EWMO Division Specific Forklift and Drum Handler Equipment Operations

Effective Date: November 18, 2016Next Review Date: November 18, 2019

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

Patrice Stevens / 106047 / /s/ Patrice Stevens / 11/9/16

Name (print) Z# Signature Date

Responsible Manager, Facility Operations Director

Leslie K. Sonnenberg / 290408 / /s/ Leslie K. Sonnenberg / 11/14/16

Name (print) Z# Signature Date

Working Copy / Information Only (circle one)

Initials / Date: _____ / _____

EWMO Division Specific Forklift And Drum Handler Equipment Operations Reference	Document No.: EWMO-DOP-20086 Revision: 0 Effective Date: 11/18/16 Page: 2 of 33
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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-DIV-DOP-20086, R.1	December 14, 2012	Major Revision	Revise procedure to incorporate requirement changes associated with the Area G TSR Page Change 0.33 and correct existing TSR references. Make editorial corrections as necessary. This revision does not introduce any new hazards.
EP-DIV-DOP-20086, R.1 IPC-1	January 22, 2013	IPC	Revised to correct history on Revision 0 EP-DIV-DOP-20086 to Cancel EP-DIV-SO-20063 instead of EP-DIV-SO 20038.
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.

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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.

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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.
- The instructions in this procedure satisfy the P101-25 ordinary lift requirements and the use of LANL Form 1611, Ordinary Lift Procedure, is not required. Not all of the items listed on Form 1611 are captured in this procedure because this procedure is performed using gantry cranes and forklifts in preapproved locations and lifts standard waste containers of a known size and volume.
- Forklift operations are governed by the LANL procedure P101-4, Forklift and Powered Industrial Trucks. P101-4 requires the completion of the applicable sections of a LANL procedure P101-25 Attachment B for critical lifts involving a forklift or powered industrial truck. Forklift operations not involving a critical lift (e.g., load suspended below the forks of the forklift) are not required to comply with the ordinary lift requirements of P101-25.
- This procedure contains special procedure step markings. (\$) is used to identify steps that implement EWMO safety basis requirements. Steps containing (\$) may not be changed without Engineering approval to ensure the safety envelope is maintained.
- 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.
- 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

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3. PRECAUTIONS AND LIMITATIONS (continued)

- 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.

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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, per 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.

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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] **(\$)** **PERFORM** a daily inspection in accordance with Attachment 1.
[ABD-WFM-002, AC 5.6.6(1)]
- [4] **CHECK** (✓) SAT or UNSAT to indicate whether the equipment satisfies the inspection criteria listed on Attachment 1.
- [5] **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 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, Defective Equipment Report for Forklifts and Industrial Equipment.
- [E] **SUBMIT** an FSR for maintenance along with a copy of Attachment 1.

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5.1 Forklift Inspection (continued)

- [6] **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

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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] **(S) PERFORM** a daily inspection in accordance with Attachment 2. [ABD-WFM-002, AC 5.6.6(1)]
- [3] **CHECK** (✓) SAT or UNSAT to indicate whether the equipment satisfies the inspection criteria listed on Attachment 2.
- [4] **IF** UNSAT was checked (✓) in the previous step,
THEN:
 - [A] **DOCUMENT** the discrepancies in the Comments section of Attachment 2.
 - [B] **NOTIFY** the area SOS and the specific area Operations Center.
 - [C] **REQUEST** guidance and direction from the 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.
- [5] **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

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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.

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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>
<i>@ 30 in.</i>	<i>120,000 in.-lb. / 30 in. = 4,000 lbs.</i>
<i>@ 36 in.</i>	<i>120,000 in.-lb. / 36 in. = 3,333 lbs.</i>
<i>@ 48 in.</i>	<i>120,000 in.-lb. / 48 in. = 2,500 lbs.</i>
<i>@ 60 in.</i>	<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** 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.
- [13] **IF** view is obstructed, **THEN UTILIZE** a spotter and/or **OPERATE** the forklift in reverse with load trailing.

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5.3 General Forklift Safe Operating Practices (continued)

- [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 supervision for guidance.

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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).

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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.

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5.5 Forklift Critical Lift

This section is performed in conjunction with other performance sections of this procedure. This section applies to forklift critical lifts that are non-routine. Routine forklift critical lifts are captured in area specific procedures.

PIC

- [1] **DETERMINE** whether a forklift critical lift is required based upon the following criteria and those identified for critical lifts 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.
 - If the load item is damaged, the cost to replace or repair it or the delay in operations resulting from the damage would have a negative impact on facility, organizational, or DOE budgets to the extent that it would affect program commitments.
 - If the load were mishandled or dropped, the event would cause any of the above noted consequences to nearby installations or facilities.
 - The lift exceeds 75% of the manufacturer's rated capacity for the industrial truck or mechanized equipment to be used in the lift.
 - 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 lift is an otherwise non-critical lift that must be made in close proximity to critical or expensive items that could be damaged.
 - The lift uses two or more lift trucks or a combination of such equipment.
 - The lift truck or mechanized equipment could at any time come in contact with an energized high voltage power line.
 - The lift requires personnel to be lifted.
- [2] **IF** one or more of the criteria listed in Step 5.5[1] is applicable,
THEN OBTAIN and **COMPLETE** an Attachment B, LANL Critical Lift Plan from P-101-25, Cranes, Hoists, Lifting Devices, and Rigging Equipment, prior to performing forklift critical lift.

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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 (FRPs), Other Metal Containers)
* 2 metal bands around drums OR 1 nylon ratcheting strap around drums OR 1 nylon ratcheting strap secured to backrest/carriage***	Tight triangle array (two of three against backrest/carriage) AND 2 metal bands* OR 1 nylon ratcheting strap around drums OR Tight triangle array (two against backrest/carriage) AND 1 nylon ratcheting strap secured to backrest/carriage	Drums against backrest/carriage AND 1 nylon ratcheting strap secured to backrest/carriage	Drum centered against backrest/carriage AND 1 nylon ratcheting strap secured to backrest/carriage	Must be on a pallet AND 1 nylon ratcheting strap secured to backrest/carriage*** OR Handled using an approved rigging device (SWB lift fixture)	* * 1 nylon ratcheting strap around container to be secured to the backrest/carriage (as applicable)
* Metal banding that currently exists on drum packs will continue to perform their safety function until the drum packs are disassembled. * * 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 not apply in every application at the discretion of the Shift Operations Supervisor and Industrial Hygiene/Safety. *** 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 not apply to loading or unloading of TRU WASTE drums or SWBs on and off transport vehicles (e.g., flatbed, stake bed).					
Unpaved Surfaces					
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).					

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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 and ABD-WFM-002, Attachment 1, Technical Safety Requirements (TSRs) for TA-54 Area G, RNS Waste Activities.

- (\$) 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)]
- (\$) 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. [5.7.8(2)]
- (\$) A critical lift plan **SHALL** be used for planned lifts of FRPs with MAR greater than 150 PE-Ci. [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)]

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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.*
- **(S)** 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]
 - **(S)** 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 one of the following: [LCO 3.4.2]
 - Have a shielding/engineered barrier between the UNVENTED TRU WASTE DRUM and the worker
 - Maintain safe standoff distance ≥ 30 ft. between the UNVENTED TRU WASTE DRUM and the worker
 - Use of spotters is required during forklift operations involving an UNVENTED DRUM.

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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.
- All Remote-Handled waste canister lifts in Area G shall be performed according to critical lift requirements specified in P101-25, Cranes, Hoists, Lifting Devices, and Rigging Equipment, or successor document.
- Without prior approval from Industrial Hygiene and Safety (IHS), 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.

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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)]
- (\$) The following forklift restrictions are applicable to the storage or handling of remediated nitrate salt (RNS) waste containers. This control applies to fossil-fueled and electric-powered forklifts:
 1. Forklifts are prohibited inside the 54-0375 Perma-Con or on the Perma-Con loading dock when RNS waste is present.
 2. Forklifts **SHALL NOT** be used for the movement or handling of RNS waste containers. [Area G TSR, Attachment 1, SAC 5.7.20]
- (\$) A spotter shall be present when RNS waste containers are being moved. [Area G TSR, Attachment 1, SAC 5.7.25]

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5.7 RANT Specific Forklift Operations Requirements

The following additional forklift requirements and restrictions are identified in the RANT safety basis document, ABD-WFM-008, Technical Safety Requirements (TSRs) for the Radioassay and Nondestructive Testing (RANT) Site.

- (\$)
No flammable liquids or gases and no combustible liquids with NFPA Flammability Rating greater than 1 **SHALL** be used or stored within Building TA-54-38, with the exception of up to two 500-ml containers of ethanol or equivalent, which may be used when needed, and excluding P-10 gas. (LCO 3.3.1)
- (\$)
Propane, gasoline, or diesel-fueled vehicles **SHALL not** be used inside Building TA-54-38, except when necessary to put facility in COLD STANDBY. (LCO 3.3.3)
- (\$)
Vehicle refueling is prohibited within 30 ft. of Building TA-54-38, CONTAINER STORAGE AREA, and MLU operations. This element of the fire protection program applies only during OPERATION and WARM STANDBY MODE. (AC 5.6.5)
- (\$)
A vehicle safety program will be established to ensure that the outside CONTAINER STORAGE AREA is protected from vehicles traversing and operating in TA-54-38 and to ensure these vehicles are maintained and operating in an effective manner. The following elements of are included in this program:
 - Vehicle and forklift maintenance and inspection program. This element of the vehicle safety program applies only during OPERATION and WARM STANDBY MODE.
 - Vehicle barriers to limit access to outside CONTAINER STORAGE AREA to only forklifts. This element of the vehicle safety program applies only during OPERATION AND WARM STANDBY. (AC 5.6.10)
- (\$)
Use of spotters during TRU WASTE CONTAINER forklift operations. (AC 5.6.11)
- (\$)
Only electric powered forklifts are allowed at the RANT SITE when TRU-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)

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5.7 RANT Specific Forklift Operations Requirements (continued)

- **(S)** 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 powered forklifts, electric powered trailer jockey, TRUPACT II tractors, Transportation Safety Documents (TSD) approved vehicles, Department of Public Safety (DPS) vehicles, the diesel-fueled trailer 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. (SAC 5.7.3.B)
- **(S)** A Critical Lift Plan **SHALL** be used for all payload lifts involving a forklift for payload transfer or involving a crane for payload insertion into Type B containers. (SAC 5.7.4.A)
- **(S)** Critical lifts **SHALL not** be performed outdoors during inclement weather conditions or winds above 25 mph. During high-winds or lightning, MLU crane lifting/loading operations **SHALL** be suspended **IMMEDIATELY**, all MLU payloads **SHALL** be secured on the ground away from the immediate area of the MLU cranes, or within the Type B container, and the MLU crane boom **SHALL** be lowered if previously extended. (SAC 5.7.4.C)
- **(S)** Vehicle driver and forklift operator training and/or qualification. (AC 5.10)

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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).

- (S) Use of spotters is required during TRU WASTE CONTAINER forklift operations and when RNS container(s) are being moved. [AC 5.6.10] [SAC 5.10.9]
- (S) TRU WASTE CONTAINERS **SHALL not** be stacked and **SHALL not** be lifted higher than 4 ft. excluding the Waste Characterization Glovebox drum lift and lifts during loading or unloading from delivery trucks. [SAC 5.10.2.2]
- (S) 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 TRU WASTE CONTAINER. [SAC 5.10.3.1]

NOTE *Allowing the transportation vehicle on site allows the use of manual assist type drum handling equipment for unloading RNS WASTE CONTAINERS rather than the use of forklifts. It was determined the use of forklifts posed a greater hazard to a RNS WASTE CONTAINER due to the proximity of the fuel source to the RNS WASTE CONTAINER.*

- (S) 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 gal 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 of RNS WASTE CONTAINERS and pickup of TRU WASTE CONTAINERS **SHALL** be allowed at the WCRRF. [SAC 5.10.1.1]
- (S) Control of Forklifts (any power source):
 1. Forklifts are prohibited within the boundary of the Vehicle Access System while RNS WASTE CONTAINERS are present in the yard or airlock;
 2. Forklifts are prohibited in BUILDING TA-50-0069 while RNS WASTE CONTAINERS are in TA-50-0069. [SAC 5.10.5]

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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

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5.10 Mobile Loading Payload Lifts at TA-54 Area G

The following are requirements associated with mobile loading payload lifts for loading TRUPACT containers prior to shipment to WIPP and are provided in accordance with ABD-WFM-002. These controls assist in preventing a mobile loading payload from dropping on top of another payload or a DEFINED AREA containing TRU WASTE and to minimize consequences of a drop by limiting the MAR involved in the accident.

TA-54 Area G procedures developed to perform mobile loading payload lifts **SHALL**, at a minimum, include the following requirements.

- (\$) Mobile loading payloads **SHALL not** be lifted over TRU WASTE, excluding another payload within the Type B container. (SAC 5.7.9.1)
- (\$) Mobile loading payloads with MAR greater than 925 PE-Ci **SHALL not** be lifted more than 12 ft, measured from the bottom of the payload to the ground. (SAC 5.7.9.2)
- (\$) Prior to loading of MAR into a TRUPACT II or HalfPACT, a verification **SHALL** be performed to ensure the containers have a current inspection sticker (provided by WIPP) or documentation of compliance provided by the manufacturer. (DF 6.1.3)
- (\$) 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)]
- (\$) 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. [5.7.8(2)]

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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, Defective Equipment Report for Forklifts and Powered Industrial Equipment (Form #1569) 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.

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 Performance Feedback and Improvement Tracking System and **DOCUMENT** actions taken in the Comments Section of the applicable attachment.

6.2 Records Processing

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, Defective Equipment Report for Forklifts and Powered Industrial Equipment #1569	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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7. REFERENCES

ABD-WFM-002, Technical Safety Requirements (TSRs) for Technical Area 54, Area G

ABD-WFM-002, Attachment 1, Technical Safety Requirements (TSRs) for TA-54 Area G,
RNS Waste Activities

ABD-WFM-006, Technical Safety Requirements (TSRs) for Waste Characterization,
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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

P101-25, Cranes Hoists, Lifting Devices, and Rigging Equipment

P121, Radiation Protection

P300, Integrated Work Management

P315, Conduct of Operations Manual

P322-4, Laboratory Performance Feedback and Improvement Process

P330-6, Nonconformance Reporting







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APPENDIX 1

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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>

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APPENDIX 2

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**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 = _____ in-lb.	
@ 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:

$$\frac{120,000 \text{ in-lb.}}{48 \text{ in.}} = 2,500 \text{ lbs.}$$

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ATTACHMENT 1

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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) (\$) [AC 5.6.6(1)]; 5.1[3]	
Fork	No hairline cracks, broken, or cracked Fastening pins operable, <u>no</u> 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	Not 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 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. 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
Section 4. Electric (as applicable)	
Battery Charge	Sufficient charge for work activities
Warning Beacon	Yellow beacon for indoor use (as applicable) operational
5.1[4] Equipment satisfies the inspection criteria:	<input type="checkbox"/> SAT <input type="checkbox"/> UNSAT
Comments: _____	
5.1[6]/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

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ATTACHMENT 2

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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) (S) [AC 5.6.6(1)]; 5.2[2]	
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[3] Equipment satisfies the inspection criteria: <input type="checkbox"/> SAT <input type="checkbox"/> UNSAT	
Comments: _____	
5.2[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

UET

**EWMO Division Specific Forklift
And Drum Handler Equipment Operations**

Document No.: EWMO-DOP-20086

Revision: 0

Effective Date: 11/18/16

Page: 33 of 33

ATTACHMENT 3

Page 1 of 1

**DEFECTIVE EQUIPMENT REPORT FOR FORKLIFTS AND POWERED INDUSTRIAL
EQUIPMENT**

5.1[5][D]/5.2[4][D]/6.1[2], as applicable, if found defective

Los Alamos
NATIONAL LABORATORY

**DEFECTIVE EQUIPMENT REPORT FOR FORK
LIFTS AND POWERED INDUSTRIAL TRUCKS**

Use this form to inform the maintenance contractor of fork lift and powered industrial truck defects or symptoms of defects. The maintenance contractor must receive a copy of this form before submitting a repair cost estimate.

Type of equipment <input type="checkbox"/> Fork lift <input type="checkbox"/> Powered industrial truck		Hour meter reading	
Equipment assigned to (Division, Group)	Contact	Telephone 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 report given to maintenance contractor			
Name of maintenance contractor representative		Given by	
Comments			

Form 1569 (1/93) LIR 402-1110-01.0 (ESH-5, QIC)

UNCLASSIFIED

JJS

EWMO-RM-AOP-20201, R.0

Discovery of an Airborne, Liquid, and/or Solid Material Release or Spill

Effective Date: 9/1/2016Next Review Date: 9/1/2017

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

Art Crawford	/ 080070	/ /s/ Art Crawford	/ 8/30/2016
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Name (print)	Z#	Signature	Date
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Responsible Manager, EWMO Deputy Facility Operations Director (FOD)

David Solms	/278703	/ /s/ David Solms	/ 8/31/2016
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Name (print)	Z#	Signature	Date
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Working Copy / Information Only (circle one)

Initials / Date: /

UET	Discovery of an Airborne, Liquid, and/or Solid Material Release or Spill	Document No.: EWMO-RM-AOP-20201
		Revision: 0
		Effective Date: 9/1/2016
		Page: 2 of 6

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	NOTIFY the Shift Operations Manager/Facility Lead (SOM/FL). Name: _____
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			
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.			
		2.5	NOTIFY the applicable Operations Manager of the event, and REQUEST the Operations Manager to notify the FOD.

UET	Discovery of an Airborne, Liquid, and/or Solid Material Release or Spill	Document No.: EWMO-RM-AOP-20201
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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.

Discovery of an Airborne, Liquid,
and/or Solid Material Release or Spill
UET

Document No.: EWMO-RM-AOP-20201
Revision: 0
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ATTACHMENT 1

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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:

Discovery of an Airborne, Liquid,
and/or Solid Material Release or Spill
UET

Document No.: EWMO-RM-AOP-20201
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ATTACHMENT 1

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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

UET

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Narrative/Comments for Discovery of an Airborne, Liquid, and/or Solid Material Release or Spill
Additional Narrative/Comments

This image shows a single sheet of white paper with horizontal blue or grey ruling lines, typical of notebook paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

EWMO-RM-AOP-20203, R.0

Severe Weather

Effective Date: 9/16/2016Next 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: _____ / _____

Severe Weather

Document No.: EWMO-RM-AOP-20203

Revision: 0

Effective Date: 9/16/2016

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UET

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>

Severe Weather

Document No.: EWMO-RM-AOP-20203

Revision: 0

Effective Date: 9/16/2016

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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: _____ _____ _____ _____
		3.2	PROCESS the procedure as a quality record in accordance with EP-AP-10003, Records Management .

UET

Narrative/Comments:

Completed By:

Printed Name _____

Signature _____

27

Date/Time

EWMO-RM-AOP-20204, R.0

Waste Container Questionable Integrity

Effective Date: 9/9/2016Next Review Date: 9/9/2017

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
WD Waste Storage & Shipping	

Classification Review: ☒ Unclassified ☐ UCNI ☐ Classified

<u>Art Crawford</u>	<u>/ 080070</u>	<u>/ /s/ Art Crawford</u>	<u>/ 9/8/2016</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>/ 9/8/2016</u>
Name (print)	Z#	Signature	Date

Working Copy / Information Only (circle one)

Initials / Date: /

Waste Container Questionable Integrity

Document No.: EWMO-RM-AOP-20204

Revision: 0

Effective Date: 9/9/2016

Page: 2 of 6

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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)

Waste Container Questionable Integrity

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Effective Date: 9/9/2016

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2.0 IMMEDIATE RESPONSE ACTIONS (continued)

✓	TIME/DATE	#	ACTIONS
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	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 <u>and</u> 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.

<p>Waste Container Questionable Integrity</p> <p>UET</p>	<p>Document No.: EWMO-RM-AOP-20204</p> <p>Revision: 0</p> <p>Effective Date: 9/9/2016</p> <p>Page: 4 of 6</p>
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ATTACHMENT 1
Page 1 of 3
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 <input type="checkbox"/> YES <input type="checkbox"/> If Yes, describe:	

Any alarms? NO <input type="checkbox"/> YES <input type="checkbox"/> If Yes, describe:
--

Any contamination? NO <input type="checkbox"/> YES <input type="checkbox"/> If Yes, describe:

Waste Container Questionable Integrity

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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:
ADNHIO:	Date:	Time:
ADEM:	Date:	Time:
ECP-CP:	Date:	Time:
DOE:	Date:	Time:

Completed By:

Printed Name

Signature

Z#

Date/Time

UET

Additional Narrative/Comments

EWMO-RM-ERP-20200, R.1

EWMO Area Emergency Response

Effective Date: November 23, 2016Next Review Date: November 23, 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:

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 / 11/22/16

Name (print) Z.# Signature Date

Responsible Manager, EWMO Deputy Facility Operations Director (FOD)

David Solms / 278703 / /s/ David Solms / 11/22/16

Name (print) Z.# Signature Date

Working Copy / Information Only (circle one)

Initials / Date: _____ / _____

EWMO Area Emergency Response

Document No.: EWMO-RM-ERP-20200

Revision: 1

Effective Date: 11/23/16

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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.

EWMO Area Emergency Response

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2.0 IMMEDIATE RESPONSE ACTIONS

✓	TIME/DATE	#	ACTIONS
Operations Center			
NOTE 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.			
		2.1	<p>ENSURE that personnel have completed the <u>Emergency 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. EVACUATE to assembly area upwind from the incident. 5. NOTIFY 911, as appropriate. <p>AND OBTAIN incident information from the caller (e.g., location, entry condition, inside or outside of a structure).</p> <p>AND DOCUMENT the information on Attachment L, Narrative/Comments for EWMO Area Emergency Response.</p>
		2.2	<p>NOTIFY personnel of incident and/or protective actions using available and appropriate methods including:</p> <ul style="list-style-type: none"> • the public address system, • two-way radio, • E-pager, • cell phone, and/or • face to face.
NOTE Steps 2.3 through 2.7 may be performed out of sequence.			
		2.3	<p>NOTIFY the Shift Operations Manager (SOM).</p> <p>Name of SOM Notified: _____</p>
		2.4	<p>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.</p>
		2.5	<p>OBTAIN meteorological data (e.g., wind direction) and, based on emergency conditions, PROVIDE directions on appropriate Assembly Area usage.</p>
		2.6	<p>DISPATCH an Operator to meet the Emergency Response vehicles and OPEN access gates if safe to do so.</p>
		2.7	<p>PERFORM accountability of personnel in affected area.</p>

EWMO Area Emergency Response

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2.0 IMMEDIATE RESPONSE ACTIONS (continued)

✓	TIME/DATE	#	ACTIONS
Shift Operations Manager/Facility Lead			
NOTE Steps 2.8 through 2.12 may be performed out of sequence.			
NOTE When the Operations Manager is not physically present and/or on shift, the Shift Operations Manager will conduct the minimum notifications up the chain of command.			
		2.8	<p>NOTIFY the Operations Manager of the event and REQUEST the Operations Manager to contact the following as needed:</p> <ul style="list-style-type: none"> • Facilities Operations Director (FOD), • Associate Director of Nuclear and High Hazard Operations (ADNHHO), and • Associate Directorate of Environmental Management (ADEM).
		2.9	<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>DOCUMENT the date/time of the notification and the name of the person contacted on Attachment 1.</p>
		2.10	BRIEF support personnel and the emergency responders upon arrival to incident site.
		2.11	CONDUCT formal transfer of command and control to the Incident Commander.
		2.12	PROVIDE EWMO resources to support the Incident Commander as requested.

EWMO Area Emergency Response

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3.0 SUBSEQUENT ACTIONS

Shift Operations Manager/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

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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: 1

Effective Date: 11/23/16

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ATTACHMENT 1

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Narrative/Comments for EWMO Area Emergency ResponseAny 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:

EWMO Area Emergency Response

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ATTACHMENT 1

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Narrative/Comments for EWMO Area Emergency Response

Additional Narrative/Comments

Handwritten narrative and comments section consisting of multiple horizontal lines.

Completed By:

Printed Name _____ Signature _____ Date/Time _____



**EP-DIR-PLAN-10008,R1
Training Program PLAN**

Environmental Programs Directorate, ADEP

ADEP Organization Approval

Associate Director (<i>print</i>) Michael J. Graham	Signature /s/Bruce Schappell <i>for</i>	Z# 232832	Date 3/13/12
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Revision Log

Revision No.	Date	Description of Change
0	8/31/11	New document.
1	3/16/12	Minor editorial changes; removed reference to EP-DIR-SOP-2011

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1.0 TPP Introduction and Organization

This Training Program Plan (TPP) defines training requirements for Environmental Programs Directorate, ADEP personnel who do not work in nuclear facilities and personnel working in nuclear facilities in positions not requiring a formal qualification standard. Each position existing within the directorate has specific training requirements that include Institutional mandatory courses and, where applicable, additional unique training expectations associated with a position.

This document provides the basis and expectations for implementing non-nuclear facility training requirements throughout the directorate. It describes the manner in which training is managed, monitored, and documented. Management and training positions requiring qualification are qualified via the Laboratory institutional qualification standards. Documentation of qualification is maintained in the Laboratory learning management systems. Nuclear facility workers' training and/or qualification requirements are addressed in the ADEP Training Implementation Matrices (TIM).

The implementation of the TPP and the TIM ensures ADEP personnel are fully trained and/or qualified to support the Laboratory mission. ADEP regularly monitors employee training to ensure Directorate personnel remain compliant in their assigned training.

1.1 Functional Assignments

ADEP identifies and remediates environmental hazards associated with past laboratory operations, manages and disposes of waste at Los Alamos National Laboratory (LANL), and conducts environmental surveillance to ensure the protection of the environment and the public. Specifically, ADEP manages a suite of institutional programs and services including the Corrective Actions Program (CAP); TA-21 Closure; Waste Projects and Services (WPS); LANL Tru Program (LTP); Business and Project Services (BPS); Engineering and Technology (ADEP-ET); Project Management and Field Services (PMFS); and Regulatory Management (REG-DO).

1.2 Organization

The ADEP organizational structure can be viewed the EP home page at: <http://int.lanl.gov/orgs/adep/>. ADEP workers may be deployed to support specific projects or facilities. Their EP division or home organizations are responsible for ensuring their employees have the core training necessary to perform required tasks, while the facilities or projects are responsible for ensuring that appropriate facility, project, and/or position-specific training is provided.

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2.0 Roles and Responsibilities (R2)

Responsible Line Managers (RLMs) are accountable for their personal training and the training of their assigned workers. FODs are accountable to identify facility-specific training required to allow unescorted access to controlled facilities or for building emergency plans and training for administrative facilities. Training specialists and subject matter experts (SMEs) provide technical expertise and perform training tasks. This document further defines the R2 for ADEP to ensure the goals of the Training Program are met.

Associate Director for Environmental Programs

- Serve as Program Owner for the TPP and delegate such responsibilities as deemed appropriate.
- Provide direction to the ADEP management team and expectations for implementation of the TPP.

Division-level Managers

- Ensure implementation of the TPP.
- At least biannually review the TPP for changes to include identification of positions training requirements.
- Review TPP and provide input regarding requirements for directorate positions.
- Assign specific training courses/plans to workers and ensure assigned training is completed.

Functional Managers

- Ensure implementation of the TPP.
- When assigning job duties, ensure the appropriate/required training for the duties is assigned and completed by the individual.
- Review the TPP and provide input regarding training requirements for directorate positions.
- Assign specific training courses/plans to workers and ensure assigned training is completed.

Group Managers

- Ensure implementation of the TPP.
- When assigning job duties, ensure the appropriate/required training for the duties is assigned and completed by the individual.
- Review periodic training reports and ensure workers are current with assigned courses and plans.
- Review workers' training plans at least annually.
- Review the TPP and provide input regarding training requirements for directorate positions.

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Project Managers

Ensure project specific training requirements are identified and project members are trained.

Subcontractor Technical Representatives (STR)

Obtain training records from LANL learning management systems, as necessary, to demonstrate subcontractor compliance with LANL training requirements.

Ensure subcontractor personnel are properly trained and qualified to perform work.

ADEP Personnel

Complete assigned training courses/plans.

Ensure training requirements are kept current.

Deployed Training Services

Assist with development and maintenance of the TPP.

Develop and maintain TIMs.

Advise on position identification regarding training requirements.

Course development and implementation.

Manage the LANL learning management systems to include establishing courses/plans, assigning training to individuals as directed by organizational managers; providing periodic reports of training status.

Support managers in identification of training requirements and development of Qualification Standards in accordance with P781-1, *Conduct of Training Manual*.

Facility Operations Directors

Define facility specific training requirements.

Provide ADEP personnel, as necessary, facility specific training to allow them to work successfully under the FODs purview.

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3.0 General Training Administration Requirements

3.1 Initial Training

Initial training requirements are analyzed, designed, developed, implemented, and evaluated using a graded approach and Systematic Approach to Training (SAT) methodology as described by the *Conduct of Training Manual* (P 781-1). Personnel may not be assigned to work independently on any position(s), job(s), and/or task(s) until they have met the necessary initial training requirements. Initial training programs consist of a combination of classroom, self-study, workshop, and on-the-job training (OJT). Personnel who are responsible for developing, approving, and delivering current and approved training are excused from initial and continuing training in the area for which they are designated an SME (as long as they continue to serve as SMEs). For example, an individual who prepares, instructs, and/or grades a written examination is not required to take the examination.

3.2 Continuing Training

Continuing training is designed to maintain job proficiency. Continuing training must be developed based on job or needs analysis commensurate with specific position /functions. Continuing training may include retraining on critical, complex, or infrequently performed tasks; or refreshers for safety, security, and regulatory requirements, and it is a means for personnel to remain current on such topics as:

- changes to regulatory requirements,
- changes to the job position,
- significant changes in procedures,
- changes in plant systems or equipment; and
- lessons learned.

Additionally, some continuing training is completed by personnel in order to maintain professional credentials and/or external certification requirements.

3.3 Selection and Qualification of Instructors

CT Division training staff and other Laboratory workers developing and implementing training must be qualified at a level commensurate with their assigned responsibilities. The education, experience, and qualification requirements for training staff are specified in P781-1, *Conduct of Training Manual*.

3.4 Subcontracted Training

Training by external providers is not anticipated to be widely employed by ADEP Directorate. If identified as a need, the subcontract organization and their specifically identified trainer(s) are evaluated by Central Training Division (CT) deployed resources and/or ADEP functional managers to ensure adequate knowledge of the field being presented and qualification in accordance with P781-1 are provided.

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3.5 Training Program Budget

Budget resources for the ADEP Training Program are negotiated annually as part of the Customer Service Agreements (CSAs). For specific data about the budget, refer to the current CSA.

3.6 Training Program Assessments and Evaluations

The evaluation phase of training takes place to determine the effectiveness of training and training programs and to identify improvements that may be required. Assessments of the training program may be conducted by CT or ADEP managers. Evaluation tools may include observations, interviews, and/or questionnaires. If training-related worker performance problems exist, the solution may involve repeating portions of the analysis, design, and development activities and the revision of existing materials.

3.6.1 Course Evaluation

Evaluation of courses and/or other training activities are to be conducted at the conclusion of each session. Trainees will be provided with questionnaires measuring the learner's reaction to training content, presentation, and materials.

3.6.2 Trainee Evaluation

Trainees are assessed to determine the level of learning gleaned from training by written assessment and/or performance demonstration.

4.0 Records Management

Official training records are maintained in the LANL learning management system. When specific reports of training status are required to support workforce training and qualification, printouts from the system are provided. Such documents when deemed to be records are maintained by the organization or project in accordance with *EP-DIR-AP-10003 Records Management Procedure for ADEP Employees*.

Reports from the LANL learning management systems are considered in-process/non-permanent when used for communication of status to the workforce. When used to demonstrate training status in showing completion of training requirements for work to be preformed, the reports are deemed to be records.

4.1 Training Records

Training records include but are not limited to SAT documentation, course materials, course rosters, and learning management system reports.

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5.0 General Training Implementation Requirements

ADEP personnel are assigned to ADEP core requirements training plans and to any position-specific training plans determined by the RLM. Personnel deployed to ADEP are trained in their field of study by their home organization and will be assigned to ADEP core requirements training plans and/or any required ADEP position-specific training to be determined by the ADEP manager with guidance/input from the training specialist.

During the training period, personnel may perform position duties under the supervision of a fully trained individual until the candidate has completed all training requirements. The level of training is determined by position-specific functions. Training can be delivered live, via web-based instruction, classroom instruction, briefings, required-reading, workshops, and/or on-the-job training (OJT).

5.1 Retraining

Re-training, continuing, or refresher training requirements are identified in the training analysis phase or as mandated by directives or regulations. Re-training utilizing lessons learned from real-world and exercise events is provided to workers to maintain job proficiencies and promote or improve job performance.

5.2 Equivalencies to Training

Equivalencies may be considered based on documented experience and/or education and are managed in accordance with P781-1, Conduct of Training Manual (3.1.5) using form 2154, *Request a Training Equivalency* and are approved by the appropriate Division Leader.

6.0 Training Classification Level Determination

ADEP training level determinations are based on typical entry-level knowledge, skills, and abilities (KSA) for each position; if the work requires an IWD; and the risks associated with performance failure. Because ADEP is organized functionally (i.e., by technical discipline), training requirements will vary within each division or program office. In addition to institutional training requirements, ADEP employees are assigned to ADEP-required training including but not limited to the EP Quality Assurance Plan; Behavior Based Training (ATOMICS), and the Integrated Work Management (IWM) Overview. Some positions also have position-specific training and/or reading requirements. The ADEP Level 3 Determinations, which apply to nuclear facilities per section 3.2.1.c of the Conduct of Training Manual, are addressed in the TIM.

ADEP training classification level determinations are defined as:

- Determination level 1: Worker Training and Authorization**
 Workers at this level complete institutional and facility specific training requirements. Level 1 positions include but are not limited to support staff and scientists.

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- Determination level 2: Worker Training and Qualification for Nonnuclear and Radiological Facilities**

In addition to institutional and facility specific training requirement, workers are typically assigned to additional position-specific and/or formal qualification standards (QS), or work under an Integrated Work Document (IWD). Level 2 positions include but are not limited to managers, training staff, and environmental technicians.

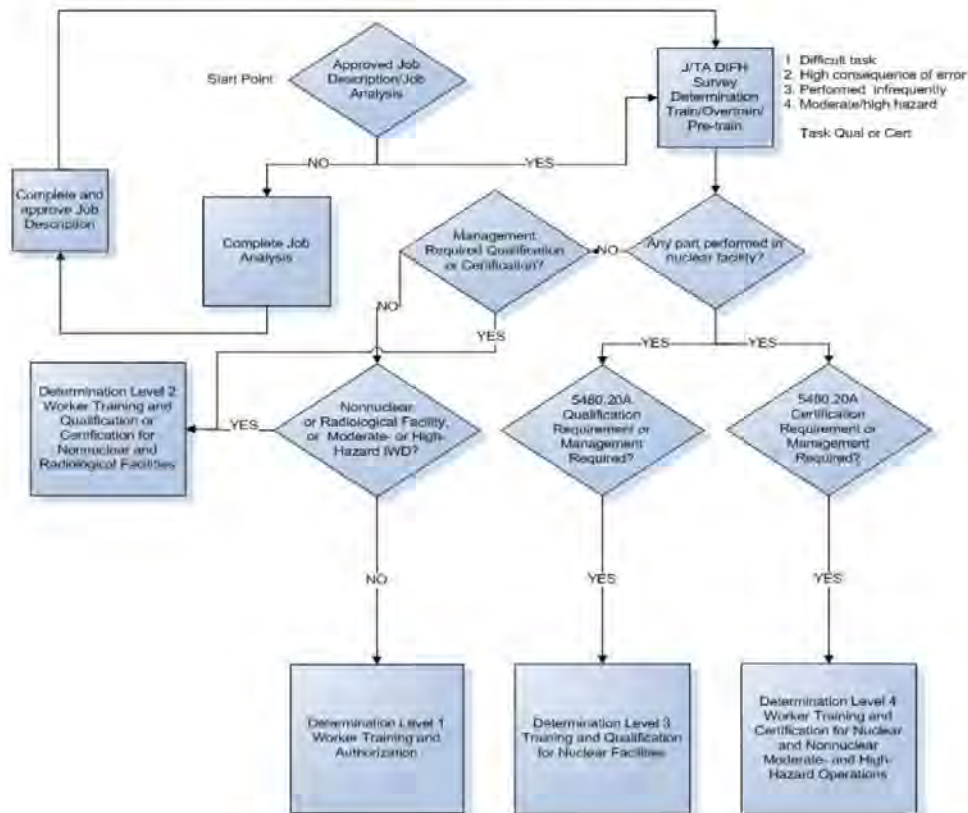
- Determination level 3: Worker Training and Qualification for Nuclear Facilities**

These positions are identified in the ADEP TIM.

- Determination level 4: Worker Training and Certification for Nuclear and Nonnuclear Moderate and High Hazard Operations**

Workers at this level perform tasks or activities with unacceptable risk for inadequate performance whether nuclear, nonnuclear, moderate- or high-hazard operations. Certification is also required by due diligence.

ADEP will use the process below for determining the training classification level for workers. Refer to Appendix 1 for the ADEP Nonnuclear Training Classification Level Determination Matrix.



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7.0 Quality Assurance

ADEP will establish an evaluation team to conduct a comprehensive training program evaluation triennially. The evaluation will cover all aspects of the training program and will be used to identify strengths and/or deficiencies in the training program and the overall training program infrastructure. The reviews will be staggered so only one division or program is being evaluated at any one time.

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Appendix 1: ADEP Job Training Classification Determination Matrix

ADEP Job Training Classification Determination Matrix (Level 3 Nuclear Facility worker positions are identified and addressed in the TIM)				
Position	Level 1	Level 2	Level 3	Level 4
Associate Director		X		
Deputy Associate Directors		X		
Program Directors		X		
Division Leaders		X		
Executive Advisor	X			
Operations Managers		X		
Environmental Project Managers (formerly Project Leaders)	X			
Operations Specialists	X	X		
Lean Six Sigma	X			
Environmental Managers		X		
Environmental Professionals	X			
Environmental Tecs		X		
Administrative Assistants and Professionals	X			
Training Staff		X		
Graduate and Undergrad Students	X	X		
Staff Operations Manager		X		
Field/Environmental Subcontract Technical Representatives	X			
Services Subcontract Technical Representatives	X			
Environmental Project Engineers	X			
Program Managers	X	X		
Communications and Government Affairs	X			
Records Management & Document Control	X			
Deliverables Production	X			
Space Management	X			
Procedure Development	X			
Scientists	X			
Regulatory Program and Support	X			
PRS Database Support	X			
Environmental Investigations Support	X	X		
Environmental Remediation Support	X			
Environmental Engineering Support	X			
Corrective Actions Program Integrated Projects	X			

EWMO-BEP-20048, R.0

EWMO Division Building Emergency Plan (BEP)

Effective Date: 8/29/2016Next Review Date: 8/29/2019

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 SMEs
Quality Assurance	Criticality Safety
Radiation Protection	Shift Operations Supervisors
Emergency Management	WD Operations

Classification Review: ☒ Unclassified ☐ UCNI ☐ Classified

Art Crawford / 080070 / /s/ Art Crawford / 8/23/2016

Name (print) Z# Signature Date

Responsible Manager, EWMO Facility Operations Director

Leslie K. Sonnenberg / 290408 / /s/ Leslie Sonnenberg / 8/23/2016

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: 0

Effective Date: 8/29/2016

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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 OUC 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.

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1. PURPOSE

The Environment and Waste Management Facility 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 TA-21 and Nuclear Environmental Sites (NES). All work performed at TA-21 and NES will be approved by the Shift Operations Manager/Operations Manager 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.

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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 9, Abnormal/Emergency Response Card, provides an example of the card that workers may carry with them when working in an 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.

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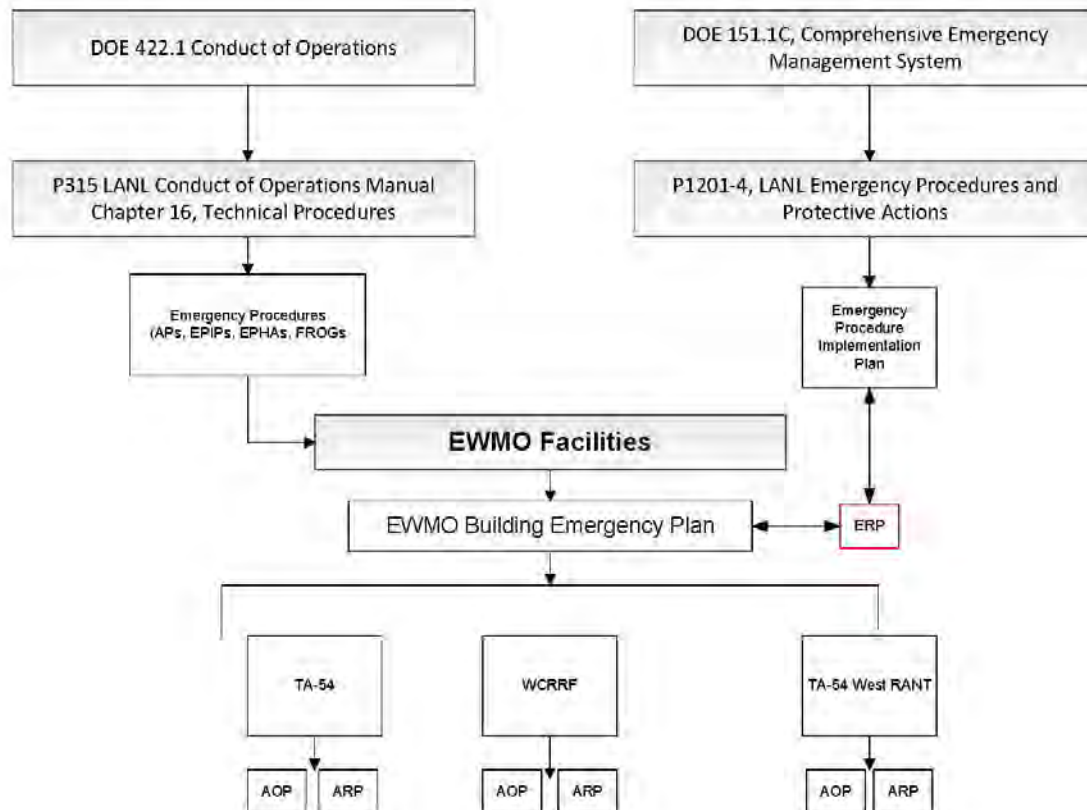
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3. OVERVIEW (continued)

FIGURE 1, EMERGENCY MANAGEMENT PROCESS REQUIREMENTS FLOW-DOWN



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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 Shift Operations Manager (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 Operations Manager (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

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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

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4.4 Shift Operations Supervisor

- 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 WCRRE, 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 3, 5, and 8)
- Provides information from the Waste Compliance and Tracking System (WCATS) as needed.

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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 Shift Operations Manager

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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

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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

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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. Three 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.

5.3 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.

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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 PermaCon Low D/P Alarm • 375 PermaCon Low Cell D/P Alarm • Inadequate Fire Department Manning • Severe Weather 	<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 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 GBE 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 he/she 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.

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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 • 375 PermaCon 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

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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/TL, 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 or ERP) the SOM will designate roles and responsibilities (record keeping, log keeping, phones, communications systems) to members of the Operations Center. The SOM's primary duty during an abnormal/emergency event is to act as the facility leader 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.

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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 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 (an example report is shown in Appendix 10) and two-way radio instructions (Appendix 11)
- 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 12)
- 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.

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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 (refer to Appendix 10 for an example accountability report)

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 FI/IC.

5.7 Protective Actions

5.7.1 Shelter-In-Place (SIP) Instructions

Employees follow protective actions 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 Incident Command. Additional instructions for SIP are shown in Appendix 13.

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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.

5.8 Chain of Command Process (continued)

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 (SEO-EM), and the workers. The TA-54 and WCRRF Operations Centers are staffed during normal operations. The notification process for off-normal hours is performed through the EWMO on-call list and Emergency Operations and Support Center (EOSC) 7-6211.

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Figure 2, Chain of Command Model

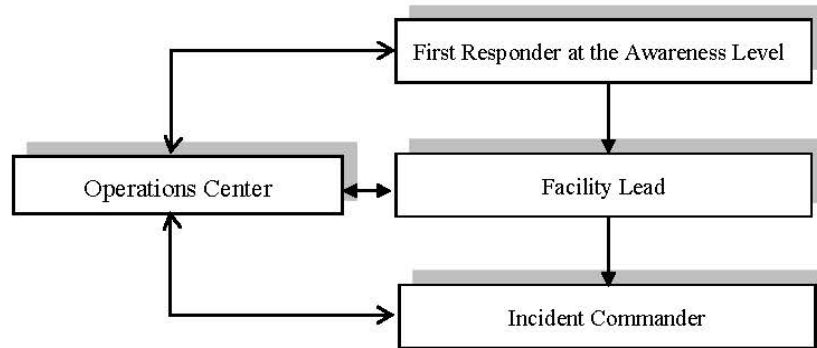
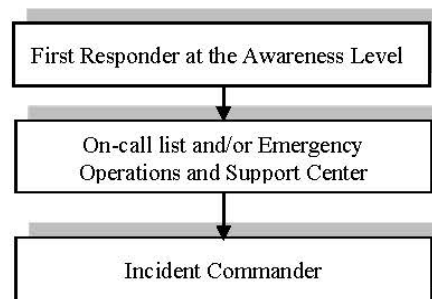


Figure 3, Chain of Command Model Off-Hours

**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.

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5.9 EWMO Communication Equipment and Warning Systems (continued)

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 Radiological Control Technician (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 6, TA-54 Areas G and L Evacuation Alarm Button Locations, and Appendix 8, RANT Evacuation Alarm Button Locations. Any worker who determines an emergency situation that endangers all workers in the area can activate the evacuation alarm. The evacuation alarm is a local alarm, and is not connected to Central Alarm Systems (CAS). At the time of this revision TA-54 evacuation alarms in Areas G, L, and the Administrative areas are inoperable. Efforts are underway to repair the evacuation alarms.

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 CAS. 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.

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5.9 EWMO Communication Equipment and Warning Systems (continued)

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 (SMEs) 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
- Nuclear Criticality Safety Division (NCSD)*
- 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.

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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 Operations Manager who in turn will at a minimum notify the FOD, ES&II 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

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5.14 Recovery Plan (continued)

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 3, 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 the Central Alarm Station (CAS). 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 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 (Public address, two-way radio, e-pagers, cell phones, and/or face to face).

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6. WCRRF SPECIFIC REQUIREMENTS (continued)

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 Confinement Ventilation System (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.

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7. TA-54 SPECIFIC REQUIREMENTS (continued)

The fire alarms are zoned into five areas in TA-54, which operate independently.

TABLE 2, DACS 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 I.), 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

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 PermaCon, and TA-54-375 PermaCon), employees **SHALL** ensure that all doors to the contamination control enclosure remain closed upon exiting.

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7. TA-54 SPECIFIC REQUIREMENTS (continued)

TA-54 is divided into eight response zones that correspond to locations where the fire alarm was initiated or activated (see Appendix 5). 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.

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 7, RANT Assembly Area Locations). This alarm is not connected to the CAS.

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 Digital Alarm Communication System (DACS) which in turn will communicate the alarm with Central Alarm Station (CAS). There is one DACS panel for Building TA-54-38: Fire Alarm Control Panel DACS 6144 (-1).

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8. RANT SPECIFIC REQUIREMENTS (continued)

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 Maintenance on Call (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., Public address, 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 Facility Lead.
- 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.

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Reference

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

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APPENDIX 1

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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 (EOC) runs the 24/7 Emergency Operations Support Center 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.

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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, PCBs, 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 he/she wishes to enter.

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DEFINITIONS AND ACRONYMS

Acronyms

BEP	Building Emergency Plan
CAM	Continuous Air Monitor
CAS	Central Alarm Station
EOSC	Emergency Operations and Support Center
EWMO	Environment and Waste Management Facility Operations
FL	Facility Leader
FOD	Facility Operations Director
FROG	Field Response Operating Guidelines
IC	Incident Commander
LAFD	Los Alamos Fire Department
NES	Nuclear Environmental Sites
OM	Operations Manager
PA	Public Address
RANT	Radioassay and Nondestructive Testing Facility
RCT	Radiological Control Technician
SEO-EM	Security Emergency and Operations-Emergency Management
SIP	Shelter in Place
SOM	Shift Operations Manager
TA	Technical Area
WCRRF	Waste Characterization, Reduction, and Repackaging Facility

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APPENDIX 2

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WCRRF TA-50-69 EMERGENCY CONTACT LIST

Organizations
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

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APPENDIX 3

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WCRRF ASSEMBLY AREA LOCATIONS



★ Large star denotes Assembly Areas

EWMO Division Building Emergency Plan (BEP)

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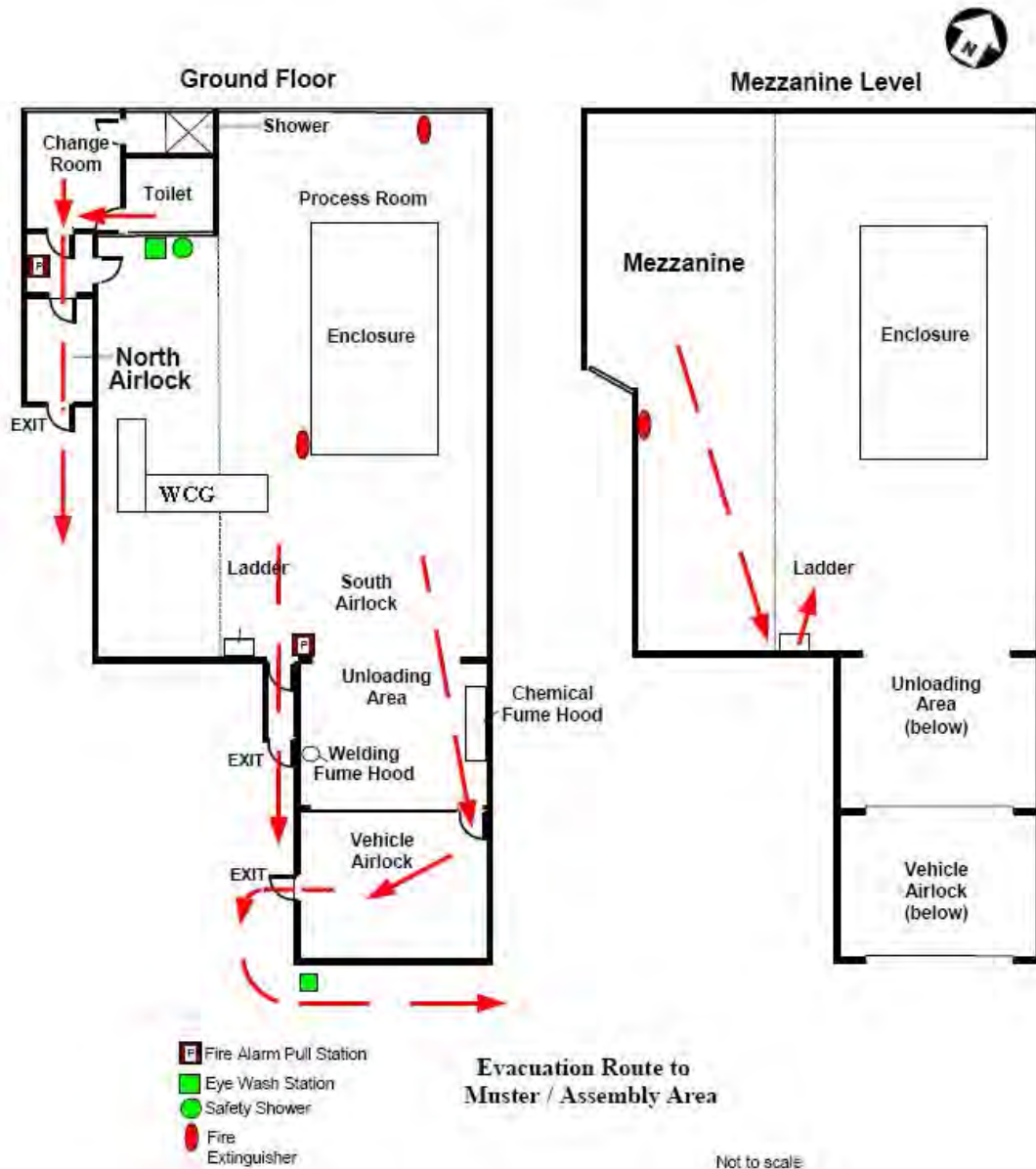
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Reference

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EWMO Division Building Emergency Plan (BEP)
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TA-54 AND RANT EMERGENCY CONTACT LIST

Organizations
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

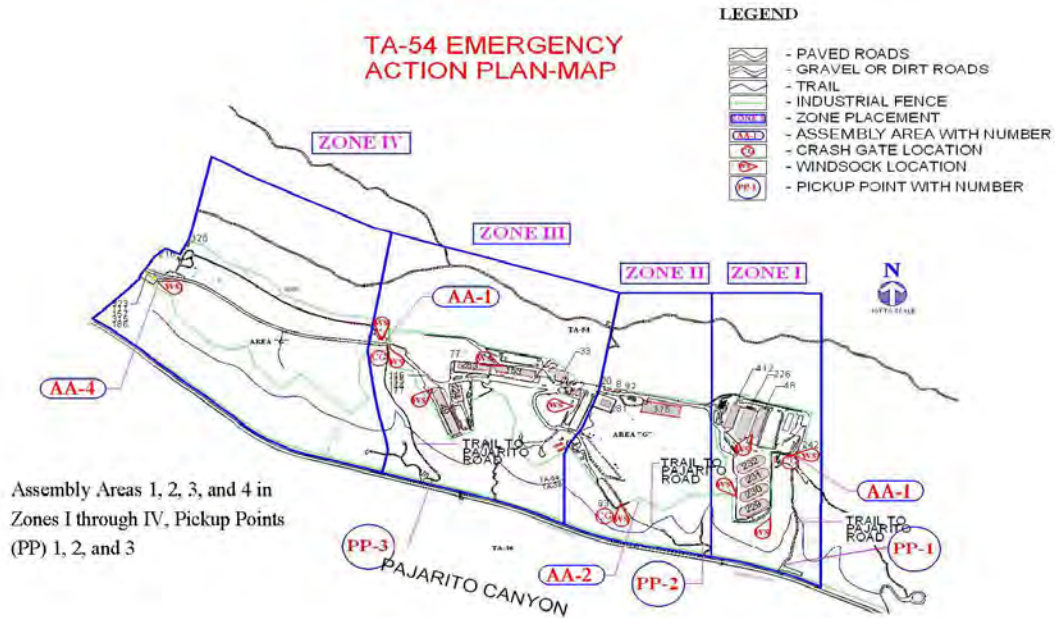
EWMO Division Building Emergency Plan (BEP)

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TA-54 ZONE BORDERS, PICKUP POINTS, AND ASSEMBLY AREA LOCATIONS



UNCLASSIFIED

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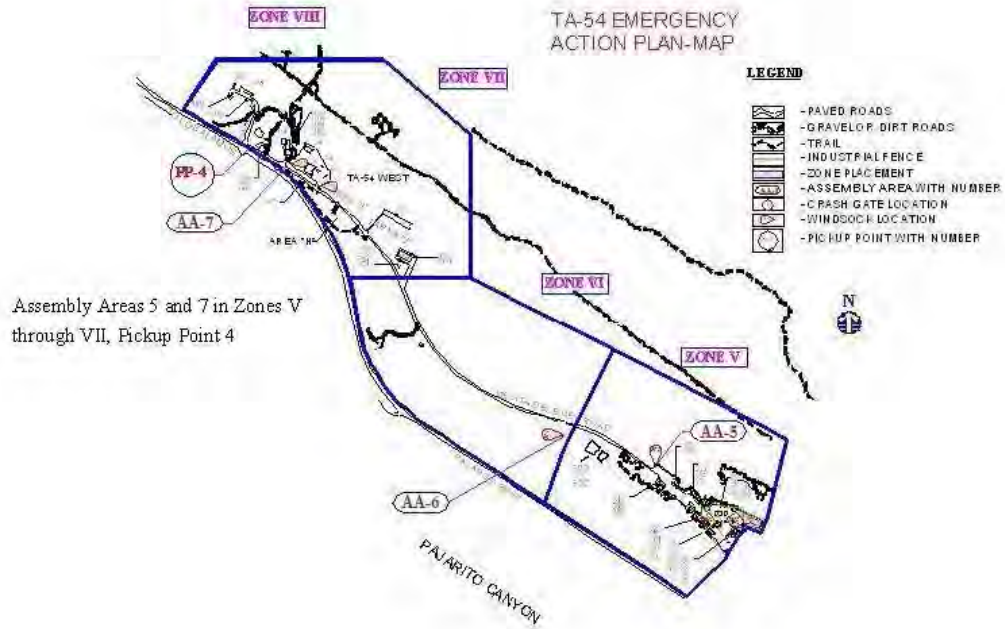
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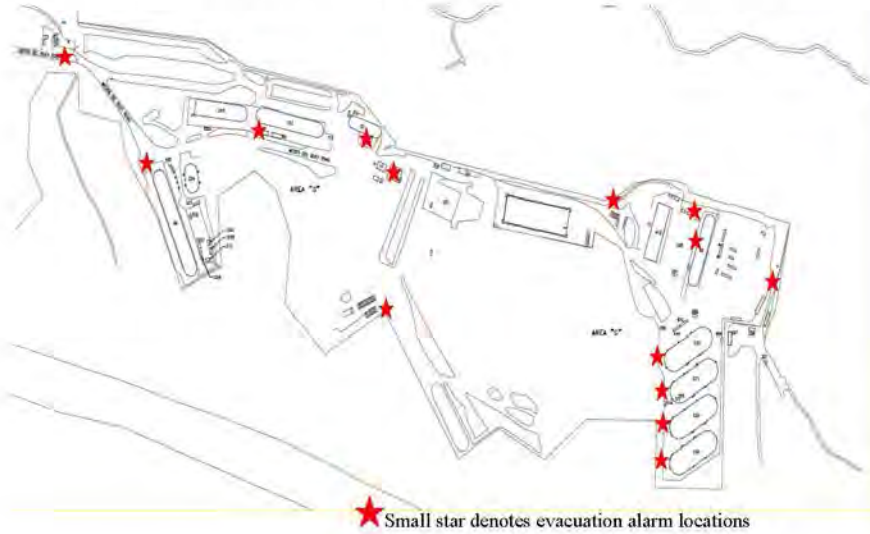
EWMO Division Building Emergency Plan (BEP)

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TA-54 AREAS G AND L EVACUATION ALARM BUTTON LOCATIONS



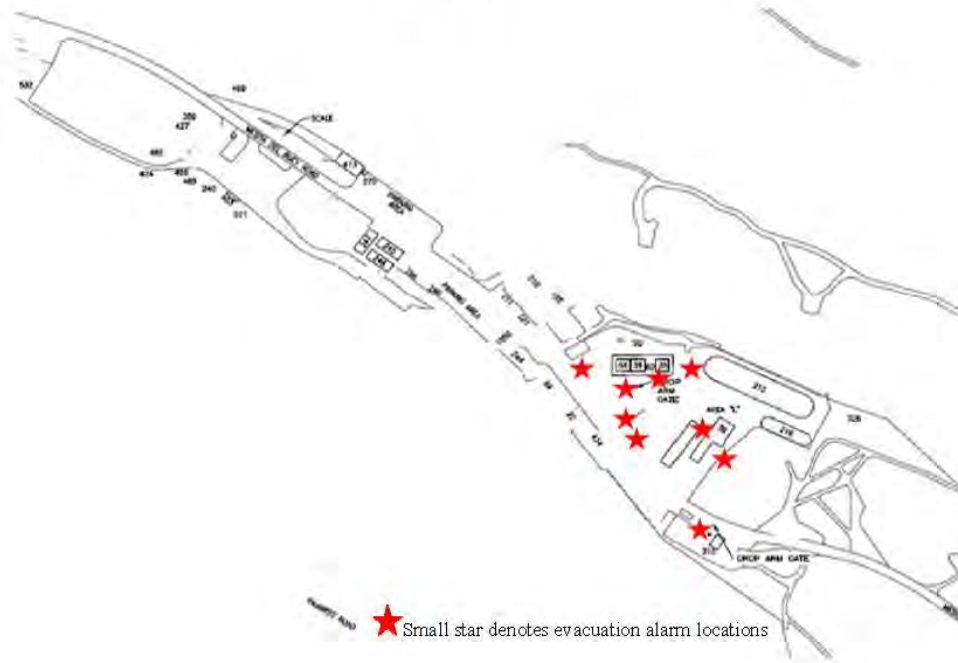
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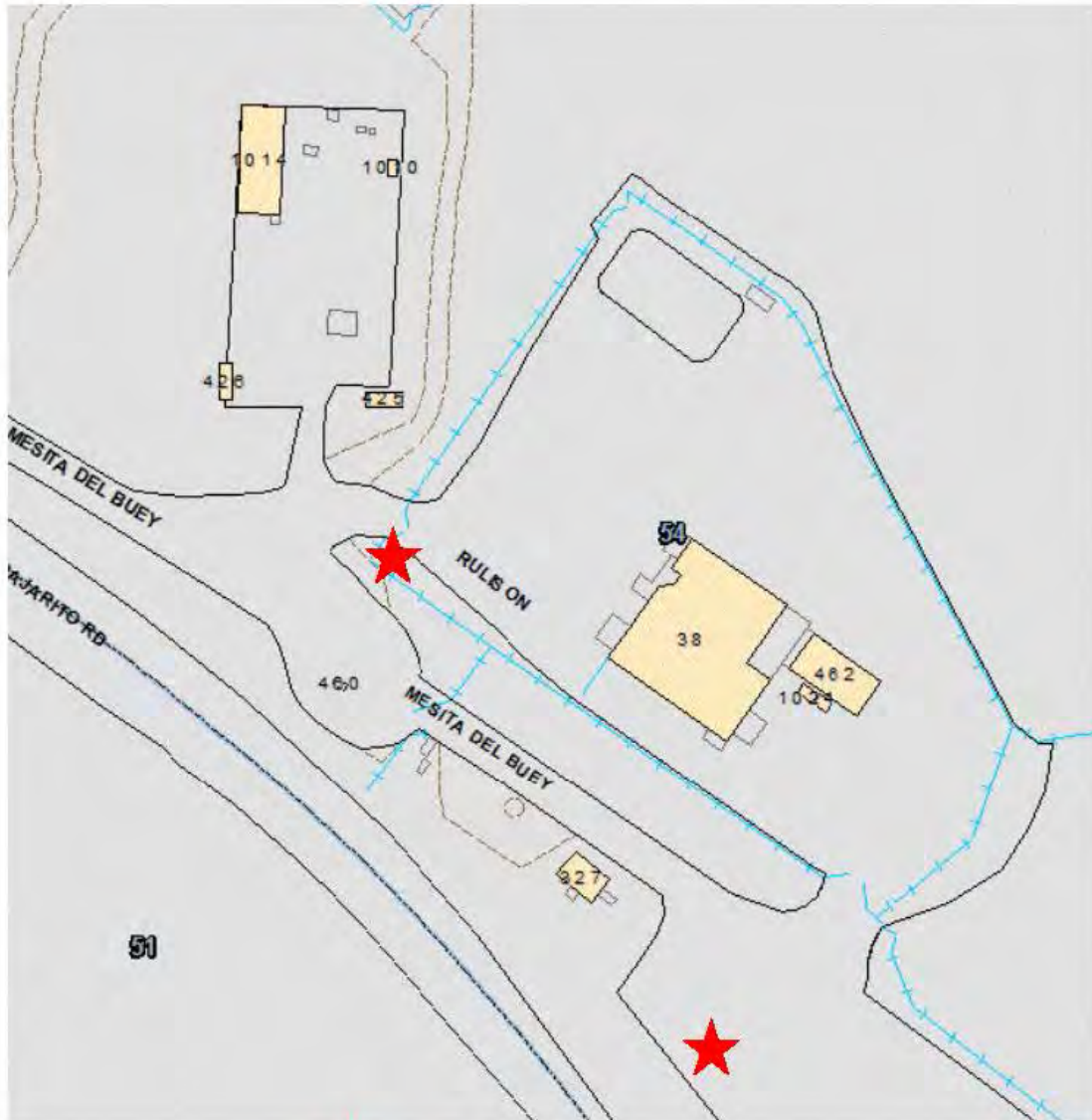
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RANT ASSEMBLY AREA LOCATIONS



★ Large star denotes Assembly Areas

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APPENDIX 9

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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 EOOSC: 7-6211		
Notification Event	Abnormal Event	Emergency Event
1. NOTIFY the Operations Center of the event.	1. SUSPEND work.	1. SUSPEND work.
2. WARN others.	2. WARN others.	2. WARN others.
3. WAIT for direction from the Operations Center and Facility Lead/ Incident Commander.	3. ISOLATE immediate area.	3. ISOLATE immediate area.
	4. MOVE AWAY upwind from the area of concern.	4. EVACUATE to an Assembly Area upwind from the incident.
	5. NOTIFY the Operations Center of the event.	5. NOTIFY 911 and the Operations Center of the event.
EP-DIV-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 EOOSC: 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	RMS Container Exhibiting Chemical Reaction
Rev. 4 – XX/XX/2016		

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Reference

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ASSEMBLY AREA ACCOUNTABILITY REPORT EXAMPLE

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.	
6.	
7.	
8.	
9.	
10.	
11.	
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30.	

Send Roster to the applicable Operations Center

Page ___ of ___

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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.
- [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).

Notes for TA 54 Assembly Areas

Note 1: The two-way radio for Assembly Area 1 is located in TA-54- 0242.

Note 2: The two-way radio for Assembly Area 4 is located inside building TA-54-0315.

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ASSEMBLY AREA LEADER CHECKLIST

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 the 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 re-enter 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**

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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.

Date: _____ Time: _____ Location: _____

Assembly Leader: _____

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/EM&R 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 EM&R. (Vehicles in Area G with windows up and air movement turned off are SIP locations.)
- Conduct Assembly Area Accountability Report and report results to the applicable Operations Center/EM&R (7-6211).
- Follow up with the applicable Operations Center/EM&R every 30 minutes until the event is considered safe.
- Remain in shelter location until the applicable Operations Center/EM&R announces it is safe and the sheltering order has been given the All Clear.

Shelter in Place Order is All Clear:

- Send Assembly Area Accountability Report to the applicable Operations Center or EWMO Emergency Planning Coordinator.

EWMO-PLAN-20036, R.0

EWMO Snow Removal Plan

Effective Date: November 18, 2016Next Review Date: November 18, 2019

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	WCRRF SOM
LTP-SSS OM	IH
LTP-OCD OM	RP-1
LTP-DDP OM	QA
TA-54 SOM	Engineering

Classification Review: ☒ Unclassified ☐ UCNI ☐ Classified

<u>Art Crawford</u>	<u>/ 080070</u>	<u>/ /s/ Art Crawford</u>	<u>/ 10-19-16</u>
Name (print)	Z#	Signature	Date

Responsible Manager, Facility Operations Director

<u>Les Sonnenberg</u>	<u>/ 290408</u>	<u>/ /s/ Les Sonnenberg</u>	<u>/ 10/20/16</u>
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 Snow Removal Plan

Document No.: EWMO-PLAN-20036

Revision: 0

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Reference

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.

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EWMO Snow Removal Plan

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Reference**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, Buildings 46-120 and 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 Roads and Grounds (R&G) crews are dispatched by the UI R&G 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.

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Reference

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
(S) 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. 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 when INVENTORY is not present in the WCRRF yard (All INVENTORY is within BUILDING TA-50-0069). 3) Transportation vehicle for the delivery of RNS WASTE CONTAINERS and pickup of TRU WASTE CONTAINERS SHALL be allowed at the WCRRF.

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Reference

4. PREACUTIONS AND LIMITATIONS (continued)

- **RANT**

(S) 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**

(S) 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 EP-AREAG-FO-AP-1190, Access Control for TA-54 Areas G, L, J, and H, and the driver must still travel along designated routes.

(S) 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.

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Reference

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 handling technicians 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 Handling Technicians 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.

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Reference**5.3 Priority**

R&G 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

EP-AREAG-FO-AP-1097, TA-54 Area G Combustible/Flammable Liquid Control

EP-AREAG-FO-AP-1190, Access Control for TA-54 Areas G, I, J, and H

SER-RNS, R.0, Safety Evaluation Report, October 2016

UI-PLAN-007, Los Alamos National Laboratory Snow and Ice Control Plan

EM-PLAN-20191, R.0

Seasonal Facility Preservation Plan (SFPP)

Effective Date: 09/22/2016
Next Review Date: 09/22/2019

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 Management

Quality Assurance
EWMFO Shift Operations Manager

Classification Review: ☐ N/A ☒ Unclassified ☐ UCNI ☐ Classified _____

S.B. Fellows	/ 126075	/ /s/S.B. Fellows	/ 09-20-2016
Name (print)	Z#	Signature	Date

Responsible Manager: MSS-EWMFO Maintenance Manager

Mark (Barry) Walker	/ 238501	/ /s/Mark (Barry) Walker	/ 09/22/2016
Name (print)	Z#	Signature	Date

Working Copy / Information Only (circle one)
Initials / Date: _____ / _____

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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.

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Reference**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 Environmental 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 the actions and requirements imposed to provide 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, lightning, 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.

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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

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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*, Section 3.1 as a walkdown aide.
- Performs walkdowns of SSCs for seasonal preservation needs, providing feedback to the MM.
- Document walkdown(s) results and provide to MM for SFPP development.
- Identifies Vital Safety Systems (VSS) supporting seasonal preservation actions (e.g., SC, SSCs etc.).
- Reviews Work Orders (WOs), work requests, and issues related for seasonal preservation needs, which should include open items and previously corrected deficiencies.
- Evaluates new and in-process projects to identify seasonal preservation issues.
- Supports Work Control Planners with the planning of PM and CM WOs needed to support seasonal facility preservation.
- Verifies acceptable results for post-modification/maintenance testing, as required.

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.

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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*.

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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, lightning 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.

Due to the difficulty of predicting high winds, flooding and lightning, these noted requirements will have to be scheduled when conditions apply.

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, lightning 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*

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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.
- Storage Area considerations:
 - 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.
- Heating System(s) considerations:
 - Heating systems PMs are completed, deficiencies verified, and the MC / MM notified if work orders are necessary.
 - Ensure facility boiler inspections and PMs are completed prior to cold weather. Verify deficiencies, and notify the MC to initiate a work order for repairs.
 - Ensure heating system(s) power is on and the heating system(s) has been turned on and properly functioning.

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5.2 Winter Weather Considerations (continued)

- Ensure areas requiring portable heating units are obtain through the MM.
- Ensure portable auxiliary heaters for emergency / unplanned use have been inspected, tested, and staged. Identified sources to obtain more have been documented, if needed.
- Ensure 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, scuppers, 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.

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5.3 Cold Weather Considerations (continued)

- Perform walkdowns of components inside heated buildings that are 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.

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5.6 Wildfire Prevention Considerations

Requirements for wildfires only apply when a wildfire is burning.

NOTE See Attachment E, *EWMO Wildfire Prevention Annual Checklist* for facility-specific responsibilities.

- Where appropriate, secure HVAC and other vulnerable equipment 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.

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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)

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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	Perform 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.			
	• Perform 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, I.A.N.L. 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	Perform 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	Perform 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.			
	• Perform 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, LANI, 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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TA-54 Administration Area				
1	Perform 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			

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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. 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	Check buildings with restrooms and kitchens: <ul style="list-style-type: none"> Open lavatory faucets, and flush toilets. Open kitchen sink faucets. 			

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#	Description	SAT / UNSAT	Date	Initials
TA-54 West				
1	Perform 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	Perform 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.			
	• Perform 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	Perform an 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, Area G				
1	Perform general inspection of the building, being observant of the following:			
	• 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.			
	• 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 except those clearly placed to prevent tampering.			
	• 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.			
	• Perform operational check of all radiant space heaters.			
	• TA-54-0011 - Check restrooms, open lavatory faucets, and flush toilets.			
	• TA-54-0367 - Check restrooms, open lavatory faucets, and flush toilets.			
	• TA-54-0002 - Check water line manifold on the west side.			

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#	Description	SAT / UNSAT	Date	Initials
TA-54 Heated Areas				
1	<p>Perform general inspection of the building, being observant of the following:</p> <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	Perform 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) 			

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ATTACHMENT C

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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: The checklists below support freeze protection requirements as follows:

- To be performed on a daily basis while operations are being performed at EWMO-supported facilities.
- To be performed at least 3 times per week during winter break.

General Inspection: For buildings listed in the table below, ensure the following tasks are performed:

- Inspect structures for potential sources of cold outside air, such as doors, windows, louvers, exterior door latches, automatic closure mechanisms and weather stripping.
- Inspect outside storage pads and unheated areas. Remove all items/materials vulnerable to freeze damage. Any 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.
- Ensure the nitrogen supply associated with applicable Fire Suppression Systems (FSS) will be inspected for the following six buildings:

(S) TA-54-0038 (RANT) – nitrogen pressure ≥ 500 psig (RANT AC 5.6.5, *Fire Protection Program*)¹

TA-54-0033 – nitrogen pressure ≥ 500 psig

TA-54-0230 – nitrogen pressure ≥ 500 psig

TA-54-0231 – nitrogen pressure ≥ 500 psig

TA-54-0412 – nitrogen pressure ≥ 500 psig

TA-54-0557 – nitrogen pressure ≥ 500 psig

- If FSS nitrogen pressure is < 500 psig, notify the MC / SOM and request nitrogen bottle be replaced.

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.

¹ (S) identifies Safety Basis requirements that cannot be changed without Engineering approval.

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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							
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
	/ /	/ /	/ /	/ /	/ /	/ /	/ /
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 (°T)							
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
(S) Record FSS nitrogen bottle pressure (≥ 500 psig)* (RANT AC 5.6.5)	____ psig	____ psig	____ psig	____ psig	____ psig	____ psig	____ psig
TA-54-1014							
TA-54 Administrative Areas							
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
	/ /	/ /	/ /	/ /	/ /	/ /	/ /
WS 54/53 Low Temp (°T)							
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 nitrogen bottle pressure is < 500 psig, notify the MC and the SOM to have the nitrogen supply bottle replaced.

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Buildings/Structures	Day of Week / Date						
TA-54 Area I.							
	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							
	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-54-0002							
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 nitrogen bottle pressure is ≤ 500 psig, notify the MC and the SOM to have the nitrogen supply bottle 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 ($\geq 40^{\circ}\text{F}$)	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
TA-54-0231							
Inside TA-54-0231: 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-54-0289							
Inside 54-289: Record fire riser room temperature ($\geq 40^{\circ}\text{F}$)	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
TA-54-0315							
TA-54-0367							
TA-54-0412							
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-54-0557							
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

* If nitrogen bottle pressure is < 500 psig, notify the MC and the SOM to have the nitrogen supply bottle replaced.

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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	Perform 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.			

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#	Description	SAT / UNSAT	Date	Initials
Building 0050 - 0069, WCRRF				
1	Perform 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	Perform 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.			
	• TA-54-0582.			
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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ATTACHMENT D

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#	Description	SAT / UNSAT	Date	Initials
TA-54 Administration Area				
1	Perform 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	Perform 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	Perform 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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	Description	SAT / UNSAT	Date	Initials
Building 0054 - 0039, Area L				
1	Perform 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.			
	• 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.			
Building 0054 - 0215, Area L				
1	Perform 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).			

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#	Description	SAT / UNSAT	Date	Initials
TA-54 Buildings -0002, -0011, -0324, -0325, -0367, -0372, and Area G				
1	Perform 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:			
	• 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 Storage Areas				
1	Perform 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-54-0033			
	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			

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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" or √ "Extreme," and √ Wind speed are forecasted to exceed 10 mph • Maintenance POC and Facility Work Coordinators 			

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ATTACHMENT E

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EWMO WILDFIRE PREVENTION ANNUAL 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.

#	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				

UNCLASSIFIED

007

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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.			

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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: _____

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ATTACHMENT G

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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


Page 1 of 1

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.

Form 2100-WC

 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: _____

WCRRF SOM/SOS: Name (Printed) _____ Z# _____ Signature: _____ Date: _____

Form 2100-WC

 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 Mues/088731/1.26.15	
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.

Form 2100-WC

 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:

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.

Form 2100-WC

 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:

<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. <hr/> Reviewer Signature/Z#/Date



Form 2100

Integrated Work Document (IWD) Part 1, Activity Specific Information

IWD #: 001 Revision #: 0			Activity/Task Title Conduct DEP related activities associated with EWMO compliance.
Work Document # DESHS-EWMS 08-16			Planner/Preparer (Name/Z #/Date) Paul Martin/ 205838/ 05/12/2016
TA 54	Building Outside	Room 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., rehanging 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: Robert Stob / 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. Solis 218703 8/30/2016

Subject Matter Exper(s) (SME[s]) Review (Signature/Z#/Date) If Required:

Frank Taylor 203034 8/29/16
Paul Shrock 232597 8/29/16
Hazard Determination by Hazard Grading Table

- ☐ Low-Hazard
☒ Moderate-Hazard
☐ High-hazard/Complex

IWD Type:

- ☒ Standing IWD ☐ Standard IWD

Expiration 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 Schrock 232597

Name of Alternate PIC: _____

Classification review completed, if required.

Reviewer Signature/Z#/Date

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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. 		
	Musculoskeletal injury due to heavy lifting	<ul style="list-style-type: none"> Maintain good housekeeping practices and clearly mark and identify hazards that cannot be eliminated. Musculoskeletal injury due to heavy lifting 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 splinters, 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. 		
	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. 		



Form 2102

**Integrated Work Document (IWD) Part 2,
FOD Requirements and Approval for Entry and Area Hazards and Controls**

**Tenant
Activity Form**

IWD No./Work Request No: DESHS-EW2 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 must be Scheduled	<input checked="" type="checkbox"/> Work-Area Training Required
<input type="checkbox"/> Co-located Hazards/Concerns	<input type="checkbox"/> Check in Daily
<input type="checkbox"/> Review under AB/Safety Basis/USQ	<input type="checkbox"/> Check out at End of Work
	<input type="checkbox"/> Check out Daily

☐ Escort Required ☐ Security Clearance Requirements
☐ Quality Issues ☐ Other Security Requirements
☐ 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 <u>Le O. G. / 151358 / 9-12-16</u>
Date Approval Expires: <u>9-12-17</u>



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. Vial</i> 211334 9-12-2016
Worker (Signature/Z#/Date) <i>Frank Taylor</i> 203034 9/12/16	Worker (Signature/Z#/Date) <i>[Signature]</i> 312160 9/12/16
Worker (Signature/Z#/Date) <i>[Signature]</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> 072588 9/12/16



Integrated Work Document (IWD) Part 3, Validation and Work Release

IWD # DESHS-EWMO 08-16 Revision #: 0

Pre-Job Brief Attendance Roster

By signing below as required , I agree to the following: <ul style="list-style-type: none"> • 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)
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Worker (Signature/Z#/Date)	Worker (Signature/Z#/Date)
Worker (Signature/Z#/Date)	Worker (Signature/Z#/Date)
Worker (Signature/Z#/Date)	Worker (Signature/Z#/Date)

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Form 2100

Integrated Work Document (IWD) Part 1, Activity Specific Information

IWD #: DSESH-EWMO-WMC-IWD Revision #: 3			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 (torqueing fasteners, applying TIDs). Supports field sampling, RLWTF pumping activities, and container movements. Containers may include 5, 10, 15, 30, 55, 85, 110 gallon drums, B-12, B-25, SWBs, Roll-Offs, Intermodels, Conex's, soft-sided bags, etc.
Work Document #			Planner/Preparer (Name/Z #/Date) David Williams / 284036 / 03-02-2016
TA 54	Building All	Room All	Other Location(s)(TA) as required TA-54 Admin Area, Areas G, H, J, L; RANT, and WCRRF (TA-50-69)

Activity Description/Overview:

Hazard Analysis (HA) Method Used: ☒ Brainstorming ☐ Other:

List Names of HA Team (Attach sheet if necessary): Robyn Petersen

Date HA Performed: August 21, 2014

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: [Signature] 100844 3/4/2016

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: [Signature] 37-116 114849 54

Subject Matter Exper(s) (SME[s]) Review (Signature/Z#/Date) If Required:

[Signature] 211334 March 2 2016

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: March 01, 2017 RLM and FOD or FOD Representative reapproval is required Annual Review Completed (RLM Initial/Date): <u>RLM 3/4/2016</u> Name of Primary Person in Charge (PIC) (Print): Robyn Petersen Name of Alternate PIC: <u>David Williams</u> Name of Alternate PIC: _____		Classification review completed, if required. NA 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.

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.

Form 2100 (10/12)

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Integrated Work Document (IWD) Part 1, Activity Specific Information Continuation Page

Form 2100_con

IWD#: DSESH-EWMO-WMC-IWD

Revision #: 3

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 PPE, Tamper Indicating Device TIDs), alarms, safes, recycle, waste minimization]	Reference Documents List permits, operating manuals, security plans, and other reference procedures.	Training List training and qualification requirements.
All Steps:	Site specific hazards	<ul style="list-style-type: none"> At a minimum, wear PPE as required by site specific training. 		Site specific training or escort
	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.). 	Site specific EAP	Site specific training
	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. 		Curriculum #18649, Thermal Stress Awareness Self-Study
	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 DSESH 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
	Exposure to radiological contamination	<ul style="list-style-type: none"> RCT support Safety glasses Cut resistant gloves Follow all postings and RCT directions. If a CAM alarm activates while in the contamination area, evacuate yourself and other workers to a safe location and contact the appropriate Operations Center. 	RWP (when required)	Radiological Worker 2 #12909

Integrated Work Document (IWD) Part 1, Activity Specific Information Continuation Page

Form 2100_con

IWD#: DSESH-EWMO-WMC-IWD

Revision #: 3

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 PPE, Tamper Indicating Device (TIDs), alarms, safes, recycle, waste minimization]	Reference Documents List permits, operating manuals, security plans, and other reference procedures.	Training List training and qualification requirements.
All Steps:	Exposure to solid or liquid chemical waste	<ul style="list-style-type: none"> Review SDS for chemical and health hazards. Contact the deployed IH to ensure proper PPE selection (e.g., chemical specific gloves). Wear safety glasses with sideshields or goggles at a minimum to protect eyes. Long sleeve shirt, long pants, closed toed shoes. 	Manufacturer's SDS (or MSDS for legacy chemicals).	Hazard Communication #25997 Training Plan WM-QS-003, LANL WMC qual standard
	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 FLM. 		
	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. 		
	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. 		
	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 FLM prior to starting outdoor work. 		

Integrated Work Document (IWD) Part 1, Activity Specific Information Continuation Page

Form 2100_con

IWD#: DSESH-EWMO-WMC-IWD

Revision #: 3

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 PPE, Tamper Indicating Device TIDs), alarms, safes, recycle, waste minimization]	Reference Documents List permits, operating manuals, security plans, and other reference procedures.	Training List training and qualification requirements.
Inspections:	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. 		Training Plan WM-QS-003, LANL WMC qual standard
	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. 		
	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. 		
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	<ul style="list-style-type: none"> HANDLING/TRANSPORT of MAR is only performed per applicable procedure by trained and qualified operators. 		Site specific training

Integrated Work Document (IWD) Part 1, Activity Specific Information Continuation Page

Form 2100_con

IWD#: DSESH-EWMO-WMC-IWD

Revision #: 3

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 PPE, Tamper Indicating Device TIDs), alarms, safes, recycle, waste minimization]	Reference Documents List permits, operating manuals, security plans, and other reference procedures.	Training List training and qualification requirements.
Container Movements: ALL	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. 		Training Plan WM-QS-003, LANL WMC qual standard
	Physical injuries	<ul style="list-style-type: none"> Wear sturdy work boots with toe protection. Wear safety glasses with side shields. Wear cut resistant gloves when pinch points or hand injuries are possible. When working around rotating equipment, control loose fitting clothing, hair, badges/lanyards, do not wear gloves. Call 911 for major injuries. For minor injuries, contact the appropriate Operations Center and have your FLM escort you to the LANL Occupational Medicine Clinic. 		
	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 the appropriate Operations Center. 		

Integrated Work Document (IWD) Part 1, Activity Specific Information Continuation Page

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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. 		Training Plan WM-QS-003, LANL WMC qual standard
Container Movement: FORKLIFT	Equipment breakdown/failure	<ul style="list-style-type: none"> Perform pre-operational inspection and complete the checklist prior to use for each shift. Operator must be qualified and authorized to 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 spotter where movement will be in congested areas. 		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 functional as intended, tag out of service and report it to the appropriate Operations Center. 	Current annual inspection for lifting equipment	

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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 cut resistant gloves. Be aware of surroundings and maintain good housekeeping. 		Training Plan WM-QS-003, LANL WMC qual standard
	Uncontrolled pressure release from a drum/container	<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. Do not open drums/containers that show deformation from pressure, pause work, evacuate the area and notify the appropriate Operations Center. 		
	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 faceshield 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. 		
	Foot injury	<ul style="list-style-type: none"> Always wear sturdy work boots with toe protection. 		
	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. 		

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Integrated Work Document (IWD) Part 1, Activity Specific Information Continuation Page

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IWD#: DSESH-EWMO-WMC-IWD

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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 PPE, Tamper Indicating Device TIDs), alarms, safes, recycle, waste minimization]	Reference Documents List permits, operating manuals, security plans, and other reference procedures.	Training List training and qualification requirements.
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. 		Training Plan WM-QS-003, LANL WMC qual standard
	Exposure to containerized solid or liquid chemicals (e.g., closed inner containers, ampoules, bulk containers, etc.)	<ul style="list-style-type: none"> Wear safety glasses with sideshields if working with contained liquids, chemical specific gloves, closed toe shoes, long pants and long-sleeved shirt. Contact the deployed IH for chemical specific PPE selection, guidance, and direction. Ensure that an eyewash is in close proximity to the work area. 		
	Exposure to corrosive liquids	<ul style="list-style-type: none"> Wear safety glasses with sideshields if working with contained liquids, chemical specific gloves, closed toe shoes, long pants and long-sleeved shirt. Contact the deployed IH for chemical specific PPE selection, guidance, and direction. Ensure that an eyewash is in close proximity to the work area. 		
	Leaks/spills from containers with compromised integrity	<ul style="list-style-type: none"> Visually inspect containers for integrity before handling. Pause work if a leak or spill is discovered or occurs. If trained and it is safe to do so, stop leak/spill Minimize exposure duration. If leak/spill is not controlled, evacuate to a safe location and warn others. Contact the appropriate Operations Center and your FLM. 		
	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. 		
	Exposure to uncontainerized liquid chemicals	<ul style="list-style-type: none"> When adding absorbent material to uncontained chemicals (e.g., spills), wear safety goggles or face shield with safety glasses, chemical specific gloves (per IH direction), closed toe shoes, long pants, long sleeve shirt, and a lab coat (a coat may be worn under the lab coat during winter weather in an air-conditioned buildings). 		

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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, ensure that radiological surveys are performed. 		Training Plan WM-QS-003, LANL WMC qual standard
Field Sampling and Screening Activities:	Skin, eye, and/or face exposure to sample material	<ul style="list-style-type: none"> Wear chemical specific gloves in accordance with deployed IH direction when performing bulk sampling and/or handling environmental media. Wash hands and exposed skin at the end of the activity. Consult with the deployed IH for PPE determination when performing sampling or screening activities that pose a body exposure risk (e.g., calawasa sampling). Wear non-vented goggles and a face shield when collecting liquid samples or corrosive liquid samples. Collect corrosive liquid samples adjacent to an eyewash/safety shower. Wear safety glasses w/sideshields and a face shield when collecting particulate samples. 		Training Plan WM-QS-003, LANL WMC qual standard
	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. 		If RPE is required: Annual physical; Curriculum 40723, Respirators: APR Self Study; Curriculum 3549, Respirators: Air-Purifying Fit Test
	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. 		

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Pumping/Transfer of Liquids from container to tanker truck (RLWF) or to another container.	Pump/Hose handling involving lifting and movement – physical injury.	<ul style="list-style-type: none"> Wear sturdy work boots with toe protection. Wear safety glasses with side shields. Wear cut resistant gloves when pinch points or hand injuries are possible. When working around rotating equipment, control loose fitting clothing, hair, badges/lanyards, do not wear gloves. <p>Call 911 for major injuries. For minor injuries, contact the appropriate Operations Center and have your FLM escort you to the LANL Occupational Medicine Clinic.</p>		Training Plan WM-QS-003, LANL WMC qual standard
	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. <p>Consider your physical condition and ask for help when you are unsure that you can manage a load without assistance.</p>		
	Leaks/spills	<ul style="list-style-type: none"> Ensure destination truck/container has adequate holding capacity for volume to be transferred. Don appropriate PPE; e.g., safety glasses with side shields/goggles, face shield, chemical resistant gloves. Ensure spill kit is located at scene. Perform Off-Normal Response per the BEP. 	EP-DIV-BEP-20048, EWMO Division Building Emergency Plan (BEP)	
	Damaged and/or incorrect orientation/connection of transfer hoses – leaks/spills	<ul style="list-style-type: none"> Inspect hoses/connections for damage and ensure connections are properly oriented and secure – correct, as appropriate. 		
	Electrical Shock	<ul style="list-style-type: none"> Inspect cord and plug of portable transfer equipment prior to use. Use GFCI equipped extension cords. Do not use if cord/plug is damaged. 		

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Form 2101

**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: DSESH-EWMO-WMC-IWD

Revision #: 3

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. All	Room N/A	Other Location TA-54 Administrative Area, Areas G,H,J,L,RANT
FOD Designated Facility Point-of-Contact	Name Pat O'Grady	Phone 231-8289	Pager N/A	Email jpo@lanl.gov
Entry and Coordination Requirements (Check one or more of the following)				
<input type="checkbox"/> No Entry/Coordination Requirements <input checked="" type="checkbox"/> FOD-designated facility Point-of-Contact must sign IWD Part 3				
<input checked="" type="checkbox"/> Plan of the Day/Plan of the Week (POTD/POTW) <input checked="" 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 checked="" type="checkbox"/> Check in Daily				
<input checked="" type="checkbox"/> Co-located Hazards/Concerns <input type="checkbox"/> Other Security Requirements (ex.: Cellphone, No Foreign Nationals, etc.)				
<input checked="" type="checkbox"/> Check out at End of Work <input type="checkbox"/> Quality Issues <input checked="" type="checkbox"/> Check out Daily				
<input type="checkbox"/> Escort Required <input checked="" type="checkbox"/> Review under Authorization Basis (AB)/Safety Basis/Unreviewed Safety Question (USQ)				
<input checked="" type="checkbox"/> Other Bounding Conditions: Area G is posted as a Radiological Area.				
Additional Comments (refer to Job Hazard Analysis [JHA] Tool Facility Notes) If training requirements are not met then an escort is required.				

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 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: Work near radiation producing devices.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Area G is considered >5mrem hr.	P121 General Radiation Protection.	Dosimetry and Rad Worker II

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IWD No./Work Request No: DSESH-EWMO-WMC-IWDRevision #: 3

ESH/ISS 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)
Worker Exposure Working near non-ionizing radiation, beryllium, noise, chemicals, hazardous biological materials, lead, asbestos, temperature/humidity extremes, or high explosives. Specify Hazards: Radiological Controlled Area and Drum Handling	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Area G Is Posted as a Radiological Controlled Area	Follow Applicable RWP	Rad Worker II, Dosimetry, Site Specific Training(if not escorted)
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: Entry into confined space#s 755,4082,4253,4258 or 4259	<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 P101-20, Fall Protection Program	<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 Pat O'Neil / 151358 / 03-07-16Date Approval Expires: 03-07-16 03-07-17 JPO 5-7-16



Form 2101

**Integrated Work Document (IWD) Part 2,
FOD Requirements and Approval for Entry and Area Hazards and Controls**

Non-Tenant
Activity FormIWD No./Work Request No: DSESH-EW Revision #: 3

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 50	Bldg. 69, 75, 194	Room All	Other Location Outside
FOD Designated Facility Point-of-Contact	Name Gail Helm	Phone 505-699-3925	Pager N/A	Email gailw@lanl.gov
Entry and Coordination Requirements (Check one or more of the following) <input type="checkbox"/> No Entry/Coordination Requirements <input checked="" type="checkbox"/> Plan of the Day/Plan of the Week (POTD/POTW) <input type="checkbox"/> Security Clearance Requirements <input type="checkbox"/> Co-located Hazards/Concerns <input checked="" type="checkbox"/> Check out at End of Work <input type="checkbox"/> Escort Required <input checked="" type="checkbox"/> Other Bounding Conditions: <u>FOLLOW ALL POSTINGS</u>				
<input checked="" type="checkbox"/> FOD-designated facility Point-of-Contact must sign IWD Part 3 <input checked="" type="checkbox"/> Check in at Start of Work <input type="checkbox"/> Work must be Scheduled <input type="checkbox"/> Other Security Requirements (ex.: Cellphone, No Foreign Nationals, etc.) <input type="checkbox"/> Quality Issues <input checked="" type="checkbox"/> Review under Authorization Basis (AB)/Safety Basis/Unreviewed Safety Question (USQ)				
<input checked="" type="checkbox"/> Work-Area Training Required <input checked="" type="checkbox"/> Check in Daily <input checked="" type="checkbox"/> Check out Daily				
Additional Comments (refer to Job Hazard Analysis [JHA] Tool Facility Notes) If training requirements are not met, then an escort is required. All work must be coordinated with Operations Center before work is authorized.				

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 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	Areas are posted as radiological areas.	Current RWP	RadWorker II, Dosimetry, Site Specific training(if not escorted)

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IWD No./Work Request No: D5ESH-EWMD-WMC-RWDRevision #: 3

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)
Worker Exposure Working near non-ionizing radiation, beryllium, noise, chemicals, hazardous biological materials, lead, asbestos, temperature/humidity extremes, or high explosives. Specify Hazards:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
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 P101-20, Fall Protection Program	<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			
<p>I have verified that the hazards identified above adequately identify the area hazards and that the IWM process has been applied appropriately.</p> <p>FOD or Representative (Signature/Z #/Date) Approval Required <u>Gail Marie Helm</u> <u>114849</u> <u>3.8.16</u></p> <p>Date Approval Expires: <u>03-08-2017</u> Gail Marie Helm</p> <p><small>Digitaly signed by Gail Marie Helm (DN: cn=Gail Marie Helm, o=Environmental Waste Management Operations, ou=ETWMD-OC, email=gmarie@etwmd.com, c=US Date: 2016.03.08 16:05:37 -07'00')</small></p>				



Integrated Work Document (IWD) Part 3, Validation and Work Release

IWD # DSH-EWMO-WMC IWDRevision #: 3 **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)	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)



Form 2104

Integrated Work Document (IWD) Part 4, Feedback/Post Job Reviews

IWD #: DSESH-EWMO-WMC-IWD Revision #: 3

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.


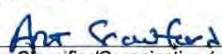

Other recommendations for improvements to performing this activity. State the positive attributes of this activity.

Completion Statement

Name (print) of PIC/Z #:	Signature	Date

Safety Basis Division

Unreviewed Safety Question Process
December 2014**Attachment D. USQ Screening Form**

	UNREVIEWED SAFETY QUESTION SCREENING WORKSHEET	
Facility Identification: EWMO	Facility-Specific USQ Number: EWMO-16-054-S	Rev.0
Change Number DSESH-EWMO-WMC-IWD, R3		Date: 3/9/2016
Title: Waste Management Coordinator daily activities list.		
<p>Reviewed for Classification</p> <p>If the documents are classified, follow the requirements contained in the Classified Matter Protection and Control Handbook, P204-2.</p> <p>This document was reviewed to ensure proper classification and is classified as :</p> <p><input checked="" type="checkbox"/> Unclassified</p> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 30%;">  Derivative Classifier/Organization (printed or typed) </div> <div style="width: 30%;">  Signature </div> <div style="width: 30%;"> 3/9/16 Date </div> </div> <p>Note: If this document is OUO or UCNI, add the appropriate markings, distribution limitation statement, and guidance data block(s).</p>		
<p><input type="checkbox"/> Official Use Only (OUO)</p> <p>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.</p> <p>Exemption number and category:</p> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 30%;"> Derivative Classifier/Organization (printed or typed) </div> <div style="width: 30%;"> Signature </div> <div style="width: 30%;"> Date </div> </div> <p>List exemption and/or guidance used (if applicable): _____</p> <p>_____</p> <p>Further dissemination authorized to US government agencies and their contractors.</p>		
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SBP112-3-R1.2


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Safety Basis Division

Unreviewed Safety Question Process
December 2014

	UNREVIEWED SAFETY QUESTION SCREENING WORKSHEET
USQ Number: : EWMO-16-054-S	Date: 3/9/2016

Description of Proposed Change:

This USQ screens the changes proposed by DSESH-EWMO-WMC-IWD, R3. This document is a list of daily activities for the Waste Management Coordinator. The specific change is the addition of a row in the table called Container Movements. This row defines the movements, types of material in the containers and states that the Handling/transport of MAR is only performed per applicable procedures by trained and qualified operators.

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-R1.2 (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; this document change adds container movements to the list of activities for the Waste Management Coordinator. The change states that the movement of containers containing MAR is only to be performed using applicable procedures and trained and qualified operators. No change is made by this document to any of the facilities. Thus, this document change is not a temporary or permanent change to the facilities as described in the existing DSAs.

Does the proposed activity involve a temporary or permanent change in the procedures as described in the existing documented safety analysis?

No; the addition of Container Movement to the list of Waste Management Coordinator activities does not make any changes to the approved operating procedures which are to be used to perform the movements. Container movements are described in the existing DSAs and this change does not affect any of the operating procedures. Thus, this document change is not a temporary or permanent change to the procedures as described in the existing DSAs.

Safety Basis Division

Unreviewed Safety Question Process
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	UNREVIEWED SAFETY QUESTION SCREENING WORKSHEET
USQ Number: : EWMO-16-026-S	Date: 2/9/2016

Does the proposed activity involve a new test or experiment not described in the existing documented safety analysis?

No; the EWMO BIOs and TSRs describe container movements. Thus, the implementation of DSESH-EWMO-WMC-IWD, R3 is not new test, experiment, or operation.

References:

- 1) DSESH-EWMO-WMC-IWD, R3, *Waste Management Coordinator daily activities list.*
- 2) ABD-WFM-001, R 3.0, *Basis for Interim Operation for Technical Area 54, Area G.*
- 3) ABD-WFM-002, R 3.0, *Technical Safety Requirements (TSRs) for Technical Area 54, Area G.*
- 4) ABD-WFM-005, R 2.1, *Basis for Interim Operation for Waste Characterization, Reduction, and Repackaging Facility (WCRRF).*
- 5) ABD-WFM-006, R 2.1, *Technical Safety Requirements (TSRs) for Waste Characterization, Reduction, and Repackaging Facility WCRRF.*
- 6) ABD-WFM-007 Rev.1.2, *Basis for Interim Operation for the Radioassay and Nondestructive Testing (RANT) Facility, TA-54-38.*
- 7) ABD-WFM-008 R.1.2, *Technical Safety Requirements (TSRs) for the Radioassay and Nondestructive Testing (RANT) Site.*
- 8) NES-ABD-0101, R.4.0, *Documented Safety Analysis for the Nuclear Environmental Sites at Los Alamos National Laboratory*

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3/9/2016
Date

Eng AB 080070 3/9/16

Procedure

Los Alamos National Laboratory

No: P409

Revision: 5

Issued: 07/30/15

Effective Date: 07/30/15

LANL Waste Management**1.0 PURPOSE**

This document describes Los Alamos National Laboratory (LANL or the Laboratory) requirements for waste generated and managed by Waste Generators and Treatment 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, and treat wastes. The Waste Generator must know and document what is in the waste, and TSFs must meet waste analysis requirements under the [LANL Hazardous Waste Facility Permit](#). This document also addresses LANL's Waste Certification and Self-Assessment Programs, to ensure there is a systematic, documented approach for compliance with requirements in this document.

All Waste Generators, including subcontractors, who generate a regulated waste, must work with Waste Management (WM) to meet the requirements in this and other required documents to ensure that the following are met:

- the waste is properly characterized, managed, stored, and transported, and
- the waste certification program is implemented at the waste generating site before the waste is shipped off-site from LANL.

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., [P930-1](#), *LANL Waste Acceptance Criteria*, Associate Director for Environment, Safety, and Health [ADESH], and Functional Series Documents [FSDs]) are established to be consistent with Department of Energy (DOE) Orders, federal and state laws and regulations, the [LANL Hazardous Waste Facility Permit](#), and reporting requirements.

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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](#), *Radioactive Waste Management*; [DOE Manual \(M\) 435.1-1](#), *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 NMSA 1978](#), *Solid Waste Act*, and the [74-4-1 NMSA 1978](#), *Hazardous Waste Act*.

- Issuing Authority (IA): Associate Director for Environment, Safety, and Health (ADESH)
- Responsible Manager (RM): Waste Management (WM) Division Leader
- Responsible Office (RO): Waste Management-Division Office (WM-DO)

2.2 Applicability

This document applies to all workers, including subcontractors, who generate, manage, treat, or store regulated waste at the Laboratory as a Waste Generator or at a TSF. Regulated waste, as used 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 include workers who generate regulated waste and store the waste in staging areas, accumulation areas, or less-than 90 day storage areas. TSFs include workers who manage, treat, or store regulated waste under the [LANL Hazardous Waste Facility Permit](#). All other persons working at the Laboratory must follow the requirements as set forth in their contractual agreements or subcontracts.

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 3.7). Second, it describes LANL's Waste Certification Program, which requires a documented approach to ensure that waste management (treatment, storage and disposal) of waste streams complies with applicable requirements (Section 3.8) prior to off-site shipment.



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 non-mandatory information, such as aids and guidance (ADESH-TOOLS) or mandatory requirements, regarding waste type and compliance factors. These FSDs are issued by ADESH in accordance with [PD311](#), *Requirements System and Hierarchy* and [ADESH-AP-007](#), *Document Control*.

If a Facility Operations Director (FOD), the Facility Responsible Line Manager (RLM), a Facility Point of Contact and/or a Waste Generator chooses to specify additional local-level procedures for waste management activities, those local procedures and changes thereto must be reviewed and approved through WM-DO before they are issued and implemented. Such procedures, including ADESH Administrative Procedures (ADESH-APs) and ADESH Technical Procedures (ADESH-TPs), may be subject to review in accordance with Safety Basis Procedure (SBP) [SBP-112-3-R1.2](#), *Unreviewed Safety Question (USQ) Process*, and [P315](#), *Conduct of Operations Manual*. WM-DO confirms that Waste Generators are compliant with potential waste streams through oversight requirements for their waste streams and that waste requirements are met in the planning stage for all waste and potential waste streams.

Before waste generating projects (remediation, Demolition and Decontamination, Footprint Reduction, etc.) begin, WM-DO must review (1) all characterization methodologies that were part of the planning stage and the preparation for waste disposition and (2) all requests for use of a DOE or LANL subcontractor that was not procured through [WM-DO](#) via e-mail.

Before generating regulated waste or commencing waste characterization activities, a Waste Generator must consult with their [Waste Management Coordinator \(WMC\)](#). TSFs must comply with their local-level procedures and the [LANL Hazardous Waste Facility Permit](#).

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 [DOE O/M 435.1, Radioactive Waste Management/Manual](#) and [DOE O 436.1, Departmental Sustainability](#). In addition, TSFs must meet waste minimization requirements of the [LANL Hazardous Waste Facility Permit](#).

The Waste Certification Official (WCO) must be notified by the originating organization when a Nonconformance Report (NCR) or a Performance Feedback and Improvement Tracking System (PFITS) issue is entered into the system regarding regulated waste. WCO concurrence for corrective actions must be obtained by e-mail prior to closure.

3.2 Identifying Waste

Waste Generators must correctly identify their waste through waste characterization as specified below. If a Waste Generator needs assistance with and/or cannot identify the waste type, the worker must contact their WMC. In addition, if a LANL worker or subcontractor discovers a waste stream with no identifiable Waste Generator, the worker must contact their WMC. See [ADESH-TOOL-213, No Owner Waste](#).

"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 and fluorescent light bulbs) and hazardous waste (e.g., aerosol cans). [ADESH-TOOL-114, Office Waste Tool](#), [ADESH-TOOL-111, Waste Characterization](#), and [ADESH-TOOL-314, Radioactive Characterization](#), help Waste Generators quickly identify their regulated waste types and describe additional tools with requirements for their regulated waste types.

Project Management (PM) projects, Environmental Remediation (ER) or decontaminated and decommissioned must notify WM-DO via e-mail of upcoming waste generation projects and provide all pertinent planning documentation and characterization documentation for evaluation. Use of the Permits and Requirements Identification (PRID) system is required (see [PD400, Environmental Protection](#)).

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., Material Safety Data Sheets (MSDSs), product labels, and historical data. TSFs must meet waste analysis plan requirements under the [LANL Hazardous Waste Facility Permit](#) prior to 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 Disposal Facility (TSDF) may not accept the waste. 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.

Waste Generators must consult with their WMCs to start the waste characterization process, when working with a new process that may create a new regulated waste stream, or when waste processing has been modified. [ADESH-TOOL-111](#), *Waste Characterization* and [ADESH-TOOL-314](#), *Radioactive Characterization*, help Waste Generators document and characterize regulated wastes, and describe additional tools with requirements for their regulated waste types. The Waste Generator must sign a Waste Stream Profile (WSP) Certification Statement in the [Waste Compliance and Tracking System \(WCATS\)](#), 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 valid documentation is referenced in WCATS with a unique identifier;
- sign the WSP Certification Statement assuring accurate and complete characterization of the waste; and
- annually re-evaluate waste characterization for each WSP to verify accuracy of the waste characterization. For compliance purposes, this annual period is defined as less than one year since the original waste characterization or the last recharacterization.

After waste has been identified and entered into WCATS, the waste characterization will be reviewed by the WM-DO prior to a new waste stream identification number being activated. WM-DO screens documentation for LANL facilities that characterize waste streams by acceptable knowledge, process knowledge (or knowledge of process), historical knowledge, etc.

Note: If waste with no disposal path must be generated, the Waste Generator must contact [WM-DO](#) via e-mail for prior authorization.

TSFs must meet waste characterization requirements of the [LANL Hazardous Waste Facility Permit](#), including specifically the Waste Analysis Plan (WAP).

3.2.1.a Waste Generator Recharacterization

Waste Generators must recharacterize and update waste characterization based on the following conditions if

- after an annual re-evaluation, there is any change to waste characterization information, including changes to the waste-generating process or operations;
- there is a change to the waste-generating processes 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 pre-approved waste analysis certification or accompanying shipping documentation.

Note: TSF workers may become Waste Generators when waste processing includes one of the activities described above.

The Waste Generators must contact the WM-DO in the event it is required to update waste characterization information described above. WM-DO will work through appropriate subject matter experts 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 [LANL Hazardous Waste Facility Permit](#), TSFs must update their waste characterization when the following occurs:

- a Waste Generator determines one or more of the above conditions in Section 3.2.1.a has occurred;
- TSF workers have reason to believe that the process or operation generating the waste has changed;
- waste is repackaged and secondary material is added during this process;
- waste received at an off-site facility does not match a pre-approved waste analysis certification or accompanying shipping documentation; or
- an inspection reveals that the waste does not match the identity of the waste specified by the Waste Generator or a manifest on a shipping paper.

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-TOOL-306](#), *Potentially Radioactive or Mixed Investigation-Derived Waste*. The Waste Generator is required to meet the actions 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 decontaminated and decommissioned sites), the waste must be characterized. See [ADESH-TOOL-314](#), *Radioactive Characterization*. The Authorized Release Limits Process is defined in [P411](#), *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](#), *Radiation Protection of the Public and the Environment*; and
- do not contain [74-4-1 NMSA 1978](#), *Hazardous Waste Act* and [Resource Conservation and Recovery Act \(RCRA\)](#) constituents.

Note: For release of potentially activated metals previously stored in Radiation Control areas, see [RP-SOP-077.004](#), *LANSCE Metals Clearance Process* and [RP-SVS-RIC-TBD-03](#), *Technical Basis Documentation Regarding Health Physics Measurements for the Unrestricted Release of Metals from LANSCE*.

3.2.3 Waste Verification

To ensure compliance with DOE Directives, federal and state laws and regulations, [P930-1](#), *LANL Waste Acceptance Criteria*, and reporting requirements, WM-DO 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 includes the 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 waste certification requirements.

Note: The [LANL Hazardous Waste Facility Permit](#) requires an annual verification of the waste characterization of one percent of the total number of hazardous waste streams characterized solely by acceptable knowledge and managed at TA-54 in the previous calendar year.

3.3 Packaging Waste

Low-Level Waste (LLW) and Mixed Low-Level Waste (MLLW) must meet waste package certification requirements before the waste is disposed. Waste Generators of LLW and MLLW must make a request via e-mail to [WM-DO](#) to arrange for waste package certification. If there are specific waste issues regarding LLW and MLLW, the Waste Generator must contact the [WCO](#). To ensure compliance with federal and state laws, regulations and reporting requirements, the WCO will rely on established waste disposition requirements that are consistent with Waste Acceptance Criteria (WAC) requirements from the Nevada National Security Site (NNSS).

To prepare for waste disposition, the Waste Generator must refer to the [600 Series](#) FSDs, (*Transport of Waste*). All waste information regarding waste disposition must be documented in WCATS and a disposal request must be submitted through the WCATS system by the WMC. This will prompt WM-DO to initiate a waste shipment. WM-DO must be consulted on all specific waste issues as WM-DO is responsible for compliance with safe packaging and transportation requirements to off-site receiving facilities.

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 (e.g., less-than 90-day storage areas) are conducted in [Registered Waste Areas](#). For more detailed instruction see the following:

- [ADESH-TOOL-206](#), *Hazardous Waste*;

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- [300 Series Tools](#), (Radioactive Waste);
- [400 Series Tools](#), (Universal Waste);
- [500 Series Tools](#), (NM Special Waste);
- [ADESH-TOOL-712](#), Polychlorinated Biphenyl (PCB) Waste; and
- [ADESH-TOOL-716](#), Used Oil for Recycle.

TSFs can meet the requirements in the [LANL Hazardous Waste Facility Permit](#) by operating to the [800 Series Tools](#), (Treatment, Storage, and Disposal Facilities).

The WMC must also certify waste protection and storage by evaluating the waste and using [ADESH-TOOL-300](#), General Radioactive Waste Management, and [P930-1](#), LANL Waste Acceptance Criteria.

3.4.2 Site Treatment Plan (STP) for Mixed Transuranic (MTRU) and Mixed Low-Level Waste (MLLW) at TSFs

In accordance with the Site Treatment Plan (STP), LANL must report to NMED all MTRU waste and MLLW that will be stored at the Laboratory after 1-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 the 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](#) via e-mail at least three months prior to the waste exceeding its 1-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 1-year accumulation start date; and
- for MLLW only, compliance milestone dates when waste will be shipped off-site for treatment and disposal.

3.4.3 Radioactive Waste Management Basis

For Radioactive Waste, the FOD or RLM must submit [Form 2107](#), *Radioactive Waste Management Basis Report Form* (RWMB) to WM-DO. The Waste Generator must submit an updated [RWMB](#) to WM when there are changes in facility operations or waste status. For assistance in completing the [RWMB](#), contact WM-DO. The LANL [RWMB](#) consists of

- identification of the generating process owner;
- identification of every area where radioactive waste is generated;
- identification of waste management activities;
- reference to documents that support the [RWMB](#);
- institutional documents applicable to waste management;
- waste authorization basis documents pertinent to the waste generating facility;
- waste management processes within the facility and their locations;

- waste matrix (solid or liquid);
- waste categories generated, i.e., LLW, MLLW, TRU, and MTRU;
- volumes of generated waste by matrix, category, and annual estimates;
- characterization methods for each waste stream;
- how waste certification is protected when waste is transported;
- how waste certification is protected during waste storage;
- how the waste management quality assurance program protects waste certification; and
- proposed disposition for each waste stream (reported under "Life-Cycle Waste Management").

WM-DO then reviews, edits, and forwards the RWMB to the DOE Field Element Manager for review and approval. WM-DO monitors compliance and is responsible for reporting the status of compliance to the DOE Field Element Manager. If WM-DO detects radioactive waste activities that were not included in the RWMB, WM-DO 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 the activities if not reported.

WM-DO may allow facilities to generate radioactive waste without continuous updates to the RWMB, e.g., remedial projects, superfund projects, etc., so long as

- the facilities (1) are performing work in accordance with [EP-DIR-SOP-10021](#), *Characterization and Management of Environmental Programs Waste* and (2) have provided WM-DO a completed and signed Waste Characterization Strategy Form (WCSF); and
- WM-DO has approved the work being performed at the facility and DOE concurrence has been obtained by WM-DO.

3.4.3.a Storage Extension Requests

If a determination is made that radioactive waste cannot be shipped for final disposition within one year of waste generation, the FOD or RLM (or Facility Point of Contact) must submit a request for storage extension to WM-DO at least three months before exceeding the one year expiration of the date the container was sealed. The storage extension request must be submitted by e-mail an updated RWMB that contains

- a checked box, "Extension Request;"
- a specific description of the waste;
- a specific description of the location of the waste;
- the specific length of time it will take to dispose of the waste; and
- the reason the extension is needed.

After reviewing the request, WM-DO will send a letter to the DOE Field Element Manager at least 60 days prior to 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 [WM-DO](#) via e-mail at least three days prior to the expiration date that DOE approval has not been received. If approval for extension is not granted, DOE will provide direction back to WM-DO.

Note: If WM-DO discovers that an extension request was never submitted, WM-DO will initiate a PFITS issue in accordance with [P322-4](#), *Laboratory Performance Feedback and Improvement Process*.

3.4.4 Processing Waste at Treatment and Storage Facilities (TSFs)

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 described in the [LANL Hazardous Waste Facility Permit](#) or 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 Environmental Protection-Compliance Programs ([ENV-CP](#)) must be contacted via e-mail. Waste processing activities are conducted in the areas outlined in [ADESH-TOOL-810](#), *Waste Processing at 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 Hazardous Waste Facility Permit](#); 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 CFR Section 260.10](#), *Hazardous Waste Management System: General, Definitions*). Waste treatment may be conducted under the [LANL Hazardous Waste Facility Permit](#) or interim status documents as outlined in the following:

- [ADESH-TOOL-903](#), *TA-55 Storage in Tanks and Treatment by Stabilization*;
- [ADESH-TOOL-904](#), *Treatment by Open Burning*; and
- [ADESH-TOOL-905](#), *Treatment by Open Detonation*.

All LANL workers and subcontractors must contact ENV-CP prior to engaging in an activity that may constitute waste treatment (e.g., addition of sorbents or evaporation). Requirements for other permit exempted treatment that do not have specific location requirements (i.e., Waste Generator areas or TSFs), are found in [ADESH-TOOL-901](#), *Elementary Neutralization* and [ADESH-TOOL-902](#), *Absorption without a Permit*.

3.5 Shipping Waste

Once the waste is ready for shipment, the Waste Generator must contact the [WCO](#), who serves as the LANL Point of Contact for the off-site receiving facility and the Los Alamos Field Office. The WCO reviews 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.

3.5.1 Shipments of Radioactive Waste to Non-Department of Energy (DOE) Treatment, Storage, and/or Disposal Facilities (TSDFs)

If a Waste Generator would like to send waste to a facility that is not owned or operated by DOE, the Laboratory must obtain an "exemption request for direct off-site shipment of Radioactive Waste to Non-DOE and TSDFs" (DOE O 435.1 Exemption Request). To obtain this exemption, the Waste Generator must send an e-mail to [WM-DO](#) 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 length of time needed to complete the project's waste disposition.

WM-DO reviews the e-mail and coordinates the shipment with appropriate LANL workers, organizations and subcontractors. WM-DO and LANL's shipping subcontractor prepare the DOE O 435.1 Exemption Request, which includes a cost analysis and description of the Waste Generator's request. WM-DO then submits the final DOE O 435.1 Exemption Request to the DOE Los Alamos Field Office.

The DOE Los Alamos Field Office will review WM-DO's submittal and evaluate the request. If approved, the DOE Los Alamos Field Office will forward the request to DOE Headquarters. WM-DO will be notified if the request has been approved by DOE. If notification is not received within 15 working days from WM-DO's submittal to the DOE Los Alamos Field Office, WM-DO will contact the DOE Los Alamos Field Office for a documented response.

3.6 Disposing Waste

LANL does not have on-site disposal capacity for RCRA, TRU, or MLLW wastes. LANL retains limited capacity for on-site disposal for LLW under special circumstances and with prior approval from [WM-DO](#). WM-DO 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 [WM-DO](#). 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. ENV-CP provides guidance on DOE Directives and State Regulatory requirements. Waste management operations, including waste certification, are conducted by WM-DO to meet additional requirements from DOE Directives. Internal assessments and external inspections are performed to ensure institutional waste management compliance is met and waste certification is maintained.

3.7.1 Certification Assessments for All Waste Types

To certify that facility waste operations are in accordance with [WM-PROG-QP-250](#), *Radioactive Waste Facility Certification*, and [ADESH-TOOL-300](#), *General Radioactive Waste Management*, WM-DO performs compliance assessments at a facility level against [DOE O 435.1](#), *Radioactive Waste Management*, [DOE M 435.1](#), *Radioactive Waste Management Manual*, RCRA regulations, and this document. 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.

Assessments include, but are not limited to

- 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;
- an evaluation of registered waste areas for waste certification compliance. RCRA corrective actions and opportunities for improvement must be reported to Environmental ENV-CP;
- 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 other LANL organizations, DOE, or their contractors, if possible and;
- a review of nonconformance and corrective action documentation and, when appropriate, an action plan to periodically monitor facilities to ensure appropriate corrective actions are being taken.

WM-DO must notify the FOD and RLM in advance of upcoming site visits and assessments. Registered waste area information will be recorded and tracked in a database managed by ADESH.

3.7.2 LANL Self-Assessment

DOE and NMED expect LANL to assess compliance of the Waste Generator's waste management activities and TSF permit compliance. Waste Generator assessments include but are not limited to, accumulation and registered waste areas, LANL inspection forms, containers or tanks, labels, time limits, worker health and safety practices, and the Waste Generator's records and training records. Compliance evaluations routinely include sites outside registered areas (see the ADESH-FSD for requirements on various registered waste areas including TSF requirements). Assessments of registered waste areas are performed by WM-DO and ENV-CP in addition to periodic Independent Assessments (see [P328-2, Independent Assessment](#)) and Management Assessments (see [P328-3, Management Assessment](#)).

Waste Generators and TSFs must retain waste documents and records in accordance with [PD1020, Document Control and Records Management](#).

3.8 Waste Certification

The LANL Waste Certification Program was developed, documented and implemented to ensure that the waste acceptance requirements of off-site facilities receiving waste for storage, treatment, and disposal are met. LANL waste management components that are provided complex wide support waste certification.

Waste certification is a process by which a Waste Generator affirms that waste meets the waste acceptance criteria of the off-site facility to which the Waste Generator intends to transfer the waste for treatment, storage, and disposal. As such, LANL's Waste Certification Program includes the waste certifying process from generation to disposition (cradle-to-grave) for all regulated wastes. Identifying, characterizing and recharacterizing waste with consideration for associated hazards and signing the WSP certification statement is conducted by the Waste Generator and WMC. Assuring compliance performance includes waste verification, storage certification, packaging certification, data management, and STP and RWMB reporting. Finally, preparing waste for shipment, disposal acceptance, final disposition and on-going assessments completes LANL's Waste Certification Program.

Waste certification includes WM-DO providing oversight of Waste Generator activities to meet the requirements of this document and the waste acceptance criteria of the receiving TSDF. LANL's Waste Certification Program includes compliance for all waste types. Fig. 2 illustrates key components of LANL's Waste Certification Program.



Fig. 2. Key components of the LANL Waste Certification Program

4.0 RESPONSIBILITIES

4.1 Facility Operations Director (FOD)

- If needed, issues local-level procedures for waste management activities in accordance with Section 3.1.
- Routes local level procedures through review and approval process adopted by WM-DO.
- Ensures completion and management of their facility's *Radioactive Waste Management Basis Report* (RWMB [Form 2107](#), *Radioactive Waste Management Basis Report Form*).

4.2 Responsible Line Manager (RLM)

- Participates and encourages others' participation in WM-DO's assessment for facility certification.
- Assists in the management and implementation of corrective actions, findings and opportunities for improvement regarding their facilities.
- Ensures waste management compliance at their facilities.

4.3 Waste Management Division Leader

- Ensures waste management compliance processes are implemented across the Laboratory.
- Ensures waste management oversight processes are implemented.

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- Acknowledges the process by which local waste management procedures are reviewed and approved before they are issued or implemented.
- Initiates the review of waste characterization documentation by subject matter experts when new information or discrepancies in waste characterization are discovered.
- Monitors work in progress and conducts effectiveness evaluations (i.e., through facility assessment and waste verification).
- Documents compliance or noncompliance with characterization/certification requirements.
- Identifies the facility's waste management quality assurance program and how it protects waste certification and the proposed disposition for each waste stream.
- Performs re-evaluation and verification of characterization information for facilities' waste generation operations.
- Evaluates corrective actions regarding waste management as timely or untimely.
- Reports corrective action regarding waste management adequacy to management.
- Provides notification to facility RLMs of the status and performance of activities under assessment.
- Documents facility waste certification reviews resulting from internal (e.g., Authorization Authority) or external (e.g., DOE) audits and assessments, tracking corrective actions and reporting observations to management.
- Determines whether waste management staging/storage facilities and systems are adequate to certify waste and to maintain waste certification until shipment.
- Ensures LLW/MLLW waste containers are certified by a qualified Waste Package Certifier (WPC).
- Completes receiving facility documentation and notifications for LANL.
- Maintains LANL facility operations certification and off-site receiving facility certification.
- Provides WCO disposition approval for final TSDF destination.
- Performs LANL Self Assessments of radioactive waste staging and storage areas in accordance with Section 3.7.2.
- Ensures that the WCO and designees certify waste for disposition to off-site TSDFs.
- Performs annual verification of the waste characterization of one percent of the total number of hazardous waste streams characterized solely by acceptable knowledge and managed at TA-54 in the previous calendar year.
- Provides notification and reporting to regulatory oversight bodies.
- Provides WMC qualification training.

4.4 Waste Management Coordinators (WMCs)

- Certify waste for storage in LANL's registered storage areas.
- Verify waste containers or tanks meet the requirements for transfer into storage at their facility or verify waste can be transferred to a TSF or TSDF.

- Ensure waste characterization and acceptable knowledge documentation is accurate, defensible, and complete.
- Ensure waste meets accepting facility WAC and follows the ADESH-FSD processes.
- Ensure the WSP is completed and submitted in WCATS.
- Support Waste Generators in internal assessments and external inspections.
- Ensure waste containers are closed in accordance with manufacturer's instructions prior to shipment.
- Ensure waste container or tank is adequate to protect the waste against external sources of contamination, and ensure waste management integrity and compatibility.

4.5 Environmental Protection - Compliance Programs (ENV-CP) Group Leader

- Directs the waste management compliance process.
- Coordinates information and compliance requests and activities with regulators.
- Manages the ADESH-FSD collection.
- Receives information on RCRA corrective actions and opportunities for improvement from WM-DO's assessment of facility certification.
- Ensures that LANL Self Assessments in accordance with Section 3.7.2 are performed.
- Assists WM-DO by providing regulatory information and institutional guidance on waste management requirements.
- Maintains the [LANL Hazardous Waste Facility Permit](#) and is responsible for developing permit modification requests.

4.6 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.
- Before waste is generated and/or packaged, conduct waste avoidance or minimization analysis in consultation with the WMC.
- Ensure adequacy of the documentation used for waste characterization (acceptable knowledge and physical/chemical analysis).
- Maintain registered waste areas within their span of control.
- Manage on-site storage as required in this document.
- Initiate the WSP.
- Notify the [STP Manager](#) via e-mail, at least three months prior to the waste exceeding its 1-year accumulation start date that their waste must be added to the STP.

5.0 IMPLEMENTATION

The requirements in this document are effective on the issue date. All ADESH FSDs that are referenced in this document will be reviewed and updated by December 31, 2015, in accordance with [ADESH-AP-007, Document Control](#) and [PD311, Requirements System and Hierarchy](#). The FSDs will be reviewed and updated on a three year schedule beginning with the issue date of P409, Rev.5.

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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:

- [Course #23263](#), *Waste Generation Overview Live*; and
- [Course #21464](#), *Waste Generation Overview Refresher SS*, every three years.

6.2 Persons who work in, or are owners of, less-than-90-day waste accumulation areas must complete:

- [Course #7488](#), *RCRA Personnel Training*, and
- [Course #28582](#), *RCRA Refresher (Self-Study)*, every twelve months.

Note: The RCRA-related training listed above must be completed within six months of employment or new assignment; during this period, workers must work under the supervision of a trained worker.

6.3 Persons who work in TSFs must complete:

- [Course #7488](#), *RCRA Personnel Training*;
- [Course #28582](#), *RCRA Refresher (Self-Study)*, every twelve months; and
- [Course #23263](#), *Waste Generation Overview Live*.

Note: The RCRA-related training listed above must be completed within six months of employment; during this period, workers must work under the supervision of a trained worker.

6.4 Remediation Workers must complete:

- [Course #23263](#), *Waste Generation Overview Live*;
 - [Course #4464](#), *HAZWOPER: General Site Worker*, or [Course #4465](#), *HAZWOPER: Limited Site Worker*;
 - [Course #28652](#), *HAZWOPER: Refresher*, every twelve months;
 - [Course #7488](#), *RCRA Personnel Training*;
 - [Course #28582](#), *RCRA Refresher (Self-Study)*, every twelve months; and
- or other courses as assigned by the supervisor.

7.0 EXCEPTION OR VARIANCE

Changes in the processes conducted at the TSF or changes to the TSF structure must be reviewed by ENV-CP for necessary permit modifications. Hazardous waste treatment activities that are not authorized by the [LANL Hazardous Waste Facility Permit](#) or interim status documents must be reviewed by ENV-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

WM-DO and ENV-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, *Exemption Request*
- STP plan and correspondence to and from NMED
- Independent Assessment Reports
- Trend analysis on waste management data
- ADESH database containing [Registered Waste Area](#) information
- Inspection Forms

9.0 DEFINITIONS AND ACRONYMS**9.1 Definitions**

See LANL [Definition of Terms](#) and [ADESH-TOOL-101](#), *Waste Management Glossary*

9.2 Acronyms

See LANL [Acronym Master List](#)

ADESH	Associate Director for Environment, Safety, and Health
AP	Administrative Procedures
DEAR	Department of Energy Acquisition Regulation
DOE	Department of Energy
DOT	Department of Transportation
ENV-CP	Environmental Protection-Compliance Programs
EPA	Environmental Protection Agency
ER	Environmental Restoration
FOD	Facility Operations Director
FSD	Functional Series Documents
IA	Issuing Authority
LANL	Los Alamos National Laboratory
LLW	Low-Level Waste
M	Manual
MLLW	Mixed Low-Level Waste

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MSDSs	Material Safety Data Sheets
MTRU	Mixed Transuranic
NCR	Nonconformance Report
NMED	New Mexico Environment Department
NNSS	Nevada National Security Site
O	Order
OP	Operating Tools
PFITS	Performance Feedback and Improvement Tracking System
PRID	Permits and Requirements Identification
PM	Project Management
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
SOP	Standard Operating Procedure
STP	Site Treatment Plan
TP	Technical Procedure
TRU	Transuranic
TSCA	Toxic Substances Control Act
TSDF	Treatment, Storage, and/or Disposal Facility
TSFs	Treatment Storage Facilities
WAC	Waste Acceptance Criteria
WAP	Waste Analysis Plan
WCATS	Waste Compliance and Tracking System
WCO	Waste Certification Official
WCSF	Waste Characterization Strategy Form
WSP	Waste Stream Profile
WM	Waste Management
WMC	Waste Management Coordinator
WM-DO	Waste Management-Division Office

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. • LIG 404-00-02, <i>Acceptable Knowledge Guidance</i>

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Revision History		
		<ul style="list-style-type: none"> • 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.
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, Waste Generation Overview Live, 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, Requirements System and Hierarchy.</p> <p>Updated links, titles, and acronyms.</p>
07/30/15	P409, Rev. 5	<p>Performed three-year review in accordance with PD311, Requirements System and Hierarchy.</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>

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

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- Part III, Section J, Appendix G
- Appendix B, Statement of Work: §1.0 General
- [DOE O 435.1](#), *Radioactive Waste Management*
- [DOE M 435.1-1](#), *Radioactive Waste Management Manual*
- [DOE O 436.1](#), *Departmental Sustainability*
- [40 CFR Section 260.10](#), *Hazardous Waste Management System: General, Definitions*
- [DOE O 458.1](#), *Radiation Protection of the Public and the Environment*

11.1 Other References

- [LANL Hazardous Waste Facility Permit](#)
- [P930-1](#), *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-R1.2](#), *Unreviewed Safety Question (USQ) Process*
- [P315](#), *Conduct of Operations Manual*
- [ADESH-TOOL-213](#), *No Owner Waste*
- [ADESH-TOOL-114](#), *Office Waste Tool*
- [ADESH-TOOL-111](#), *Waste Characterization*
- [ADESH-TOOL-314](#), *Radioactive Characterization*
- [PD400](#), *Environmental Protection*
- [Waste Compliance and Tracking System \(WCATS\)](#)
- [ADESH-TOOL-306](#), *Potentially Radioactive or Mixed Investigation-Derived Waste*
- [P411](#), *Authorized Release Limits Proposal Process*
- [RP-SOP-077.004](#), *LANSCE Metals Clearance Process*
- [RP-SVS-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*

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- [ADESH-TOOL-600](#), Certification, Documentation, Shipment of ChemHaz
- [ADESH-TOOL-206](#), Hazardous Waste
- [300 Series Tools](#), (Radioactive Waste)
- [400 Series Tools](#), (Universal Waste)
- [500 Series Tools](#), (NM Special Waste)
- [ADESH-TOOL-712](#), Polychlorinated Biphenyl (PCB) Waste
- [ADESH-TOOL-716](#), Used Oil for Recycle
- [800 Series Tools](#), (Treatment, Storage and Disposal Facilities)
- [ADESH-TOOL-300](#), General Radioactive Waste Management
- [EP-DIR-SOP-10021](#), Characterization and Management of Environmental Programs Waste
- [P322-4](#), Laboratory Performance Feedback and Improvement Process
- [ADESH-TOOL-810](#), Waste Processing at Permitted Units
- [ADESH-TOOL-903](#), TA-55 Storage in Tanks and Treatment by Stabilization
- [ADESH-TOOL-904](#), Treatment by Open Burning
- [ADESH-TOOL-905](#), Treatment by Open Detonation
- [ADESH-TOOL-901](#), Elementary Neutralization
- [ADESH-TOOL-902](#), Absorption without a Permit
- [WM-PROG-QP-250](#), Radioactive Waste Facility Certification
- [P328-2](#), Independent Assessment
- [P328-3](#), Management Assessment
- [PD1020](#), Document Control and Records Management
- [PD311](#), Requirements System and Hierarchy
- [ADESH-TOOL-101](#), Waste Management Glossary

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

Waste Management Division Office

Telephone: (505) 667-2211

Fax: (505) 667-1945

Website: <http://int.lanl.gov/org/padops/adesh/waste-management/index.shtml>

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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, 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. Sours 218703 8/30/2016

Subject Matter Expert(s) (SME[s]) Review (Signature/Z#/Date) If Required: Thanker Taylor 203034 8/29/16

Hazard Determination by Hazard Grading Table

- ☐ Low-Hazard
☒ Moderate-Hazard
☐ High-hazard/Complex

IWD Type:

- ☒ Standing IWD ☐ Standard IWD

Expiration 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 205838

Name of Alternate PIC: Dave Schroeder 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

IWD No./Work Request No: DESHS-EVW Revision #: 1

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
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 <u>Feb O'Gara / 151358 / 9-12-16</u>
Date Approval Expires: <u>9-12-17</u>



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. V. [unclear]</i> 211334 9-12-2016
Worker (Signature/Z#/Date) <i>Frank Taylor</i> 203034 9/12/16	Worker (Signature/Z#/Date) <i>[unclear]</i> 7/12/16 312160
Worker (Signature/Z#/Date) <i>P. Dente</i> 270242 9/12/16	Worker (Signature/Z#/Date) <i>[unclear]</i> 232547 9/12/16
Worker (Signature/Z#/Date) <i>[unclear]</i> 167339 9/12/16	Worker (Signature/Z#/Date) <i>[unclear]</i> 072553 9/12/16

Integrated Work Document (IWD) Part 3, Validation and Work Release

Attachment J
Threatened and Endangered Species
Habitat Management Plan for LANL

LA-UR-14-21863

*Approved for public release;
distribution is unlimited.*

<i>Title:</i>	Threatened and Endangered Species Habitat Management Plan for Los Alamos National Laboratory
<i>Author(s):</i>	Environmental Protection Division Resources Management Team
<i>Intended for:</i>	Reference purposes
<i>Date:</i>	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

Threatened and Endangered Species Habitat Management Plan

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 traillii 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

Threatened and Endangered Species Habitat Management Plan

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

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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

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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.

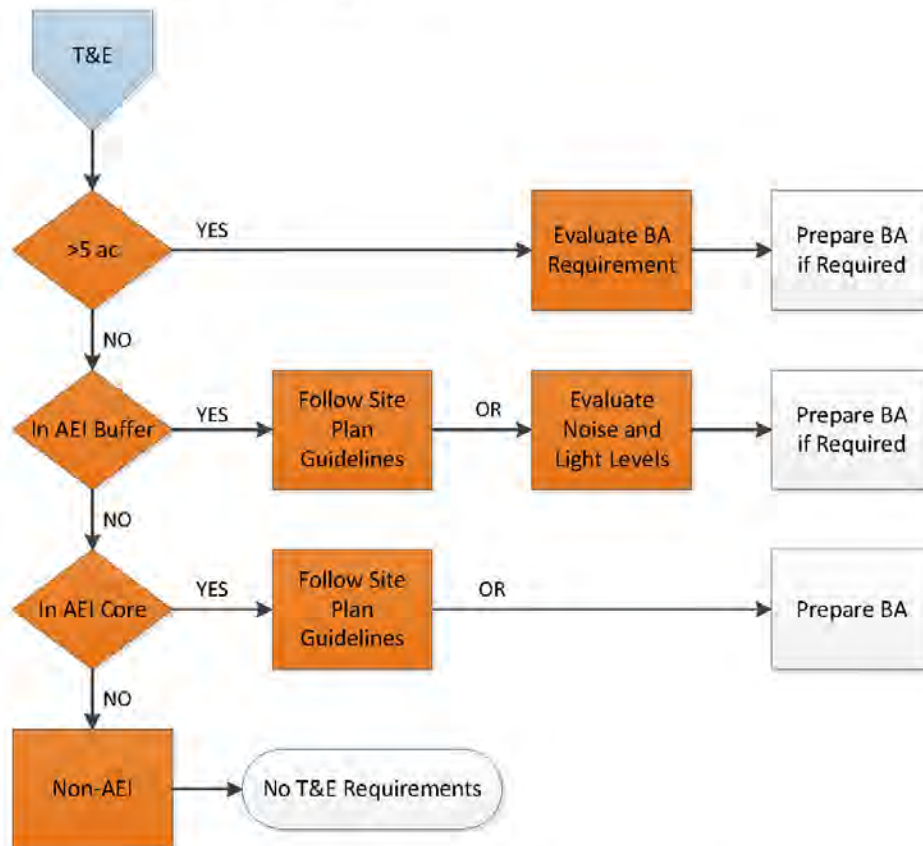


Figure 1. Process flowchart for determining site plan requirements.

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.

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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.

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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).

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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).

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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 Río 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

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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

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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.

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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.

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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>).

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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

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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 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 (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

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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.

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- 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

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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.

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- 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 redelineation 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

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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.

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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

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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.

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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

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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

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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 Racinez 1995).

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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.

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- 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.

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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.

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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 Riemer 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

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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

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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

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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

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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.

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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.

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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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Threatened and Endangered Species Habitat Management Plan

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Threatened and Endangered Species Habitat Management Plan

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

U.S. Fish & Wildlife Service

MSGP TA-54 Facilities

IPaC Trust Resource Report

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IPaC Trust Resource Report

MGYAW-QJOTF-DIJE0-ZGXLF-BYW60E

US Fish & Wildlife Service

IPaC Trust Resource Report



Project Description

NAME

MSGP TA-54 Facilities

PROJECT CODE

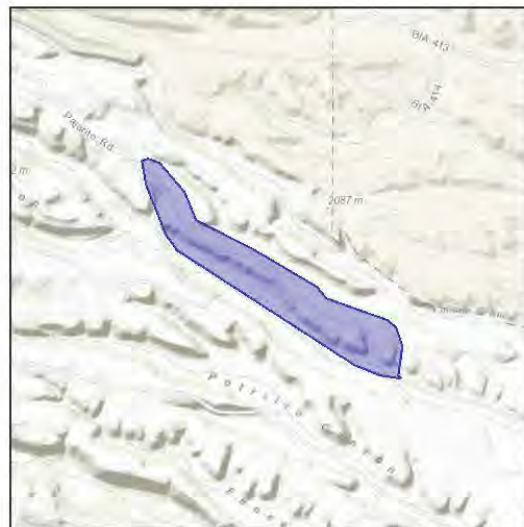
MGYAW-QJOTF-DIJE0-ZGXLF-BYW60E

LOCATION

Los Alamos County, New Mexico

DESCRIPTION

No description provided



U.S. Fish & Wildlife Contact Information

Species in this report are managed by:

New Mexico Ecological Services Field Office

2105 Osuna Road Ne

Albuquerque, NM 87113-1001

(505) 346-2525

Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the [Endangered Species Program](#) and should be considered as part of an effect analysis for this project.

This unofficial species list is for informational purposes only and does not fulfill the requirements under [Section 7](#) of the Endangered Species Act, which states that Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action." This requirement applies to projects which are conducted, permitted or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can be obtained by returning to this project on the IPaC website and requesting an Official Species List from the regulatory documents section.

Amphibians

Jemez Mountains Salamander *Plethodon neomexicanus*

Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=D019>

Birds

Mexican Spotted Owl *Strix occidentalis lucida*

Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=B074>

Southwestern Willow Flycatcher *Empidonax traillii extimus*

Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=B094>

Yellow-billed Cuckoo *Coccyzus americanus*

Threatened

CRITICAL HABITAT

There is **proposed** critical habitat designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=B06R>

Mammals

New Mexico Meadow Jumping Mouse *Zapus hudsonius luteus*

Endangered

CRITICAL HABITAT

There is **proposed** critical habitat designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=A0BX>

IPaC Trust Resource Report

MGYAW-QJOTF-DJED-ZGXLF-BYW6OE

Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

There is no critical habitat within this project area

Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

Bald Eagle <i>Haliaeetus leucocephalus</i> Season: Wintering https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008	Bird of conservation concern
Bendire's Thrasher <i>Toxostoma bendirei</i> Season: Breeding	Bird of conservation concern
Brewer's Sparrow <i>Spizella breweri</i> Season: Migrating https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HA	Bird of conservation concern
Brown-capped Rosy-finch <i>Leucosticte australis</i> Season: Wintering	Bird of conservation concern
Burrowing Owl <i>Athene cunicularia</i> Season: Breeding	Bird of conservation concern
Flammulated Owl <i>Otus flammeolus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0DK	Bird of conservation concern
Fox Sparrow <i>Passerella iliaca</i> Season: Wintering	Bird of conservation concern
Golden Eagle <i>Aquila chrysaetos</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0DV	Bird of conservation concern
Grace's Warbler <i>Dendroica graciae</i> Season: Breeding	Bird of conservation concern
Juniper Titmouse <i>Baeolophus ridgwayi</i> Year-round	Bird of conservation concern
Lewis's Woodpecker <i>Melanerpes lewis</i> Year-round	Bird of conservation concern
Loggerhead Shrike <i>Lanius ludovicianus</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FY	Bird of conservation concern
Mountain Plover <i>Charadrius montanus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B078	Bird of conservation concern

IPaC Trust Resource Report

MGYAW-OJQTF-DIJEO-ZGXLF-BYW6OE

Olive-sided Flycatcher <i>Contopus cooperi</i>	Bird of conservation concern
Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=B0AN	
Peregrine Falcon <i>Falco peregrinus</i>	Bird of conservation concern
Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=B0FU	
Pinyon Jay <i>Gymnorhinus cyanocephalus</i>	Bird of conservation concern
Year-round	
Prairie Falcon <i>Falco mexicanus</i>	Bird of conservation concern
Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=B0ER	
Swainson's Hawk <i>Buteo swainsoni</i>	Bird of conservation concern
Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=B070	
Williamson's Sapsucker <i>Sphyrapicus thyroideus</i>	Bird of conservation concern
Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=B0FX	
Willow Flycatcher <i>Empidonax traillii</i>	Bird of conservation concern
Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=B0F6	

Refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

There are no refuges within this project area

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

There are no wetlands identified in this project area

Attachment K

Concurrence December 8, 2013

Biological Assessment of Jemez Mtn Salamander Site Plan



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

Geoffrey L. Beausoleil, Acting Manager

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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.

Geoffrey L. Beausoleil, Acting Manager

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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 for NPDES Stormwater General Permits



Associate Director for ESH

ADESH

P. O. Box 1663, MS K491

Los Alamos, New Mexico 87545

505-667-4218/Fax 505-665-3811

Date: **AUG 14 2013**

Symbol: ADESH-13-041

LAUR: 13-25954

Mr. Ron Curry, Regional Administrator
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Mail Code: 6RA
Dallas, TX 75202-2733

Dear Mr. Curry:

**SUBJECT: NOTIFICATION OF LOS ALAMOS NATIONAL SECURITY, LLC SIGNATORY
OFFICIAL AND AUTHORIZED REPRESENTATIVES FOR NPDES
STORMWATER GENERAL PERMITS AND LANL INDUSTRIAL POINT SOURCE
OUTFALL PERMIT (NPDES PERMIT NO. NM0028355)**

The purpose of this letter is to provide an update to the Environmental Protection Agency (EPA) Region 6 on the signatory authority for the operator of Los Alamos National Laboratory (LANL) NPDES permits. Los Alamos National Security, LLC (LANS) has been the Laboratory's management and operation contractor since June 1, 2006 and is also a co-permittee with the Department of Energy under the LANL Industrial Point Source Outfall Permit (NPDES Permit No. NM0028355).

The positions of Associate Director of Environmental, Safety, and Health (ADESH), Deputy Associate Director, and Division Leader of the Environmental Protection Division (ENV-DO) are hereby identified as LANS's primary signatory officials under 40 CFR 122.22(a) for certifying and signing permit applications and reports required under the LANL Industrial Point Source Outfall Permit (NPDES Permit No. NM0028355) and the NPDES Stormwater Construction and Multi-Sector General Permits.

The following positions are hereby designated as authorized representatives under 40 CFR 122.22(b) to sign reports, Storm Water Pollution Prevention Plans, and any other compliance documentation required by the permits:

Construction General Permit:

- Group Leader of the Laboratory's Environmental Compliance Programs Group.
- Cognizant Project Manager, Project or Field Engineer, or Subcontractor Technical Representative for the regulated construction activity.

Mr. Ron Curry
ADESH-13-041

- 2 -

- Responsible Facility Operations Director (FOD), Deputy FOD, or Operations Manager responsible for the overall operation of the regulated facility or construction activity.

Multi-Sector General Permit (No. NMR05GB21) & Industrial Point Source Outfall Permit (No. NM0028355):

- Group Leader of the Laboratory's Environmental Compliance Programs Group.
- Division Leader, Deputy Division Leader, or Group Leader of the LANL 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.
- Group Leader in the ESH Deployed Services Division assigned to the regulated facility.

This letter supersedes and replaces the signatory authority letter dated March 2, 2009 (See Enclosure 1) with respect to the LANL Industrial Point Source Outfall Permit, the Construction General Permit, and the Multi-Sector General Permit, and is submitted to notify the EPA of the current authorized representatives pursuant to 40 CFR 122.22(c).

Please contact Alison M. Dorries, Division Leader for the Environmental Protection Division, at (505) 665-6592, if you have questions.

Sincerely,



Michael T. Brandt, DrPH, CIH
Associate Director
Environment, Safety & Health

MTB:AMD:MTS/lm

Enclosure:

1. 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) Memo

CY: Diana McDonald, USEPA, Region 6, Dallas, TX
Isaac Chen, USEPA, Region 6, Dallas, TX
Jan Walker, USEPA, Region 6, Dallas, TX
Brent E. Larsen, USEPA, Region 6, Dallas, TX
Bruce Yurdin, NMED/SWQB, Santa Fe, NM
Gene Tuner, NA-OO-LA, (E-File)
David Sosinski, LC-DO, (E-File)
Carl A. Beard, PADOPS, A102
Alison M. Dorries, ENV-DO, (E-File)

Mr. Ron Curry
ADESH-13-041

- 3 -

Cy (continued):

Anthony R. Grieggs, ENV-CP, (E-File)
Michael T. Saladen, ENV-CP, (E-File)
Terrill W. Lemke, ENV-CP, (E-File)
Deborah K. Woitte, LC-LESH, (E-File)
Brett S. Henrikson, LC-LESH, (E-File)
Alexander W. Purdue, LC-BL, (E-File)
LASOmailbox@nnsa.doe.gov, (E-File)
locatesteam@lanl.gov, (E-File)
ADESH Correspondence File, (E-File)
ENV-CP Correspondence, File, K490

ENCLOSURE 1

**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) Memo**

ADESH-13-041

LAUR-13-25954

Date: AUG 14 2013



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:

Mr. Lawrence E. Starfield
ESH&Q-09-009

- 2 -

March 2, 2009

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

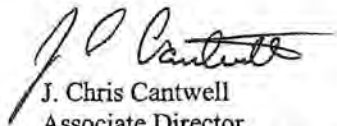
- Group Leader or Deputy Group Leader of the Laboratory's Water Quality & RCRA Group.
- Director, Deputy Director, or Group Leader of the Laboratory Division responsible for the overall operation of the regulated facility or activity.
- Responsible FOD, Deputy FOD or Operations Manager responsible for 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

Mr. Lawrence E. Starfield
ESH&Q-09-009

- 3 -

March 2, 2009

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

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R. Madison, LANS, T009
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PO Box 1663, MS A100, Los Alamos, NM 87545
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National Nuclear Security Administration of the U.S. Department of Energy

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815

Attachment M

Environmental References/Documents

ENV-CP-QP-007.9

Effective Date: July 19, 2013

Next Review Date: June 19, 2015

**Environment, Safety, Health Directorate****Environmental Protection – Compliance Programs
Quality Procedure****Spill Investigations****Reviewers:**

Name:	Organization:	Signature:	Date:
Melanie Lamb	ADESH-OIO, QA Specialist	Signature on file	7/18/13

Derivative Classifier: ☐ Unclassified ☒ DUSA ENVPRO

Name:	Organization:	Signature:	Date:
Ellena Martinez	ADESH-OIO	Signature on file	7/23/13

Approval Signatures:

Subject Matter Expert:	Organization:	Signature:	Date:
Jake Meadows	ENV-CP	Signature on file	7/18/13
Responsible Line Manager:	Organization:	Signature:	Date:
Mike Saladen	ENV-CP Team Lead	Signature on file	7/18/13
Responsible Line Manager:	Organization:	Signature:	Date:
Anthony Grieggs	ENV-CP Group Leader	Signature on file	7/19/13

CONTROLLED DOCUMENT

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Users are responsible for ensuring they work to the latest approved version.

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History of Revisions

Document Number <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	12/98	New Document.
1	06/00	Annual review, added Cerro Grande fire hazards
2	07/01	Annual review
3	06/03	Annual review
4	04/04	Annual review, changes to HCPs
5	02/07	Annual review, changes to reflect organizational restructure
6	07/08	Annual review
7	09/10	Biennial Review and revision
8	04/11	Removed prerequisites, added note re: on-call spill reporting.
9	07/13	Biennial review and revision, implemented new procedure format.

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1.0 PURPOSE

This Environmental Protection – Compliance Programs Group (ENV-CP) procedure describes processes and implements requirements for spill investigations.

2.0 SCOPE

This procedure applies to all ENV-CP staff and personnel conducting spill investigations.

2.1 HAZARD REVIEW

The work described in this procedure is field work and has a **LOW hazard** rating as documented by submittal of a completed [ENV Low Hazard Verification form](#) to the Quality Assurance Specialist.

3.0 RESPONSIBILITIES

The following personnel require training before implementing this procedure:

- ENV-CP staff and contract personnel who perform spill response and investigation require training on this procedure.

Annual re-training to this procedure is required. Specific training requirements will be updated as needed.

The training method for this procedure is part “self-study” and part on-the-job training (OJT). The OJT training is to be conducted by a Team Leader or person designated as Subject Matter Expert (SME) by the ENV-CP Group Leader. The self-study and OJT will be documented in accordance with [ENV-DO-QP-115, Personnel Training](#).

Actions specified within this procedure, unless proceeded with “should” or “may,” are to be considered mandatory (i.e., “shall”, “will”, “must”).

3.1 PREREQUISITES

- None

4.0 DOCUMENT CONTROL/RECORDS MANAGEMENT

The following records generated as a result of this procedure are to be submitted in accordance with [ENV-DO-QP-110, Records Management](#).

- Field notebook documentation of the release including:
 - time and date of the release
 - time and date of ENV-CP notification
 - location of the release and from where the release occurred (equipment, etc.)
 - type of material released
 - quantity of material released
 - if an impact to a watercourse, SWMU, or PRS occurred

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- time release was stopped
 - any immediate mitigating actions implemented to contain or control the release
- Any written report and verbal notification list generated should the release be deemed reportable.
- Non-Reportable LANL Spill Report (Attachment 2)

5.0 WORK PROCESSES

Responsibility is to assure the immediate mitigation and timely notification of appropriate regulatory organizations in the event of a spill or unplanned discharge that has or may affect the environment. Work requires frequent and unscheduled site visits to any area of the Laboratory during a spill or unplanned release as support staff for the on-scene EO-EM Incident Commander.

Specific activities associated with Spill Response and Investigation:

- Respond to the spill or unplanned release site;
- Report to the On-Scene EO-EM Incident Commander and Site Safety Officer;
- Receive site safety requirements;
- Provide decision support;
- Investigate the nature and extent of the spill or unplanned release;
- Evaluate the potential environmental impact to water quality;
- Report the occurrence to the regulatory agencies, if necessary; and
- Provide support to mitigation plan and implementation.

5.1 FIELD ACTIVITY

If the spill or unplanned discharge is determined to be a non-emergency event by EO-EM response, such as a release of potable water, perform the following steps:

Step	Action
1	Perform a site visit in coordination with the Facility Operations Director designee.
2	Assess potential environmental damage.
3	Provide mitigation measures and requirements.
4	Document the event.
5	Notify regulatory agencies and DOE, if necessary.
6	Facilitate collection of samples, if necessary.

For emergency response, perform the following steps:

Step	Action
1	Report to on-scene commander and await instructions.
2	Perform a site visit in coordination with EO-EM.

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3	Adhere to access requirements as developed by the EO-EM Site Safety Officer and Incident Commander.
4	Identify source and cause of release and document.
5	Provide notification and written report if necessary.
6	Facilitate collection of samples if necessary and safe to do so.

If sample collection is required, contact the following sampling personnel:

- ENV-CP
 - NPDES outfall
 - Sanitary treatment solids
 - Wastes and chemical spills (liquid, solid, hazardous)
- ADEP Corrective Actions Program
 - Surface water
 - Storm water runoff
 - Groundwater
 - Sediments

5.2 COMMUNICATION

Take a cellular phone that will transmit from the location to be visited. Also take a contact pager to receive messages.

If cellular service is unavailable, use a portable radio set to the appropriate radio frequency.

If in a secure area where cell phone use is prohibited, use the radio. Be sure to have radio checked and authorized for use within secure areas or within the boundaries of the WFO FOD or WX Division. Government-owned cellular phones, with batteries removed, may be brought into the secure area but used only if approval is given by the EO-EM Incident Commander or FOD or designee. Rules of use for Smartphones and other mobile devices (BlackBerry, iPhones, iPads) can be found on the Computing Communications webpage for mobile devices, <http://int.lanl.gov/computing/communications/mobile/index.shtml>.

Radio or cellular contact must be established with a designated contact prior to leaving ENV-CP and upon arrival/departure at the site in accordance with ENV-DO-QP-100, *General Field Safety*.

The Incident Commander can make special communication exceptions.

All photography at LANL must adhere to the procedure and P202-5, *Prohibited and Controlled Articles*.

Wastes generated from activities described in the procedure will be properly characterized, managed, and disposed in accordance with P409, *Waste Management*, P930-1, *LANL Waste Acceptance Criteria*, and P403, *Environmental Aspects Identification Requirement*.

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5.3 FACILITY MANAGEMENT WORK CONTROL REQUIREMENTS FOR FIELD ACTIVITIES

Most field activities performed by the ENV-CP spill response personnel are impacted by facility management work control requirements. Requirements vary between the respective Facility Operations Divisions (FODs) and therefore necessitate ENV-CP response personnel to acquire FOD approval for site access in advance of starting work activities. The exception to this is in response to emergency situations as support to EO-EM staff.

Should work be required to stop/pause, reference [P101-18, Procedure for Pause/Stop Work](#), for guidance.

5.4 FACILITY MANAGEMENT-SPECIFIC ACCESS REQUIREMENTS

TA-16 and TA-11 high explosives areas have specific access requirements. Access inside the security gate requires annual site-specific training. Curricula# 5243 must be assigned and all the training courses completed before arriving at TA-16.

For access to perimeter gates during normal working hours, contact MSS-UI at 665-0106.

For perimeter gates with key core MSS-UI, prior notification for after hours entry is required. Perform the following steps:

Step	Action
1	Call SOC Los Alamos at 667-4437.
2	Identify yourself to the on duty officer or attendant.
3	Provide the following information: Group, color and make of vehicle (s), which perimeter gate you are entering, and approximate time of arrival and finally, length of stay.

Failure to notify security personnel in advance could result in a security violation against the visiting Team Member.

Provide notification to SOC Los Alamos at 667-4437 when leaving area.

For access to WX areas requiring during normal working hours, perform the following steps:

- Ensure the required security clearance (Q clearance) is held, and
- Contact the FOD or designee for entry requirements.

5.4.1 CHEMISTRY METALLURGY RESEARCH FACILITY ACCESS

For access to the Chemistry Metallurgy Research Facility, perform the following:

- Must have the required Q clearance to pass the security gate.
- If access into any of the buildings is necessary, contact the FOD for an escort.
- If responding to an emergency with EO-EM, ENV-CP staff will be considered part of the EO-EM response team, met at the access gate, and escorted to the spill site.

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5.4.2 TA-3-66 SIGMA FACILITY ACCESS

For access to the Sigma facility (TA-3-66), perform the following:

- For non-emergency responses, obtain prior site-specific training and authorization or contact the FOD for personnel escort.
- For emergency response with EO-EM, ENV-CP staff will be considered part of the EO-EM response team, met at the access gate, and escorted to the spill site.

5.5 REGULATORY SPILL REPORTING

If a spill is determined to be a threat to the environment or human health, regulatory and DOE notification may be necessary. Contacts and telephone numbers can be found on Attachment 1, Release Notification Phone List.

If a Spill impacts a Solid Waste Management Unit (SWMU) or Area of Concern (AOC), contact ENV-CP and ADEP Corrective Action Program for possible additional notification requirements. See Attachment 1 to this document.

If ENV Division or designated SME personnel determine after a site inspection or verbal notification that a spill is non-reportable to DOE or applicable regulatory agencies, a non-reportable spill report must be completed by appropriate facility designated personnel. See attachment 2 for the spill report form and information to be collected. Once the form has been accurately completed it can be sent to the SME at ENV-CP for required documentation.

For ENV Division designated on-call personnel, follow guidance for spill reporting as described in [ENV-DO-QP-101, Environmental Reporting Requirements for Releases or Events](#).

NOTE: On-call representatives are required to follow up in writing (email is sufficient) with the spills program lead regarding all releases during their on-call schedule. If no spills are reported in off-work hours, please confirm in writing with the spills program lead at the end of your on-call schedule.

For additional information concerning spill and unplanned discharge determination and notification requirements, contact the ENV-CP Water Quality Permitting and Compliance Team Leader.

6.0 REFERENCES

None

7.0 DEFINITIONS

Field Work: Performance of Laboratory related activities in areas that are removed or isolated from an established populated base of operation (that is, where emergency support and medical assistance is not readily available.)

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NPDES: National Pollutant Discharge Elimination System

EO: Emergency Operations Division

EO-EM: Emergency Management Group (A.K.A. EO-3)

PRS: Potential Release Site

SOC Los Alamos: Security contractor for Los Alamos National Laboratory

SWMU: Solid Waste Management Unit

8.0 ATTACHMENTS

Attachment 1- ENV-CP Release Notification Phone List

Attachment 2- LANL Spill Report Form

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ATTACHMENT 1- ENV-CP RELEASE NOTIFICATION PHONE LIST

Los Alamos National Laboratory
ENV-CP
Release notification phone list
March 2013

Los Alamos National Laboratory

- | | | |
|-----|------------------------------|----------|
| (1) | Emergency Management (EO-EM) | 667-6211 |
| (2) | ENV-ES Group Office | 665-885 |
| (3) | ENV-CP Group Office | 667-0666 |
| (4) | ENV-DO | 667-2211 |
| (5) | Central Alarm Station | 667-4437 |
| | L.A. Fire Dept. dispatch | |

New Mexico Environment Department

See Web address below

- | | | |
|-----|------------------------------|----------|
| (1) | NMED Emergency Hotline | 827-9329 |
| (2) | NMED Non-Emergency Hotline | 476-6000 |
| (3) | Surface Water Quality Bureau | 827-0187 |
| | Erin Trujillo | 827-0418 |
| (4) | Ground Water Quality Bureau | 827-2918 |
| | Robert George | 476-3648 |
| | Jennifer Fullem | 827-2909 |
| (5) | NMED/HWB | |
| | Ruth Horowitz | 476-6025 |

U.S. Environmental Protection Agency

- | | | |
|-----|-------------------------|----------------|
| (1) | USEPA Emergency Hotline | (214) 655-6450 |
| | After Work Hours | (214) 655-6595 |
| (2) | Jan Walker | (214) 655-8431 |

U.S. Department of Energy

- | | | |
|-----|-------------|----------|
| (1) | Gene Turner | 667-5794 |
|-----|-------------|----------|

State Emergency Response Commission (SERC) Notification

- | | |
|-------------------------------------|---------------------------------|
| New Mexico State Police | (505) 827-9126 (24-hour #) |
| (Immediate Notification) | |
| State and Local Preparedness Bureau | (505) 476-9600 (daytime # only) |
| (Follow-up Notification) | |

National Response Center

- | | |
|---|----------------|
| U.S. Coast Guard | 1-800-424-8802 |
| See NRC web address below for report form | |

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New Mexico State Police

New Mexico State Police

1-800-827-9126 (24 hr. #) or
827-9300 (dispatch, 24 hr. #)**Local Emergency Planning Committee (LEPC) LAPD**

Philmont Taylor

(505) 663-3511

On Call Environmental Contact for Releases**Group Representatives for Notifications to External Agencies**

Name	Group	Work Phone	Pager	Cellular Phone	Email address
Jake Meadows	ENV-CP	606-0185	664-1333	231-0460	jmeadows@lanl.gov
Mike Saladen	ENV-CP	665-6085	664-4226	699-1284	saladen@lanl.gov
Mark Haagenstad	WM-WMP	665-2014	664-5356	699-1733	mph@lanl.gov
Tim Zimmerly	ENV-CP	664-0105	699-7621	664-1237	tzimmer@lanl.gov
Terrill Lemke	ENV-CP	665-2397	664-7082	699-0725	tlemke@lanl.gov

Web addresses:

NMED home page <http://www.nmenv.state.nm.us>National Response Center home page <http://www.nrc.uscg.mil/nrchp.html>Reportable Quantities web page <http://homer.ornl.gov/rq/>

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ATTACHMENT 2- LANL SPILL REPORT FORM**LANL SPILL REPORT**

**Environmental Protection Division (ENV)
Compliance Programs Group (CP)
Los Alamos National Laboratory**

Spill Coordinator	Telephone	Mail Stop	Division	Group
Responsible Facility/User Group				
Contact Person	Telephone	Mail Stop	Pager #	

Spill Location		Date of Spill	Time of Spill	Date Discovered	Time Discovered
Date Spill Stopped	Time Spill Stopped	Method used to Stop Spill			
Actions taken to Mitigate Damage					
Nearest Water Course Affected? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA (If yes, please describe.)					
Source and Cause of Spill (pipeline, tank, truck, overflow, etc.)					
Materials Spilled					
Estimated Amount of Material Spilled					
Cleanup Started? <input type="checkbox"/> Yes <input type="checkbox"/> No		Date Started	Time Started		
Cleanup Finished? <input type="checkbox"/> Yes <input type="checkbox"/> No		Date Finished	Time Finished		
Cleanup Method					
Weather Conditions					
Comments					

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Estimate the quantity of waste generated by the spill cleanup procedures, how that waste is packaged and the current disposition of wastes.	
Describe any sampling performed during spill cleanup and attach analytical results to this form	
Describe current status of the spill site and the need for further cleanup or monitoring activities	
Describe actions taken to prevent recurrence of such a spill.	
Injuries or Exposure? <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If yes, please describe.)</i>	
Did evacuation occur? <input type="checkbox"/> Yes <input type="checkbox"/> No	Were facilities or equipment damaged? <input type="checkbox"/> Yes <input type="checkbox"/> No
Did fire/explosion occur? <input type="checkbox"/> Yes <input type="checkbox"/> No	Was there a potential for fire/explosion? <input type="checkbox"/> Yes <input type="checkbox"/> No
Did the spill enter sewer drains, streams, or stream beds? <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If yes, give location and ultimate drainage.)</i>	
Who discovered the Spill?	

Spill Information

Describe the spill response, in chronological order. Include a call-out response personnel, steps taken to contain the spill, and steps taken to clean it up. Also describe spill control equipment used.

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 is no handwriting or other markings on the paper.

Name of certifying official:	Title:	Organization:	Date signed:

ENV-RCRA-QP-022.2

Effective Date: February 28, 2013

Next Review Date: January 28,
2015**Environment, Safety, Health Directorate****Environmental Protection – Water Quality and RCRA
Quality Procedure****MSGP Storm Water Corrective Actions****Reviewers:**

Name:	Organization:	Signature:	Date:
Melanie Lamb	ENV-QPMO QA Specialist	Signature on file	1/4/13

Derivative Classifier: ☒ Unclassified

Name:	Organization:	Signature:	Date:
Catherine Hayes	ENV-RCRA	Signature on file	2/8/13

Approval Signatures:

Subject Matter Expert:	Organization:	Signature:	Date:
Holly Wheeler	ENV-RCRA	Signature on file	1/28/13
Responsible Line Manager:	Organization:	Signature:	Date:
Terrill Lemke	ENV-RCRA Team Lead	Signature on file	2/8/13
Responsible Line Manager:	Organization:	Signature:	Date:
Anthony Grieggs	ENV-RCRA Group Leader	Signature on file	2/28/13

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Title: MSGP Storm Water Corrective Actions	No. ENV-RCRA-QP-022.2	Page 2 of 23
	Effective Date: February 28, 2013	

History of Revisions

Document Number <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	08/10	New Document.
1	11/10	Incorporated ENV-RCRA-QP-062 <i>MSGP Routine Inspections</i> into this document.
2	01/13	Biennial revision, new template implemented.

Title: MSGP Storm Water Corrective Actions	No. ENV-RCRA-QP-022.2	Page 3 of 23
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1.0 PURPOSE

This procedure is written to provide requirements for identifying, documenting and entering corrective actions into the ENV-RCRA MSGP Corrective Action Report Findings database.

2.0 SCOPE

Requirements set forth in this document apply to Los Alamos National Laboratory industrial facilities covered by the National Pollutant Discharge Elimination System (NPDES) Storm Water Multi-Sector General Permit (MSGP). This “general permit” requires identification, documentation, tracking and reporting of corrective actions in accordance with sections 2.2.1, 3, 4.1.2, 4.2.2, 4.3.2, 5.0, 5.2, 5.4, 6.2.1, 6.2.1.2, 7.2 and Appendices B and I.

2.1 HAZARD REVIEW

The work described in this procedure is office work only and has a **LOW hazard** rating as documented by submittal of a completed [ENV Low Hazard Verification form](#) to the Quality Assurance Specialist.

3.0 RESPONSIBILITIES

The following personnel require training before implementing this procedure:

- Group and Team Leader
- ENV-RCRA MSGP Storm Water compliance personnel
- Deployed Environmental Professionals (DEPs)
- Other LANL or subcontract personnel identified as being required to conduct storm water assessments as part of their job duties.

In addition to training to this procedure, the following training is also required prior to performing this procedure:

- [ENV-RCRA QAPP-MSGP Quality Assurance Project Plan for the Storm Water Multi-Sector General Permit for Industrial Activities](#)

The training method for this procedure is “self-study” (required read). For ENV-RCRA staff, this is documented in accordance with [ENV-DO-QP-115, Personnel Training](#). Other participating groups may require training documentation pursuant to local procedures.

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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3.1 ROLES AND RESPONSIBILITIES

3.1.1 ENV-RCRA MSGP STORM WATER TEAM

ENV-RCRA MSGP Storm Water Team members will be fully knowledgeable of the specific regulatory requirements identified in the 2008 MSGP and are responsible for ensuring compliance with these requirements and entering corrective actions. Team members will evaluate corrective actions that the DEPs enter into the ENV-RCRA MSGP Corrective Action Report Findings database and modify them as needed for quality assurance. This team will also periodically review open corrective actions and follow up with the DEPs, ES&H Managers, or Upper Management, as deemed necessary, to ensure close out of the corrective action. The team members will notify upper management of instances of non-compliance with the permit. A team member may also be responsible for responding to the regulatory authority (EPA) regarding identified storm water issues and/or negotiate settlement of any identified issues.

3.1.2 DEPLOYED ENVIRONMENTAL PROFESSIONALS

DEPs will be fully knowledgeable of the site specific Storm Water Pollution Prevention Plan (SWPPP) and corrective action requirements identified in the MSGP for the facilities they are deployed to. In addition, they shall be appropriately trained to meet the job qualifications identified in the *Quality Assurance for Storm Water Multi-Sector General Permit for Industrial Activities Program* (ENV-RCRA-QAPP-MSGP) and shall be familiar with the regulatory requirements identified in the 2008 MSGP. Further, they shall be familiar with facility operations so that potential pollution discharge sources can be determined and corrective actions can be identified.

The DEPs are responsible for identifying and entering corrective actions observed at their industrial facilities into the ENV-RCRA MSGP Corrective Action Report Findings database. They are also responsible for updating corrective actions in a timely manner that cannot be implemented immediately. They will work with the ES&H Manager and ENV-RCRA storm water personnel to ensure identified corrective actions are implemented by overseeing repairs and/or improvements or instituting additional controls. If it is determined that corrective actions are necessary following an assessment, any modification to the control measures must be made before the next storm event if possible, or as soon as practicable following that storm event.

NOTE: These time intervals are not grace periods, but are schedules considered reasonable for documenting your finding(s) and for making repairs and improvements. They are included in the MSGP Permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely (see Section 3.3 of the 2008 MSGP). In no instance will the corrective action remain open indefinitely.

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3.1.3 ENV-RCRA STORM WATER TEAM LEADER

The ENV-RCRA Storm Water Team Leader is responsible for compliance oversight relative to the 2008 MSGP. The Team Leader will ensure costs needed to implement the regulatory requirements identified in the 2008 MSGP are identified and environmental risks are assessed. Upper management will be notified of these costs or environmental risks, as deemed necessary. In the event there is a dispute regarding the regulatory requirements contained in the MSGP, the Team Leader will make the final determination of the required action. The Team Leader will notify upper management of instances of non-compliance with the permit.

3.1.4 ENV-RCRA GROUP LEADER

The ENV-RCRA Group Leader or designee is responsible for ensuring there is adequate funding to implement the regulatory requirements identified in the 2008 MSGP. The Group Leader also acts as the duly authorized signatory that certifies the reports. The Group Leader will notify upper management of instances of non-compliance with the permit or other identified environmental risk.

3.1.5 ES&H MANAGER

The ES&H manager shall identify funding for their industrial facilities to ensure compliance with the 2008 MSGP. The ES&H Manager is also responsible for ensuring that industrial facilities are complying with the 2008 MSGP permit and notifying upper management of instances of non-compliance with the permit or other identified environmental risk.

3.1.6 FACILITIES OPERATIONS DIRECTOR

The Facilities Operations Director (FOD) provides organizational leadership to ensure that all facility and programmatic activities under their authority are performed in compliance with the 2008 MSGP. The FOD is also responsible for establishing an environmental compliance envelope. It is the FOD's responsibility to maintain trained and qualified Environmental Professionals and Waste Management Coordinators on staff.

3.1.7 COMPUTER PROGRAMMER

Maintains and updates the ENV-RCRA MSGP Corrective Action Report Findings database as requested by MSGP storm water personnel.

3.2 PREREQUISITES

In addition to training to this procedure, the following training is also required prior to performing this procedure:

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- [*ENV-RCRA QAPP-MSGP, Quality Assurance Project Plan for the Storm water Multi-Sector General Permit for Industrial Activities Program*](#)

4.0 DOCUMENT CONTROL/RECORDS MANAGEMENT

The following records generated as a result of this procedure are to be submitted to the designated RM-POC in accordance with [*ENV-DO-QP-110, Records Management*](#) and filed in project files.

- MSGP Comprehensive Site Inspection Annual Report
- Completed Routine Inspection Forms
- Electronic records within the ENV-RCRA MSGP Corrective Action Report Findings database.
- Copies of automated e-mail notifications

5.0 WORK PROCESSES

5.1 IDENTIFYING CORRECTIVE ACTIONS

If any of the following conditions occur, the DEP or ENV-RCRA storm water team member must review and revise the selection, design, installation, and implementation of control measures to ensure that the condition is eliminated and will not be repeated in the future:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-storm water not authorized by the 2008 MSGP);
- You become aware, or EPA determines, that your control measures are not stringent enough for the discharge to meet applicable water quality standards;
- An inspection or evaluation of the facility by an EPA official and/or local or State entity, determines that modification to the control measures are necessary to meet the non-numeric effluent limits in the 2008 MSGP;
- You find in the routine facility inspection, quarterly visual assessment, or comprehensive site inspection that the control measures are not being properly operated and maintained;
- Construction or a change in design, operation, or maintenance at the facility significantly changes the nature of pollutants discharged in storm water from the facility, or significantly increases the quantity of pollutants discharged; or
- The average of four quarterly sampling results exceeds an applicable benchmark. If less than four benchmark samples have been taken, but the results are such that an exceedence 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 exceedence, triggering this review;
- If effluent limitation guidelines are exceeded at the Asphalt Batch Plant (Sector D); or
- If impaired water quality standards are exceeded.

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5.2 ROUTINE INSPECTIONS

Routine inspections shall be conducted by the DEP (or a qualified member if the DEP is not trained and qualified) at all areas of the facility where industrial materials or activities are exposed to storm water, and of all storm water control measures used to comply with the effluent limits contained in the 2008 MSGP. Routine inspections shall be conducted at least quarterly; however, some facilities conduct monthly inspections (as specified in the facility specific SWPPP). Routine inspections shall be conducted during periods when the facility is in operation. A certified copy of completed Routine Inspection Forms shall be maintained in the facility's SWPPP.

At least once each calendar year, the routine facility inspections must be conducted during a period when a storm water discharge (either rain or snow) is occurring. The DEP(s) or storm water personnel from ENV-RCRA are responsible for identifying and entering corrective actions observed during the routine inspections into the ENV-RCRA MSGP Corrective Action Report Findings database. The database is set up to allow access for all identified DEPs associated with a particular FOD if the FOD has more than one DEP. Contact a member of the ENV-RCRA storm water team if you do not have access to this database and the FOD has assigned you responsibility for MSGP corrective actions.

NOTE: If the industrial facility is inactive and unstaffed and there are no industrial materials or activities exposed to storm water, routine inspections may not be required. A determination of whether a facility is inactive or unstaffed shall be made in coordination with storm water personnel from ENV-RCRA as there are specific documentation and certification requirements that have to be met prior to discontinuing routine inspections.

5.3 COMPREHENSIVE INSPECTIONS

Qualified ENV-RCRA storm water personnel will conduct one comprehensive inspection of all industrial facilities and those that meet the "no exposure" criteria subject to the 2008 MSGP before September 29th of each year. At least one member of the facility's storm water pollution prevention team shall participate in this inspection. This is usually the DEP.

This inspection must cover all areas of the industrial facility affected by the requirements in the 2008 MSGP including the areas identified in the SWPPP as potential pollutant sources where industrial material or activities are exposed to storm water, areas where control measures are used to comply with the effluent limits, and areas where spills and leaks have occurred in the past 3 years. The inspector must include review of the monitoring data (analytical results from benchmark and impaired waters and visual assessments) collected that calendar year as part of the comprehensive inspection. Inspectors must examine the following at a minimum:

- Industrial materials, residue, or trash that may have or could come into contact with storm water;
- Leaks or spills from industrial equipment, drums, tanks, and other containers;

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- 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; and
- Control measures needing replacement, maintenance, or repair.
- Storm water controls measures required by the 2008 MSGP must be observed to ensure that they are functioning correctly.

NOTE: The annual comprehensive site inspection may also be used as one of the routine inspections, as long as all components of both types of inspections are included.

ENV-RCRA will then enter all identified corrective actions into the ENV-RCRA MSGP Corrective Action Report Findings database. It is the responsibility of the DEP to update the database to reflect updates to these corrective actions.

Information compiled during the comprehensive inspection is used to complete the Annual Report. This report shall be submitted to EPA (postmarked) within 45 days of the last facility inspection completed in September of each year. For example, if the last facility was inspected (as part of the comprehensive site inspection) on September 22, the report shall be postmarked before or on November 6th. A complete certified copy of the Annual Report shall be maintained in the facility's SWPPP.

5.4 SPILLS

All leaks or spills shall be cleaned up immediately and entered into the ENV-RCRA MSGP Corrective Action Report Findings database. This can be done by either the DEP or an ENV-RCRA MSGP storm water team member. If the spill is immediately cleaned up, and controls are put in place to prevent further leakage, the corrective action can be closed.

5.5 ALLOWABLE NON-STORM WATER DISCHARGES

The following are allowable non-storm water discharges authorized by the 2008 MSGP:

- Discharges from fire-fighting activities;
- Fire hydrant flushing;
- Potable water, including water line flushings;
- Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
- Irrigation drainage;
- Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;
- Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous material have occurred (unless all spilled material has been removed);

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- Routine external building washdown that does not use detergents; and
- Uncontaminated ground water or spring water.

Any person authorized to conduct work at LANL can identify a potential storm water issue. If this occurs, they should contact the DEP or an ENV-RCRA MSGP storm water team member who will determine if a corrective action is needed.

5.6 ENTERING CORRECTIVE ACTIONS

To enter a corrective action into the ENV-RCRA MSGP Corrective Action Report Findings database, perform the following steps:

NOTE: Be clear and concise, use correct grammar and punctuation, and correct any spelling errors. This information will be used to populate a report that will be submitted to the EPA. Therefore, it is critical that all information entered into the ENV-RCRA MSGP Corrective Action Report Findings database is correct and meets these criteria.

Step	Action
1	<p>From this web page:</p> <p>http://int.lanl.gov/environment/water/guidance/swmgp.shtml, under the heading "Compliance Tools". Click on the link "MSGP Corrective Action Report Findings Database"</p> <p>Click on "Enter New Corrective Action."</p>
2	<p>Under the "Corrective Action Header" tab, enter the following:</p> <ul style="list-style-type: none"> • Facility Name by clicking on the "List" tab and selecting a facility. • Date Problem was Identified (mm/dd/yyyy) • Date of Notification to ENV-RCRA (mm/dd/yyyy) • FOD Responsible for CA (Name & Org) by clicking in the box. FOD designations (for example "STO") and the associated name will come up. Just select the appropriate FOD. <p>NOTE: Contact the MSGP Project Leader at 667-1312 or hbensen@lanl.gov if the FOD name or organization is incorrect, so this can be corrected.</p> <ul style="list-style-type: none"> • Describe Specific Evaluation Location (for example "Northeast corner of Building TA-3-66") • Inspector Z-Number by clicking in the box, which will populate it with your Z number. In most instances, the DEP should be identified as the inspector. Note: If you are entering the CA and are not the DEP, you will have to enter the DEP's Z number or they will not have the ability to update the corrective action. <p>Once all of the above information is entered correctly, click "Save" and go</p>

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	to Step 3. All boxes identified with a red asterisk are "required fields" and shall be filled out. Note: The system will automatically assign a Corrective Action Report ID number.
3	<p>Click "Go To Corrective Action Details" in the middle of the screen.</p> <p>Under the "Corrective Action Details" tab, enter the following:</p> <ul style="list-style-type: none"> Identify the condition triggering the need for this review by clicking on the "List" tab and selecting an option or selecting "Other" and entering a description of the condition. Briefly describe the nature of the problem identified during the inspection (e.g., erosion, damage to a BMP, trash, spill, etc.) and the specific evaluation location. <p>NOTE: Spills or other emergency situations may identify the need for a corrective action that was not identified during an inspection.</p> <ul style="list-style-type: none"> How the problem was identified by clicking on the "List" tab and selecting an option or selecting "Other" and entering a description of the problem. Description of the corrective action taken, or to be taken, to eliminate or further investigate the problem (e.g., describe modifications or repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, the basis for that determination. Did/will the corrective action require modification of your SWPPP. Type in "Y" for yes and "N" for no. Date Corrective action was initiated (mm/dd/yyyy) Date corrective action was completed OR expected completion date (mm/dd/yyyy) <p>NOTE: If the corrective action has not been completed, enter an expected completion date. Do not put a date in both locations.</p> <p>If the corrective action has not been completed, provide the status of the corrective action and describe any remaining steps (including timeframes associated with each step) necessary to complete the corrective action.</p> <p>NOTE: This should only be filled out if the corrective action has not been completed. If the corrective action has been completed, enter "N/A."</p> <p>Make sure to hit the "save" tab in the bottom right hand corner so the corrective action information is retained. If you want to enter more corrective actions, go back to the "Corrective Action Header" tab and press the "Enter New Corrective Action" button in the lower left hand corner of the screen (see step #2). Hitting the "Exit" button will cause you to exit from the system.</p>

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	All boxes identified with a red asterisk are "required fields" and shall be filled out. If a date is not included or identified as an expected completion date, ENV-RCRA storm water compliance personnel will enter a completion date of 30 days after the corrective action was identified.
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5.7 UPDATING CORRECTIVE ACTIONS

To update a corrective action in the ENV-RCRA MSGP Corrective Action Report Findings database, perform the following steps:

Step	Action
1	From this web page: http://int.lanl.gov/environment/water/guidance/swmgp.shtml , under the heading "Compliance Tools". Click on the link " MSGP Corrective Action Report Findings Database " to access the database and tab down to the corrective action number you want to edit. Click on "Edit."
2	Navigate to the blank that you will be changing and input the updated information. It is anticipated that most changes will occur relative to updating the status of corrective actions. Save all changes to the information. Remember, you should only have a date under "Date corrective action completed OR the "expected to be completion," but not both.

5.8 VALIDATING CORRECTIVE ACTIONS

ENV-RCRA storm water personnel will periodically validate the information contained in the ENV-RCRA MSGP Corrective Action Report Findings database. To validate a corrective action in the ENV-RCRA MSGP Corrective Action Report Findings database, perform the following steps:

Step	Action
1	From this web page: http://int.lanl.gov/environment/water/guidance/swmgp.shtml , under the heading "Compliance Tools". Click on the link " MSGP Corrective Action Report Findings Database " to access the database.

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2	<p>Check all entered fields for a corrective action to ensure that all information is clear, correct, and concise. If not, correct the information by navigating to the information that needs to be changed and making the change. Save all changes to the information.</p> <p>All information shall be validated before running the final annual report.</p>
3	<p>For ENV-RCRA storm water personnel only, under “status” select “void” if the corrective action is a repeat of a previous corrective action or if it is determined not to be a corrective action. This will delete the corrective action from the annual report.</p>

5.9 INSTITUTIONAL PERFORMANCE FEEDBACK AND IMPROVEMENT TRACKING SYSTEM (PFITS)

PFITS is the institutional performance and tracking system for identified issues. A corrective action that meets any of the following criteria will be entered into the PFITS system, as deemed necessary.

- Corrective action was not completed by the expected completion date entered into the database.
- No action was taken to remedy an identified issue with a control measure within 14 days of discovery or before the next storm event or as soon as practicable following that storm event (Section 3.3 of the 2008 MSGP).
- Repeat corrective actions or trends identified by ENV-RCRA MSGP storm water personnel.
- Conditions requiring immediate action, where failure to take action would result in pollutants being released to water of the state or an immediate non-compliance with the 2008 MSGP.
- Violations identified by the regulatory authority.
- Other issues as deemed necessary by MSGP storm water personnel.

Once every month, ENV-RCRA storm water personnel will evaluate a summary of open corrective actions in the ENV-RCRA MSGP Corrective Action Report Findings database and using the above criteria will determine which corrective actions, if any, should be transferred into PFITS. When the monthly notification of outstanding corrective actions is sent out, evaluate whether any of the outstanding corrective actions meet the above conditions. Send those that do to the Environmental Protection Division’s Improvement Management Coordinator (IMC) so that she can enter the information into PFITS. The summary report will contain the following information, at a minimum:

- Date the corrective action was identified;
- Person that identified the corrective action;

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- A description of the nature of the problem identified and what needs to be done to address the corrective action.
- Whether the corrective action was identified internal to LANL or External to LANL.

5.10 NOTIFICATIONS FOR NEW AND OVERDUE CORRECTIVE ACTIONS

When a new corrective action is entered into the ENV-RCRA MSGP Corrective Action Report Findings database, the FOD, ESH&Q Manager, Operations Manager, inspector (usually the DEP) and ENV-RCRA MSGP storm water personnel are notified automatically by e-mail (unless the corrective action is closed the same day it is entered). This will assist the FOD, ESH& Q Managers, Operations Managers and the DEPs with keeping track of new corrective actions.

An automatic e-mail is sent the first of each month notifying the FOD, ESH&Q Manager, Operations Manager and DEPs of all overdue corrective actions for their industrial facilities. The Environmental Protection Division Leader and ENV-RCRA Group Leader receive a web link that contains a bar graph showing corrective actions 30 to 60 days overdue, 60 to 90 days overdue, 90 days to 1 year overdue, and those greater than a year overdue. In addition, they receive a link with summary information on each corrective action overdue sorted by FOD.

6.0 REFERENCES

- Federal Register: *Final National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Industrial Activities*. Federal Register: September 29, 2008, Volume 73, Number 189.
- [P300, Integrated Work Management](#)
- [P315, Conduct of Operations Manual](#)
- [PD103, Worker Safety and Health Policy](#)
- [SD100, Integrated Safety Management System Description Document with Embedded 10 CFR 851 Worker Safety and Health Program](#)
- [P101-18, Procedure for Pause/Stop Work](#)
- [PD410, Los Alamos National Laboratory Environmental ALARA Program](#)
- [P121, Radiation Protection](#)
- [ENV-DO QP-106, Document Control](#)
- [ENV-DO-QP-115, Personnel Training](#)
- [ENV-DO-QP-104, Work Safety Review](#)

In addition to these documents, please read any site specific requirements before proceeding with work.

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7.0 DEFINITIONS

Best Management Practice (BMP): Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of “waters of the United States.” BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. (*40 CFR Part 122.2*)

Control Measure: Any BMP or other method (including effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the United States.

CA: Corrective Action

DEP: Deployed Environmental Professional

EPA: Environmental Protection Agency

FOD: Facility Operations Director

MSGP: Multi-Sector General Permit

SWPPP: Storm Water Pollution Prevention Plan

8.0 ATTACHMENTS


Attachment 1- Annual Reporting Form

Attachment 2- NPDES Multi-Sector General Permit Routine Inspection Form

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ATTACHMENT 1- ANNUAL REPORTING FORM

NPDES Permit Tracking No.:

 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460	
Annual Reporting Form	
A. GENERAL INFORMATION	
1. Facility Name: 	
2. NPDES Permit Tracking No.: 	
3. Facility Physical Address:	
a. Street: 	
b. City: 	c. State: d. Zip Code:
4. Lead Inspectors Name: Title: 	
Additional Inspectors Name(s): 	
5. Contact Person: Title: 	
Phone: - - Ext. E-mail: 	
6. Inspection Date: 	
B. GENERAL INSPECTION FINDINGS	
1. As part of this comprehensive site inspection, did you inspect all potential pollutant sources, including areas where industrial activity may be exposed to stormwater? <input type="checkbox"/> YES <input type="checkbox"/> NO If NO, describe why not:	
NOTE: Complete Section C of this form for each industrial activity area inspected and included in your SWPPP or as newly identified in B.2 or B.3 below where pollutants may be exposed to stormwater.	
2. Did this inspection identify any stormwater or non-stormwater outfalls not previously identified in your SWPPP? <input type="checkbox"/> YES <input type="checkbox"/> NO	
If YES, for each location, describe the sources of those stormwater and non-stormwater discharges and any associated control measures in place:	

3. Did this inspection identify any sources of stormwater or non-stormwater discharges not previously identified in your SWPPP? ☐ YES ☐ NO

If YES, describe these sources of stormwater or non-stormwater pollutants expected to be present in these discharges, and any control measures in place:

4. Did you review stormwater monitoring data as part of this inspection to identify potential pollutant hot spots? ☐ YES ☐ NO ☐ NA, no monitoring performed

If YES, summarize the findings of that review and describe any additional inspection activities resulting from this review:

5. Describe any evidence of pollutants entering the drainage system or discharging to surface waters, and the condition of and around outfalls, including flow dissipation measures to prevent scouring:

6. Have you taken or do you plan to take any corrective actions, as specified in Part 3 of the permit, since your last annual report submission (or since you received authorization to discharge under this permit if this is your first annual report), including any corrective actions identified as a result of this annual comprehensive site inspection? ☐ YES ☐ NO

If YES, how many conditions requiring review for correction action as specified in Parts 3.1 and 3.2 were addressed by these corrective actions?

NOTE: Complete the attached Corrective Action Form (Section D) for each condition identified, including any conditions identified as a result of this comprehensive stormwater inspection.

NOTE: Copy this page and attach additional pages as necessary

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

Date Signed: _____

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ATTACHMENT 2- NPDES MULTI-SECTOR GENERAL PERMIT ROUTINE INSPECTION FORM

Los Alamos National Laboratory
ENV-RCRA

NPDES Multi-Sector General Permit Routine Inspection Form
(rev. 03/2009) Page 1 of (use additional sheets if necessary)

Name of Facility:		Responsible FOD (Name & Organization):		
Qualified Inspector(s): Others Present:		Inspection type: <input type="checkbox"/> Quarterly <input type="checkbox"/> Other	Date of inspection (MM/DD/YYYY): Time of inspection:	
Weather: <input 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: °F Is Inspection Being Conducted During a Storm Water Discharge? <input type="checkbox"/> Yes <input type="checkbox"/> No				
#	Structural Control Measures (BMP)s	Location	Operating Effectively (Yes or No)? If No, Need to Maintain (M), Repair (R) or Replace (RP)?	Corrective Action Needed and Notes (Identify needed maintenance and repairs, or any failed control measures that need replacement)
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
Were additional BMPs or Control Measures implemented? <input type="checkbox"/> Yes <input type="checkbox"/> No Describe:				
Were previously identified conditions corrected before the next anticipated storm event? <input type="checkbox"/> Yes <input type="checkbox"/> No If No, describe reason:				
Area/Activity (Areas of Industrial Materials or Activities Exposed to Storm Water)	Inspected?	Controls Adequate?	Corrective Action Needed and Notes (List area letter with comments below)	
A. Material loading/unloading & storage areas				
B. Equipment operations & maintenance areas				
C. Fueling Areas				
D. Outdoor vehicle & equipment washing areas				
E. Waste Handling & disposal areas				
F. Erodible areas / construction				
G. Non-storm water / illicit connections				
H. Salt storage piles or pile containing salt				
I. Dust generation & vehicle tracking				
Are the SWPP Plan maintenance, schedules and procedures being implemented at the facility? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Were any Corrective Actions initiated or completed? <input type="checkbox"/> Yes <input type="checkbox"/> No Describe:				
Are there any conditions requiring Corrective Action? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, List Number of Corrective Actions Required _____ (Note – need a Corrective Action Form for each listed)				

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Los Alamos National Laboratory
ENV-RCRA

NPDES Multi-Sector General Permit Inspection Form
(rev. 03/2009) Certification Sheet

Non-Compliance

Describe any incidents of non-compliance and/or need for corrective action observed and not described above:

Additional Control Measures

Describe any additional control measures needed to comply with the permit requirements:

Notes

Use this space for any additional notes or observations from the inspection:

Inspector's Signature and date: _____

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: _____

UNCLASSIFIED

ENV-CP-QP-045.1Effective Date: September 5,
2013Next Review Date: August 5,
2015**Environment, Safety, Health Directorate****Environmental Protection – Compliance Programs
Quality Procedure****Installing, Setting Up, and Operating ISCO Samplers
for the MSGP****Reviewers:**

Name:	Organization:	Signature:	Date:
Melanie Lamb	ADESH-OIO, QA Specialist	Signature on file	8/28/13

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History of Revisions

Document Number <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	03/11	New Document.
1	04/13	Biennial Review and Revision
2	09/13	Biennial Review and Revision

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1.0 PURPOSE

This procedure describes the installation, setup, programming, and operation of Teledyne ISCO Avalanche and Model 3700 full-size portable automated samplers used to collect storm water runoff samples for the Multi-Sector General Permit (MSGP).

2.0 SCOPE

This procedure applies to all ENV-CP technical staff and contractor personnel conducting installation, operation, maintenance and sampling activities at single stage stations used for monitoring under the MSGP.

2.1 HAZARD REVIEW

Hazards in the work described in this procedure are controlled thorough site specific [IWDs](#). The hazard level of the activities in this procedure is **moderate**.

3.0 RESPONSIBILITIES

The following personnel require training before implementing this procedure:

- This procedure applies to all ENV-CP MSGP storm water compliance personnel conducting installation, operation, maintenance and sampling activities at MSGP single stage monitoring stations.

The training method for this procedure is “self-study” (reading). For ENV-CP staff, this is documented in accordance with [ENV-DO-QP-115, Personnel Training](#). Other participating groups may require training documentation pursuant to local procedures.

Actions specified within this procedure, unless proceeded with “should” or “may,” are to be considered mandatory (i.e., “shall”, “will”, “must”).

3.1 PREREQUISITES

Personnel performing this procedure will be familiar with the most current versions of the following procedures and operation manuals:

- ENV-CP MSGP Sampling and Analysis Plan for the current monitoring year
- Manual for Teledyne ISCO Sampler Model 3700.
- Manual for Teledyne ISCO Avalanche refrigerated sampler
- Facility/FOD specific IWDs for the MSGP

4.0 DOCUMENT CONTROL/RECORDS MANAGEMENT

The following records are generated as a result of this procedure and are maintained in accordance with [ENV-DO-QP-110, Records Management Program](#) with the originals on file at ENV-CP offices:

Completed work orders for:

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- LANL MSGP ISCO Sampler Installation Form 045-1(Attachment 1)
- LANL MSGP ISCO Sampler Activation Form 045-3 (Attachment 6)
- LANL MSGP ISCO Sampler Winter Shutdown 045-5 (Attachment 9)
- LANL MSGP ISCO Sampler Decommission 045-6 (Attachment 10)

5.0 WORK PROCESSES

The discharge of storm water from industrial facilities at Los Alamos National Laboratory (LANL, the Laboratory) is regulated under the National Pollutant Discharge Elimination System (NPDES) *Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity* (MSGP). The current MSGP became effective on September 29, 2008 pursuant to 73 FR 56572. The Laboratory's MSGP permit coverage (Permit Tracking No. NMR05GB21) requires storm water quality monitoring to evaluate the overall effectiveness of control measures. ISCO samplers coupled with Model 1640 sampler actuators are used at MSGP Program monitoring stations. Refrigerated (Avalanche) and/or non-refrigerated (Model 3700) samplers may be deployed; and may be configured with multi-battery arrays, solar panels, and surge protectors.

5.1 EQUIPMENT AND TOOLS

Ensure the following equipment is available in the field vehicle:

- Copy of this procedure
- Copy of the appropriate Integrated Work Document(s) (IWDs)
- Charged spare battery(ies)
- Battery voltage tester
- Spare tubing (pump, suction, discharge types, sampler specific)
- Spare sample bottles
- Shovels
- Wooden stakes
- Plastic wire "zip" ties
- Cell phone (only government cell phones with the battery removed are allowed in secure areas)
- Appropriate tools (including insulated tools for electrical work) in tool box
- Issued Work Orders and associated forms
- Necessary access and station keys
- Ziploc® plastic storage bags
- Tape measure
- Sturdy hiking boots or steel toed shoes with soles that grip

The time on the ISCO sampler clock must be verified upon arrival at the site. The ISCO clocks must be set to Mountain Standard Time (MST) at all times, with no daylight saving time adjustment. Cellular phones can be used to verify the time.

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5.2 ISCO SAMPLER INSTALLATION

Step	Action
1	Work Orders are issued for all field operations at individual MSGP monitored outfalls. Obtain the Work Order with the LANL MSGP ISCO Sampler Installation Form 045-1 (Attachment 1). The Work Order specifies the MSGP outfall and target date for the work to be performed. An outfall-specific equipment list with specifications and configuration settings is provided on each Work Order.
2	Deploy the ISCO sampler and charged battery on level ground above the flood plain. Often, large tool/storage boxes (Greenlee™) are used for equipment protection in the field. NOTE: These boxes are locked. Therefore, a key should be obtained prior to accessing them. The sampler should be as level as possible to allow effective sample collection. Verify/record the ISCO sampler serial number and the battery tracking number(s) on the Work Order.
3	Install the separate protective battery box for the charged battery (follow manufacturer's instructions).
4	Determine the bottle set configuration from the equipment list on the Work Order. <ul style="list-style-type: none"> • If a Model 3700 sampler is indicated, install the correct distributor arm (has either "12" or "24" embossed on bottom at outlet). • For an Avalanche sampler, attach either the discharge tube guide (single bottle configuration) or the distributor arm (multi-bottle configuration) and the appropriate bottle adapter plate. If an adapter plate is not available, the inside of the sampler may need to be configured by hand (i.e., add form) to prevent bottles from moving around during a sampling event. • Install required bottles and retaining devices in the sampler base. • Check that the end of the discharge tubing does not extend below the bottom face of the distributor arm (where it could snag the bottle tops and jam as the arm advances through the bottle sequence). • Remove and place the clean bottle caps in a new Ziploc® plastic bag.
5	Attach a length (in whole foot increments) of 3/8-inch diameter Teflon suction line to the sampler intake line and anchor as needed for the Outfall location. Measure and record (for later programming steps) the tubing length used. Route the sample tubing downslope from the sampler to the intake point so that there is a continuous slope with no valleys that could retain water between sample intervals.
6	Install the actuator: <ul style="list-style-type: none"> • Anchor a stake to the channel bottom in the main flow of the outfall discharge. • Attach the sampler intake tube and the 1640 liquid level detector (actuator) to the stake. • Position the actuator at least 1/2 inch above the intake tube to ensure there is enough water to submerge the intake when the sampler is activated. • Connect the actuator to the sampler using the cable connector provided by the manufacturer. • If necessary, use a gravel bag to create a small pooling area for the actuator and sampler intake to sit in. <p>The actuator height above the channel bottom is established using professional judgment. For example, the intake may be positioned 1 inch or less above the bottom of low-flowing wide channels, but higher than 1 inch in a high-flowing narrow channel.</p>

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7	<p>NOTE: You must be a trained electrical worker and have completed all required courses in Training Plan #2876 to conduct this step.</p> <p>Connect the sampler to the power source, either a 12 Volt 110 A-h deep cycle lead acid battery or other power source such as a multi-battery array coupled with a solar panel, as appropriate. Record the battery tracking numbers in the equipment list section of the Work Order. (Refer to Attachments 2 and 3 for the wiring diagram for Avalanche sampler installation.)</p>
---	---

5.3 CONFIGURING ISCO 3700 SAMPLERS

Step	Action
1	When a new ISCO 3700 sampler is being installed, configure the sampler in accordance with the steps contained in this section. Follow the project-specific configuration settings as indicated on the Work Order and given in Attachment 4, ISCO 3700 Configuration Settings.
2	Turn on the sampler by pressing the "On" button.
3	Press the "Enter/Program" button.
4	Select "Configuration".
5	Set the configuration parameters in accordance with the guidance in Attachment 4, ISCO 3700 Configuration Settings. After each selection is made, press the "Enter" button to allow the next configuration parameter to be displayed on the screen.
6	<p>After the programming is complete, select "Run diagnostics" and press "Enter" to run the system diagnostic test. The diagnostic tests include the following:</p> <ul style="list-style-type: none"> • RAM and ROM test • LCD test • Pump test ("OFF/ON" number should be between 50 and 200 for a successful test) • Distributor test – select "YES" to run test. Test will move the distributor to Position 24 and then return it to Position 1.
7	Following the diagnostic tests, "Reinitialize Controller" will be displayed. Select "No" and press "Enter." <u>Do not select "Yes."</u> If "Yes" is selected, the sampler will reset a number of configuration and program settings to the factory default values.
8	To leave the configuration sequence, use the "Exit configuration" and press "Yes" or press the "Enter/Program" key.

5.4 PROGRAMMING ISCO 3700 SAMPLERS

Step	Action
1	Follow the steps in this process to program a new ISCO or to confirm the program settings are correct for a specific location. Follow the project-specific program settings as indicated on the

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	work order and given in Attachment 5, ISCO 3700 Program Sequence.
2	Turn on the sampler by pressing the "ON" button
3	Press the "Enter/Program" button.
4	Select "Program".
5	Set the program parameters in accordance with the guidance on Attachment 5, ISCO 3700 Program Sequence. After each selection is made, press the "Enter" button to allow the next configuration parameter to be displayed on the screen.
6	Set the switch on the actuator to "Latch."
7	NOTE: You must be a trained electrical worker and have completed all required courses in Training Plan #2876 to conduct this step.
8	Complete the responses for the sampler installation tasks listed on the Work Order. Sign and date the Work Order and ensure all items contained within it have been completed.

5.5 ACTIVATING ISCO 3700 SAMPLERS

Step	Action
1	<p>Follow the steps in this section when a Work Order is received to activate a sampler (generally at the beginning of a field season or at the beginning of the next quarter after the last quarterly monitoring sample was obtained).</p> <p>Note: The MSGP monitoring quarters are as follows</p> <ul style="list-style-type: none"> • April 1 through May 31 • June 1 through July 31 • August 1 through September 30, and • October 1, through November 30.
2	<p>Obtain the Work Order with the LANL MSGP Sampler Activation Form 045-3 (Attachment 6). The Work Order specifies the MSGP Outfall and target date for the work to be performed. An Outfall-specific equipment list with specifications and configuration settings is provided on each Work Order.</p> <p>NOTE: You must be a trained electrical worker and have completed all required courses in Training Plan #2876 to conduct this step.</p> <p>If not already installed, install and hook up the charged battery.</p> <p>If a battery is already in place, use the voltage tester to check for minimum voltage of 11.7 volts. If the voltage is lower, replace the battery with a charged battery.</p>
3	Turn the sampler ON. "Program halted" will be displayed; press the Enter/Program button to enter program/configure sequence.
4	Check the configuration and programming parameters to ensure they are still correct for the specific installation (see Attachment 4 and 5 for the correct parameters).
5	Check integrity and condition of sampler tubing, actuator, wiring, etc., to ensure sampler will properly collect a sample.

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6	To test the integrity of the tubing, press "Pump forward" to turn on pump and test for suction at the tubing intake. Press "Stop" to turn off pump. If no suction is felt at the intake, check the integrity of the tubing and replace as necessary.
7	To activate the sampler, press "Start sampling" and "Enter" twice.
8	Ensure the sampler indicates "Sampler Inhibited".
9	Complete the responses for the sampler activation tasks listed on the Work Order. Sign and date the Work Order and ensure all items contained within it have been completed.

5.6 CONFIGURING ISCO AVALANCHE SAMPLERS

Step	Action
1	When a new ISCO Avalanche sampler is being installed, configure the sampler in accordance with the steps contained in this section. Follow the project-specific configuration settings as indicated on the work order and given in Attachment 8, ISCO Avalanche Configuration Settings.
2	Turn on the sampler by pressing the "Standby" key.
3	From the main menu, select Other Functions, to access the menus and select options given in Attachment 8.
4	Set the configuration parameters in accordance with the guidance on Attachment 8, ISCO Avalanche Configuration Settings.
5	After the programming is complete, select "Run diagnostics" and press "Enter" to run the system diagnostic test. These include the following: <ul style="list-style-type: none"> • RAM and ROM test • Pump test ("ON/OFF" ratio should be between 0.80 and 1.25 for a successful test) • Distributor test -- select "YES" to run test. Test will move the distributor to Position 14 and then return it to Position 1.
6	Following the diagnostic tests, "Reinitialize Controller" will be displayed. Select "No" and press the "Enter" key. (If "Yes" is selected, the sampler will reset a number of configuration and program settings to the factory default values).
7	If a 700 series module (e.g., pH) is to be installed, consult the equipment manufacturer's manual for installation instructions. NOTE: The pH module is only required at the Asphalt Batch Plant.
8	Complete the responses for the sampler installation tasks listed on the Work Order. Sign and date the Work Order and ensure all items contained within it have been completed.

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5.7 PROGRAMMING ISCO AVALANCHE SAMPLERS

Step	Action
1	Follow the steps in this process to program a new ISCO or to confirm the program settings are correct for a specific location and bottle configuration. Follow the project-specific program settings as indicated on the work order and given in Attachment 8; ISCO Avalanche Program Sequence.
2	Turn on the sampler by pressing the "Standby" key.
3	Press the "Program" button.
4	Select the current program to review settings, or choose "Select New Program" to create a new program with different settings.
5	Select the current program to review settings, or choose "Select New Program" to create a new program with different settings.
6	At the prompt "Programming complete, run this program now?", select "Yes" if sampler is scheduled to be active, and "No" if sampler is in stand down.
7	Set switch on actuator to "Latch."
8	Complete the responses for the sampler installation tasks listed on the Work Order. Sign and date the Work Order and ensure all items within it have been completed.

5.8 ACTIVATING ISCO AVALANCHE SAMPLERS

Step	Action
1	Follow the steps in this section when a Work Order is received to activate a sampler (generally at the beginning of a field season or at the beginning of the next quarter after the last quarterly monitoring sample was obtained). Note: The MSGP monitoring quarters are as follows <ul style="list-style-type: none"> • April 1 through May 31 • June 1 through July 31 • August 1 through September 30, and • October 1, through November 30.
2	NOTE: You must be a trained electrical worker and have completed all required courses in Training Plan #2876 to conduct this step. If not already installed, install and hook up the charged battery(ies). If a battery is already in place, use the voltage tester to check for minimum voltage of 11.7 volts. If the voltage is lower, replace the battery with a charged battery.
3	Turn on sampler power. From the main menu, select "Program" and the "Enter" key to enter programming sequence, and "Other Functions" to enter the configuration settings.
4	Check the programming/configuration parameters to ensure they are still correct for the specific installation – follow the two preceding sections for the steps and see Attachment 7 and 8 for the correct parameters.
5	Check integrity and condition of sampling tubes, actuator, wiring, etc., to ensure sampler

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	will properly collect a sample.
6	From the main menu, select "Other Functions" ► "Manual Functions" ► "Operate Pump" to perform a manual suction test. To test the integrity of the tubing, press "Pump forward" to turn on pump and test for suction at the tubing intake. Press "Stop" to turn off pump. If no suction is felt at the intake, check the integrity of the tubing and replace as necessary.
7	Reset the actuator by toggling the switch to "Reset" then back to "Latch." To activate the sampler, ensure the correct program name is displayed on the main menu and select "Run".
8	Ensure the sampler indicates "Program Disabled".
9	Note: The Avalanche refrigeration system is active any time the controller is powered. This is true for all states (including OFF), except for the time between entering RUN and the completion of the first sample, and when the pump is running. To conserve power, the Avalanche assumes that during this time there is no sample liquid to cool.
10	Ensure that all items on the Work Order have been completed.

5.9 STANDING DOWN OR WINTERIZING SAMPLERS

Step	Action
1	Follow the steps in this section when a Work Order is received to turn off ("stand down") a sampler (generally at the end of a field season, which is November 30, or to disable a sampler for a certain time period after a sample was collected). Fill out the LANL MSGP ISCO Sampler Winter Shut-Down Form in Attachment 9.
2	ISCO 3700: Turn off power. ISCO Avalanche: The Avalanche refrigeration system is active any time the controller is powered. This is true for all states (including OFF), except for the time between entering RUN and the completion of the first sample, and when the pump is running. To conserve power, the Avalanche assumes that during this time there is no sample liquid to cool. NOTE: To ensure that the refrigeration system does not activate during an intended stand down, disconnect the sampler from the power source.
3	Remove the battery and return it to the storage compound at TA-64 or other specified location identified by ENV-CP MSGP stormwater compliance personnel. Store cables inside the Greenlee™ box. If the actuator and tubing are not contained within conduit, disconnect these and place them in the box. Close sampler. Avalanche samplers must not be left in place for the winter, and are required to be returned to ENV-CP's storage shed.
4	Ensure that all items on the Work Order have been completed.

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5.10 SAMPLER RESET AND RE-INITIALIZATION AFTER SAMPLE COLLECTION

Step	Action
1	Follow ENV-CP-QP-047, Inspecting Storm Water Runoff Samplers and Retrieving Samples for the MSGP for collecting samples from an ISCO and installing new bottles so it is ready to collect new samples.
2	<p>After collecting samples and resetting the sampler, follow instructions on sample collection Work Order, the updated sample tracking log or confer with the MSGP Project Lead regarding whether the sampler should be disabled.</p> <p>If sampler is to be deactivated, follow the steps specific to each sampler provided in the preceding section.</p> <p>If an ISCO 3700 sampler is to be left activated, reset the actuator by toggling the switch to "Reset" then back to "Latch", and press "Start sampling" and "Enter" twice. Ensure the sampler display indicates "Sampler Inhibited".</p> <p>If an ISCO Avalanche sampler is to be left activated, reset the actuator by toggling the switch to "Reset" then back to "Latch." From the main menu, verify the correct program name is displayed and select "Run." Ensure the sampler display indicates "Program Disabled."</p>

5.11 REMOVING A SAMPLER

Step	Action
1	Follow the steps in this process when a Work Order is received to un-install or remove a sampler. Fill out the LANL MSGP ISCO Sampler Decommission Form in Attachment 10.
2	Disconnect all equipment and remove it from the site. Return the equipment to the ENV-CP Storage Shed or other location specified by MSGP storm water compliance personnel.
3	Dispose of all equipment components that contacted samples (tubing, bottles, etc.) as waste according to applicable waste management procedure. For assistance, contact the Waste Management Coordinator for TA-59.
4	Ensure that all items on the Work Order have been completed.

6.0 REFERENCES

ENV-DO-QP-110, *Records Management Program*

ENV-DO-QP-115, *Personnel Training*

ENV-CP-QP-047, *Inspecting Storm Water Runoff Samplers and Retrieving Samples for the MSGP*

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7.0 DEFINITIONS

ENV-CP: Environmental Protection Division, Compliance Programs Group

Grab Sample: A single sample collected at an NPDES outfall (using approved EPA methods) at a particular time that represents the composition of the storm water at that time and place.

IWD: Integrated Work Document

MSGP: Multi-Sector General Permit

MST: Mountain Standard Time

NPDES: National Pollutant Discharge Elimination System

8.0 ATTACHMENTS

Attachment 1- LANL MSGP ISCO Sampler Installation Form 045-1

Attachment 2- Wiring Diagram for Avalanche Sampler

Attachment 3 – Battery Photovoltaic Connection Wiring

Attachment 4 - ISCO 3700 Configuration Settings

Attachment 5 – ISCO 3700 Program Sequence

Attachment 6 – LANL MSGP ISCO Sampler Activation Form 045-3

Attachment 7 – ISCO Avalanche Configuration Settings

Attachment 8 – ISCO Avalanche Program Sequence

Attachment 9 – LANL MSGP ISCO Sampler Winter Shut-Down Form 045-5

Attachment 10 – LANL MSGP ISCO Sampler Decommission Form 045-6

By requesting credit for this required reading I acknowledge that I have read and understand the contents of this document and I will follow and meet the requirements in this document unless it is unsafe to do so.

Click to
Acknowledge

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ATTACHMENT 1- LANL MSGP ISCO SAMPLER INSTALLATION FORM 045-1

ENV-QP-045.0

LANL Multi-Sector General Permit
ISCO Sampler Installation Form

Form 045-1 (3/2011)

Outfall: 54-G-4 : 54-PAD10E

Project ID: P-MSGP-2443

Work Order ID: MSGP-31193

Target Date: 4/1/2013

Project: MSGP 2013 Sampler Install

Reason: MSGP 2013 Sampler Installation

Date: _____ Time: _____

Name/Z#: _____

Name/Z#: _____

Lead Signature: _____

"I confirm the information as recorded is true, accurate and complete."

Verify the equipment list below. Make corrections as required and fill in missing information (e.g., serial numbers).

Equipment	Manufacturer	Model	Serial No.	Specification	Configuration
Actuator	ISCO	1640	210J01660		
Charge Controller	Xantrex	C-12	B20037667		
ISCO 3700 Sampler	Teledyne	3700	198H00978	Bottle Set	12c- 1 1L Glass, 11 1L Poly
ISCO 3700 Sampler	Teledyne	3700	198H00978	Program	Time / Multiplex no delay
ISCO Avalanche Sampler	Teledyne	Avalanche	210J00066	Bottle Set	14 950 mL Poly
ISCO Avalanche Sampler	Teledyne	Avalanche	210J00066	Program	1-Part, 14 Bottles, 950 mL
Pb-Acid Battery	Universal	110 A-h	MSGP-110-0311-07	Voltage	> 11.7 V
Pb-Acid Battery	Universal	110 A-h	MSGP-110-0311-08	Voltage	> 11.7 V
Pb-Acid Battery	Universal	110 A-h	MSGP-110-0311-09	Voltage	> 11.7 V
Solar Panel	SunWize	SW-S85P	11004467		

ISCO Sampler Tasks

Note: If "No" provide correct information or explanation.

Deploy battery(ies) if not listed in equipment list above. Record serial numbers of battery(ies) installed.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Deploy Avalanche sampler matching serial number listed in equipment list above for installation.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Deploy and install pH and Temperature Probe listed in equipment list above and probe saturation reservoir.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Refer to the wiring diagram in ENV-QP-045.0 for the solar panel, battery configuration, and type of sampler being installed. Has wiring been completed according to instructions?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is the sampler installed according to steps in ENV-QP-045.0?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is a Greenlee box used?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are electrical connections secure?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Record battery voltage(s). Voltage(s) > 11.7 V?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is the sampler physically configured for the types and number of bottles specified above (i.e., correct carousel, base, arm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is the sampler programmed correctly per ENV-QP-045.0 for the program / bottle set specified above?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does sampler pass the ISCO diagnostics test?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does sample tubing pass suction test?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is sampler ON upon departure?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does ISCO display either "Sampler Inhibited" or "Program Disabled"?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Has the actuator switch been reset to "Latch"?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If any maintenance completed, check YES and describe.	<input type="checkbox"/> Yes <input type="checkbox"/> No
If any follow-on maintenance is required, check YES and describe.	<input type="checkbox"/> Yes <input type="checkbox"/> No

LANL PERSONNEL USE ONLY (Initials and dates)

Accepted	Tech QC	ENV-RCRA Review
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M5GF SAMPLER
REV. 1
LIGHTNING PROTECTION HIGHLY RECOMMENDED

(+ earth)
10AWG WIRE FOR LONG RUNS
F5 SW-2
PV +
LOAD +
BATT -
SW-2
C.I.2 CONTROLLER
F4
F3
F2
F1
BATT-1 750W-3
BATT-2 4A
PV-1 12Vdc terminal
MFR TERMINATED CABLE IS FUSED AT OTHER END
TERMINATED SAMPLE LINE
SW-2
SW-2

F1 → 15A (32Vdc MIN RATING)
F2 → 10A "
F3 → 10A "
F4 → 10A "
F5 → 15A (32Vdc MIN. RATING)

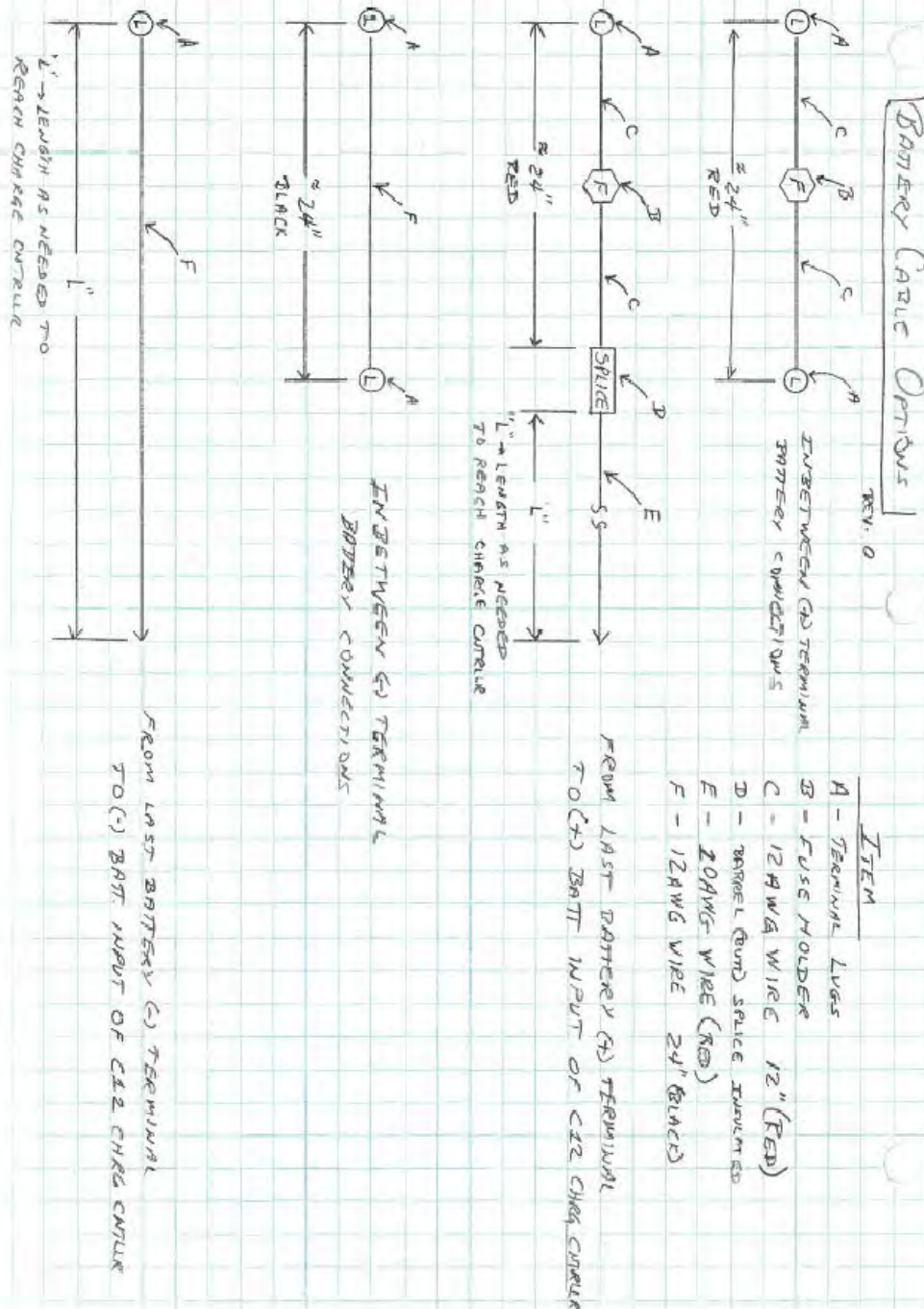
SW1, SW2, some form of knife-blade or toggle switch recommended.
32Vdc MIN. FOR DISCONNECT PURPOSES.

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ATTACHMENT 4 - ISCO 3700 CONFIGURATION SETTINGS

Parameter	Storm sampling with multiplex, timed delay	Time sampling with multiplex	Flow sampling with multiplex
Time/ Date	[Set to MST]	[Set to MST]	[Set to MST]
Portable/ Refrig	Portable	Portable	Portable
Bottles	12 or 24	12 or 24	12 or 24
Bottle volume	950 ml	1000 ml	1000 ml
Suction line diameter	3/8 inch	3/8 inch	3/8 inch
Suction line type	Teflon	Teflon	Teflon
Suction line length	X feet	X feet	X feet
Liquid detector	Enable	Enable	Enable
Rinse cycles	0	1	1
Enter Head Manually	No	Yes	Yes
Retry	1	1	1
Program mode	Extended	Basic	Basic
Load program	None	N/A	N/A
Save program as	None	N/A	N/A
Take sample at start time	No	N/A	N/A
Take sample at time switch	No	N/A	N/A
Enter intervals in minutes	1 minute	N/A	N/A
Calibrate sampler	Disable	Enable	Enable
Sampling stop/resume	Disable	N/A	N/A
Start time delay	0 minutes	0 minutes	0 minutes
Master slave	No	No	No
Sample upon Disable	No	No	No
Sample upon enable	No	Yes	Yes
Reset sample interval	Yes	Yes	No
Inhibit countdown	Yes	Yes	No
Event marker	Pulse	Pulse	Pulse
At the beginning of:	Purge	Purge	Purge
Purge counts presample counts	150	100	100
Post sample counts	394	1000	1000
Pump counts	[500,000]	[500,000]	[500,000]
Reset pump counter	No	No	No
Pump counts to warning	500,000	500,000	500,000
Program lock	Disable	Disable	Disable
Sampler ID number is:	[leave blank]	[leave blank]	[leave blank]
Run diagnostics	Yes	Yes	Yes
Test distributor	Yes	Yes	Yes
Re-initialize	No	No	No

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ATTACHMENT 5 – ISCO 3700 PROGRAM SEQUENCE

Parameter	Storm sampling with multiplex, timed delay
[Switch on liquid actuator]	Set to “Latch”
Paced sampling	Storm
Time Mode 1st Bottle Group	X-minute delay
Timed Sample Event	1
Bottle per sample event	11 or 23
Sample volume	950 ml
Bottles available	1
2 nd bottle group	Time
2 nd group samples	1-minute delay
Sample interval	1 minute
Bottles per sampling event	1
Sample per bottle	1
Sample volume	950 ml
Enter start time	No

[Programming complete]

Parameter	Time sampling with multiplex
[Switch on liquid actuator]	Set to “Latch”
Time/Flow	Time
Min/Hr	1 min
Multiplex samples	Yes
Bottles/sample or Samples/Bottle	Bottles/ sample
Number of bottles	12 or 24
Sample volume	1000 ml
Suction head	XX Ft
Calibrate sample vol	No
Enter start time	No

[Programming complete]

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Avalanche Program Sequence, cont.

Parameter	Time sampling, single bottle composite sample	Time sampling, 1-part program	Time sampling, 2-part program
Two-Part Program			
Part A	N/A	N/A	Yes
Assign bottle	N/A	N/A	1-X of 4 or 14
Pacing	N/A	N/A	Uniform time paced
Time between samples	N/A	N/A	1 minute
Distribution	N/A	N/A	Sequential
Bottles per event	N/A	N/A	1
Switch bottles on	N/A	N/A	Number of samples
Switch bottles every X samples	N/A	N/A	1
Run continuously	N/A	N/A	No
Sample volumes dependent on flow?	N/A	N/A	No
Sample volume	N/A	N/A	Select between 10 ml and full container volume
Enable programmed	N/A	N/A	None
Once enabled, stay enabled	N/A	N/A	Yes
Sample at enable	N/A	N/A	Yes
Sample at disable	N/A	N/A	No
Pauses and resumes	N/A	N/A	0
Part B	N/A	N/A	Yes
Pacing	N/A		Uniform time paced
Time between sample events	N/A	N/A	1 minute
Distribution	N/A	N/A	Sequential
Bottles per event	N/A	N/A	1
Switch bottles on	N/A	N/A	Number of samples
Switch bottles every X samples	N/A	N/A	1
Run continuously	N/A	N/A	No
Sample volumes dependent on flow?	N/A	N/A	No
Sample volume	N/A	N/A	Select between 10 ml and full container volume
Enable programmed	N/A	N/A	No

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Avalanche Program Sequence, cont.

Parameter	Time sampling, single bottle composite sample	Time sampling, 1-part program	Time sampling, 2-part program
Once enabled, stay enabled	N/A	N/A	Yes
Sample at disable	N/A	N/A	No
Sample at enable	N/A	N/A	Yes
Once enabled, stay enabled	N/A	N/A	Yes
Pauses and resumes	N/A	N/A	0
Delay to start	N/A	N/A	No
Reset Sampler			
Switch on liquid actuator	Toggle to "Reset" then back to "Latch"	Toggle to "Reset" then back to "Latch"	Toggle to "Reset" then back to "Latch"
Select Program name	Run	Run	Run

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ATTACHMENT 6 – LANL MSGP ISCO SAMPLER ACTIVATION FORM 045-3

ENV-QP-045.0

LANL Multi-Sector General Permit
ISCO Sampler Activation Form

Form 045-3 (3/2011)

Outfall: 3-PSP-5 : E121.9-ISCO 12

Project ID: P-MSGP-830

Work Order ID: MSGP-12785

Target Date: 4/11/2011

Project: MSGP Sampler Activation Q1 2011

Reason: MSGP Sampler Activation 2011 Q1

Date: _____ Time: _____

Name/Z#: _____

Name/Z#: _____

Lead Signature: _____

"I confirm the information as recorded is true, accurate and complete."

Equipment	Manufacturer	Model	Serial No.	Specification	Configuration
Actuator	ISCO	1640		Actuator Height	
ISCO Sampler 12c	Teledyne ISCO	ISCO 3700	198H01553	Bottle Set	12c- 1 1L Poly
ISCO Sampler 12c	Teledyne ISCO	ISCO 3700	198H01553	Program	Time / Multiplex no delay
Pb-Acid Battery				Voltage	> 11.7 V

ISCO Sampler Tasks	Note: If "No" provide correct information or explanation.	
Is the ISCO time delta < 1 min (MST)? If no, record adjustment.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Does sampler pass the ISCO diagnostics test?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Are electrical connections secure?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Record battery voltage(s). Is/are voltage(s) > 11.7 V?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Does ISCO display either "Bottle 1 of X after 1" or "Sampler Inhibited"?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Is bottle set described above installed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Is recorded height of actuator above channel bottom correct?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
If any maintenance completed, check Yes: Describe.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
If any follow-on maintenance is required, check Yes: Describe.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Is sampler ON upon departure?	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Additional Notes:

LANL PERSONNEL USE ONLY (Initials and dates)		
Accepted	Tech QC	RNV-RCRA Review

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ATTACHMENT 7 – ISCO AVALANCHE CONFIGURATION SETTINGS**ISCO Avalanche Configuration Settings**

Parameter	All programs
Maintenance	
Set Clock	[Set to MST]
Pump Tube Alarm	[1,000,000]
Reset pump counter	No
Run diagnostics	Yes
Re-initialize	No
Software Options	
Liquid detector	Liquid detect on
Target temperature	°C
Measurement interval	1 minute
Dual sampler mode	Off
Bottle full detect	Yes
Event mark	Every sample
Duration	3 second pulse at initial purge
Presample purge counts	100
Post sample counts	Dependent on head
Periodic serial output	No
Interrogator connector power	Alarm dial-outs only
Manual Functions	
Grab Sample	Manual option
Calibrate volume	Manual option
Operate pump	Manual option
Move distributor	Manual option
Other Settings/Misc	
Suction line diameter	3/8 inch
Suction line type	Teflon
Program lock	Disable

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ATTACHMENT 8 – ISCO AVALANCHE PROGRAM SEQUENCE

Parameter	Time sampling, single bottle composite sample	Time sampling, 1-part program	Time sampling, 2-part program
Program			
Program mode	Extended	Extended	Extended
Program name	COMPOSITE	1-PART (# bottles)	2-PART (# bottles)
Site description	Station number	Station number	Station number
Units (length)	ft	ft	ft
Units (temperature)	°C	°C	°C
Data storage interval	1 minute	1 minute	1 minute
Number of bottles	1	4 or 14	4 or 14
Bottle volume	10000 ml, 4000 ml	2000 ml, 950 ml	2000 ml, 950 ml
Suction line length	X feet	X feet	X feet
Enter Head Manually	Yes	Yes	Yes
Rinse cycles	1	1	1
Retries	1	1	1
One-Part Program			
Pacing	Uniform time paced	Uniform time paced	N/A
Time between samples	Every one minute	Every one minute	N/A
Composite	1 sample	N/A	N/A
Run continuously	No	N/A	N/A
Take X sample(s)	1	N/A	N/A
Distribution	N/A	Sequential	N/A
Volume	Select between 10 ml and full container volume	Select between 10 ml and full container volume	N/A
Sample volumes dependent on flow	No	No	N/A
Enable programmed	None	None	N/A
Once enabled, stay enabled	Yes	Yes	N/A
Sample at enable	Yes	Yes	N/A
Sample at disable	No	No	N/A
Pauses and resumes	0	0	N/A
Delay to start	No	No	N/A

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ATTACHMENT 9 – LANL MSGP ISCO SAMPLER WINTER SHUT-DOWN FORM 045-5

ENV-QP-045.0

**LANL Multi-Sector General Permit
ISCO Sampler Winter Shutdown Form**

Form 045-5 (3/2011)

Outfall: 3-PSP-5 : E121.9-ISCO 12

Project ID: P-MSGP-833

Work Order ID: MSGP-12803

Target Date: 11/30/2011

Project: MSGP ISCO Sampler Winter Shutdown

Reason: MSGP Sampler Winter Shutdown 2011

Date: _____	Time: _____
Name/Z#: _____	
Name/Z#: _____	
Lead Signature: _____	
*I confirm the information as recorded is true, accurate and complete *	

Verify the equipment list below. Make corrections as required and fill in missing information (e.g., serial numbers).

Equipment	Manufacturer	Model	Serial No.	Specification	Configuration
Actuator	ISCO	1640		Actuator Height	
ISCO Sampler 12c	Teledyne ISCO	ISCO 3700	198H01553	Bottle Set	12c- 1 1L Poly
ISCO Sampler 12c	Teledyne ISCO	ISCO 3700	198H01553	Program	Time / Multiplex no delay
Pb-Acid Battery				Voltage	> 11.7 V

ISCO Sampler Tasks	Note: If "No" provide correct information or explanation	
Turn ISCO unit "OFF."	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Place caps securely on bottles in the sample carousel.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Verify equipment list above.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
ISCO 3700 Sampler Units		
Disconnect and remove battery. Transport battery to MSGP stockroom for maintenance and storage.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Place battery cables securely inside Greenlee box or ISCO casing.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Pull up actuator and tubing and store in Greenlee box or ISCO casing.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Avalanche ISCO Sampler Units:		
Disconnect and remove batteries. Transport batteries to MSGP stockroom for maintenance and storage.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Place battery cables securely inside Greenlee box or ISCO casing.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Pull up actuator and tubing and store inside Greenlee box or ISCO casing.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Transport Avalanche sampler to MSGP stockroom for maintenance and storage.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Additional Notes:

LANL PERSONNEL USE ONLY (Initials and dates)		
Accepted _____	Tech QC _____	ENV-RCRA Review _____

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ATTACHMENT 10 – LANL MSGP ISCO SAMPLER DECOMMISSION FORM 045-6

ENV-QP-045.0

**LANL Multi-Sector General Permit
ISCO Sampler Decommission Form**

Form 045-6 (3/2011)

Outfall: 3-PSP-5 : E121.9-ISCO 12

Project ID: P-MSGP-834

Work Order ID: MSGP-12804

Target Date: 7/27/2011

Project: MSGP Sampler Station Decommission

Reason: MSGP Sampler Decommission

Date: _____ Time: _____

Name/Z#: _____

Name/Z#: _____

Lead Signature: _____

I confirm the information as recorded is true, accurate and complete.

Verify the equipment list below. Make corrections as required and fill in missing information (e.g., serial numbers).

Equipment	Manufacturer	Model	Serial No.	Specification	Configuration
Actuator	ISCO	1640		Actuator Height	
ISCO Sampler 12c	Teledyne ISCO	ISCO 3700	198H01553	Bottle Set	12c- 1 1L Poly
ISCO Sampler 12c	Teledyne ISCO	ISCO 3700	198H01553	Program	Time / Multiplex no delay
Pb-Acid Battery				Voltage	> 11.7 V

ISCO Sampler Tasks	Note: If "No" provide correct information or explanation.	
Is equipment list above complete and accurate?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Turn sampler "OFF." Remove bottles from carousel.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Disconnect and remove battery(ies), solar panel, and cables (as applicable).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Pull up actuator and tubing. Disconnect from sampler unit.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Uninstall Greenlee box, as applicable.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Transport all removed equipment to the MSGP stockroom for maintenance and storage.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Additional Notes:

LANL PERSONNEL USE ONLY (Initials and dates)		
Accepted _____	Tech QC _____	ENV-RCRA Review _____

ENV-RCRA-QP-047.1

Effective Date: May 14, 2013

Next Review Date: April 14, 2015

Environment, Safety, Health Directorate**Environmental Protection – Water Quality and RCRA
Quality Procedure****Inspecting Storm Water Runoff Samplers and
Retrieving Samples for the MSGP****Reviewers:**

Name:	Organization:	Signature:	Date:
Melanie Lamb	ENV-QPMO QA Specialist	Signature on file	3/7/13

Derivative Classifier: ☒ **Unclassified** ☐ **DUSA** _____

Name:	Organization:	Signature:	Date:
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Approval Signatures:

Subject Matter Expert:	Organization:	Signature:	Date:
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Responsible Line Manager:	Organization:	Signature:	Date:
Anthony Grieggs	ENV-RCRA Group Leader	Signature on file	5/14/13

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History of Revisions

Document Number <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	03/11	New Document.
1	02/13	Annual Review and Revision

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1.0 PURPOSE

This procedure describes the process for inspecting ISCO storm water runoff samplers and retrieving storm water runoff samples from all locations where the Los Alamos National Laboratory (LANL) conducts storm water sampling activities for the Multi-Sector General Permit (MSGP).

2.0 SCOPE

This procedure applies to the ENV-RCRA technical staff and subcontractor personnel conducting activities at single stage stations used for monitoring under the MSGP.

2.1 HAZARD REVIEW

Hazards in the work described in this procedure are controlled thorough site specific [IWDs](#). The hazard level of the activities in this procedure is moderate.

3.0 RESPONSIBILITIES

The following personnel require training before implementing this procedure:

- ENV-RCRA technical staff and subcontract or other personnel who inspect storm water samplers and retrieve storm water samples for the MSGP.

The training method for this procedure is “self-study” (reading). For ENV-RCRA staff, this is documented in accordance with [ENV-DO-QP-115, Personnel Training](#). Other participating groups may require training documentation pursuant to local procedures.

Actions specified within this procedure, unless proceeded with “should” or “may,” are to be considered mandatory (i.e., “shall”, “will”, “must”).

3.1 PREREQUISITES

Personnel performing this procedure will be familiar with the most current versions of the following procedures and operation manuals:

- ENV-RCRA MSGP Sampling and Analysis Plan for the current monitoring year.
- Manual for Teledyne ISCO Sampler model 3700.
- Manual for Teledyne ISCO Avalanche sampler

4.0 DOCUMENT CONTROL/RECORDS MANAGEMENT

The following records are generated as a result of this procedure and are maintained in accordance with [ENV-DO-QP-110, Records Management Program](#) with the originals on file at ENV-RCRA offices:

- Completed work order for ISCO Sampler Inspection and Sample Retrieval and Collection forms (example in Attachment 2).

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5.0 WORK PROCESSES

ISCO samplers are used to collect storm water runoff for Multi-Sector General Permit (MSGP) Program stations. ISCOs are designed to automatically collect water when the water surface is high enough to trigger the actuator and fill the sample bottles. Field personnel are required to inspect the sampling station while retrieving water samples and at other intervals determined by the project or as directed by work orders issued by project personnel.

A LANL Project Leader is the primary person with responsibility for the steps in this procedure. ENV-RCRA personnel will be appointed with responsibility for a subset of sampling stations.

If subsequent rain events occur before all sampler locations have been visited after the first rain event, finish the route to collect the first-event samples (safety permitting).

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 floods, flooding, lightning, wildfires, hail, icy roads, deep snow, and LANL operations such as shots or burns at the OBOD sites).

5.1 EQUIPMENT AND TOOLS

Ensure the following equipment is available in the field vehicle:

- Copy of this procedure
- Copy of the Integrated Work Documents (IWDs)
- Charged spare battery(ies)
- Battery voltage tester
- Spare tubing (pump, suction, discharge types, sampler specific)
- Spare/replacement sample bottles (glass and poly)
- Shovel
- Wooden stakes
- Plastic wire "zip" ties
- Cell phone (only government cell phones with batteries removed are allowed in secure areas)
- Appropriate tools in tool box
- Issued Work Orders and associated forms
- Necessary access and station keys
- Coolers with ice or Blue Ice®
- Expanded Site Field Maps
- Nitrile gloves
- Paper Towels
- Marker pen (permanent, waterproof)
- Ball point pen
- Zip lock bags
- Safety glasses with side shields
- Chain of custody seals
- Sturdy hiking boots or steel toed shoes with soles that grip

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5.2 PREPARING FOR FIELDWORK

Once the work orders have been approved, the following steps should be followed to prepare for fieldwork:

Step	Action
1	Receipt of a work order indicates that sampler inspections have been approved by the LANL Project Leader. Schedule work to be completed by the target date appearing on the work order(s).
2	Distribute work order(s) to field personnel. A sample Work Order form is provided in Attachment 1, ISCO Sampler Inspection and Sample Retrieval Form.
3	Inform (e.g., by e-mail) the Field Operations designee, 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.
4	For work at sites operated by Weapons Facility Operations or Nuclear Environmental Sites, notify the appropriate access control before traveling to those sites. The IWD Part II (2101 Form) addresses specific requirements and training for these sites.
5	Obtain any necessary additional paperwork before conducting this work, including IWD's, and excavation permits (if necessary).
6	Gather the required equipment (see section above) for the work to be done.
7	Set watch(s) to the precise Mountain Standard (not daylight saving) Time. This can be done by logging on to the time page at www.time.gov (or click on the clock icon on the lab's internal home page). When at the site, the clock time on the ISCO sampler needs to be verified. Clocks must be set to Mountain Standard Time at all times, with no daylight saving time adjustment.

5.3 INSPECTING THE SAMPLER

The following table details the inspection requirements for the sampler:

Step	Action
1	If conditions prevent a sampler inspection, document the conditions on the work order and notify the Project Lead or designee within 24 hours. Multiple attempts can be documented on the original inspection work order up to the target date. After the target date, return work order to the ENV-RCRA Storm Water Data Stewards Team for reissuance (if necessary).
2	Item 1: on work order (see example in attachment 2): Enter the date and time inspection and water retrieval is performed and the name(s) and Z number(s) of the field personnel performing the work in the upper right corner of the work order.
3	Item 2: Verify and document the sampler is ON and its condition upon arrival by checking the "Yes" or "No" box. Explain any non-functional status in third column.
4	Item 3: Verify and document the ISCO programming displays by checking the "Yes" or "No" box in second column. <ul style="list-style-type: none"> For ISCO 3700 samplers = "Sampler Inhibited"

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	<p>OR</p> <ul style="list-style-type: none"> For Avalanche samplers = "Program Disabled" <p>If No, repair or describe (e.g., "Done X samples", or "sampler off", etc). If more space is needed, continue notes in the "Additional Notes" section at the bottom of the page.</p>
5	Don nitrile gloves and safety glasses.
6	Remove the lid from the sampler.
7	<p>Item 4: If water was collected, check "Yes" and collect the water according to the steps in "Retrieving Storm Water Runoff Samples" below.</p> <p>Note: Complete the required MSGP Visual Assessment form to document the water appearance (foam, sheen, etc.). Ensure this form is submitted to the appropriate MSGP project personnel (see item 11).</p> <p>If No, describe (e.g., "no water collected", "sampler off") in the third column; check "No" for Item 4.</p>
8	<p>Item 5: Verify and document the sampler is set to the correct Mountain Standard Time +/- no more than 1 minute by checking the "Yes" or "No" box in the second column. 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") in the third column.</p>
9	<p>Item 6: Review the Sampling Results report and document any error messages from the sampler display by checking the "Yes" or "No" box. If a message is displayed, record the message in the "Comments" section on page 2 next to the sample bottle being filled when the problem occurred.</p> <p>If there is no indication of flow and the sampler triggered due to a non-flow event (e.g., animal, tumbleweed), indicate this in the third column.</p>
10	<p>Item 7: For the Avalanche sampler equipped with an ISCO 701 pH Module, record the pH measurement taken at the time of Bottle 1 from the Combined Results report.</p>
11	<p>Item 8: For Avalanche samplers only, and if water was collected, check "Yes" and record the refrigerator temperature (°C) upon arrival. If no water was collected, or unable to review temperature, check "No" and describe in column 3 (e.g., no sample, dead battery).</p>
12	<p>Item 9: Verify and document whether sample volumes were retrieved by checking the "Yes" or "No" box. Refer to the volume retrieval instructions on page 2 of work order.</p> <p>Record the volume retrieved in third column.</p>
13	<p>Item 10: If water was collected, perform a visual assessment of the water using the MSGP program visual assessment form (not included in this procedure). Document whether a visual assessment was performed by checking the "Yes" or "No" box.</p>
14	<p>Item 11: Verify and document sample station equipment, model, serial number, actuator height, sampler program, and bottle configuration match the header on the work order page 1 by checking the "Yes" or "No". If they do not match the data on the work order, ensure you are at the correct location. If the location is verified, check "No" and update inaccurate information.</p>
15	<p>Item 12: Verify and document power supply function. Use the voltage tester to check the voltage of the battery and record the voltage. Check "Yes" or "No" to indicate if battery voltage is acceptable (≥ 11.7 V for non-floating charged batteries at ISCO 3700 samplers and ≥ 11.0 for floating-charged batteries at Avalanche samplers as described in ENV-RCRA-QP-045).</p>
16	<p>Item 13: Verify and document the sampler passed the diagnostics test by checking the "Yes" or "No" box. Directions for running the diagnostics test is provided in ENV-RCRA-QP-045).</p>

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	<p>If maintenance is necessary and can be performed at the time of inspection, perform the work and describe in third column.</p> <p>If maintenance cannot be completed at the time of inspection, then describe the condition and work needed in the third column.</p>
17	<p>Item 14: Verify and document the sample tubing passed a suction test by checking the "Yes" or "No" box.</p> <p>Check the condition of sample tubing and vent tubing. If maintenance (e.g., clearing the tube, replacing the tube) is necessary and can be performed at the time of inspection, perform the work and describe in third column.</p> <p>If maintenance cannot be completed at the time of inspection, then describe the condition and work needed in third column.</p>
18	<p>Item 15: Verify all cable and electrical connections are attached and secure by checking the "Yes" or "No" box.</p> <p>If maintenance (e.g., tightening connection, replacing cables) is necessary and can be performed at the time of inspection, describe the work performed in the third column. If more space is needed, continue notes in the "Additional Notes" section.</p> <p>If maintenance cannot be completed at the time of inspection, then describe the condition and work needed in the third column.</p>
19	<p>Item 16: Verify and document sampler is ON prior to departing the site by checking the "Yes" or "No" box. If the sampler is not on, document the reason.</p>
20	<p>Item 17: If the sampler tripped and requires reset of the sampling program, reset the actuator by toggling the switch to "Reset" then back to "Latch"</p> <ul style="list-style-type: none"> • Verify and document the ISCO programming displays the following by checking the "Yes" or "No" box in column 2, page 1. • ISCO 3700 stand-alone samplers = "Sampler Inhibited" <p>OR</p> <ul style="list-style-type: none"> • Avalanche samplers = "Program Disabled" <p>If an error occurs, reconfigure the sampler (see ENV-RCRA-QP-045 for settings)</p>
21	<p>Item 18: Verify and document any maintenance completed while on site. Describe the work performed or indicate "none completed" in third column.</p> <p>Maintenance items may include (but are not limited to) battery replacement, tubing clearing or replacement, site clearing, securing electrical connections, or sampler diagnostics or repair.</p>
22	<p>Item 19: Verify and document any follow-on maintenance needed that could not be completed while on site. Describe the needed maintenance in the third column. If more space is needed, continue notes in the "Additional Notes" section. A separate work order for the station maintenance will be issued.</p> <p>If no follow-on maintenance is required, indicate "none required" in third column.</p> <p>Maintenance items may include (but are not limited to) battery replacement, tubing clearing or replacement, site clearing, securing electrical connections, or sampler diagnostics or repair.</p>
23	<p>Item 20: If no storm water samples were collected by the sampler, draw a line through page 2 of the work order, initial, and date.</p> <p>If storm water samples were collected by the sampler, skip to "Retrieving storm water runoff"</p>

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	samples" section.
24	Replace and secure the sampler lid and secure the sampler shelter (if sampler is in a shelter).
25	Review the completed work order(s) for accuracy and completeness and sign and date "Review by Signature" line on page 2 of work order.
26	Item 21: Review the work order(s) for accuracy and certify that the information submitted is "true, accurate, and complete" by signing and dating "Lead Signature" line on page 1.
27	Return completed original work orders to the Project Leader the same day following completion of field work. If original work orders must remain with collected samples, return photocopies of incomplete work orders to the Project Leader the same day field work is completed. Stamp or write "Copy" on the work order returned.

5.4 RETRIEVING SAMPLES

The following steps should be followed when retrieving samples:

Step	Action
1	Don nitrile gloves and safety glasses.
2	<p>See flow chart in Attachment 1.</p> <p>Item 5: Refer to the "Earliest Sample Collect Date" on work order.</p> <p>If the "Earliest Sample Collect Date" field is empty OR the ISCO sample collection date is ON or AFTER that date, samples may be retrieved per the volume requirements given on the work order. Continue with next step below.</p> <p>If the ISCO sample collection date is BEFORE the "Earliest Sample Collect Date":</p> <ul style="list-style-type: none"> • Indicate "non-qualifying storm event" in Item 5 third column. • Discard the collected sample water on the ground. • Skip to Step 10 below.
3	Remove filled and partially-filled bottles from the carousel.
4	<p>Add up the total volume of water collected and check that the collected volume of water in glass and poly matches the required volume in the header of the work order page 2. The volume of water required to complete a sample set may vary. Retrieval of partial volume is allowed as long as the minimum specified volume is met.</p> <p>For "<u>Partial Volume Retrieval Allowed, Minimum Volume NOT Met</u>" samplers:</p> <p>If sample volume was sufficient, continue with next step 5 below.</p> <p>If sample volume was NOT sufficient:</p> <ul style="list-style-type: none"> • Record the date and time the ISCO collected water in each glass and poly bottle by the position number in the carousel in Item 21. • Record total volume retrieved as "0" in Item 22. • Pour out all water on the ground. • Skip to step 11 below. <p>For "<u>Partial Volume Retrieval Allowed, Minimum Volume Met</u>" samplers:</p> <ul style="list-style-type: none"> • Record the date and time the ISCO collected water in each glass and poly bottle by the position number in the carousel on Item 21 of page 2

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	<ul style="list-style-type: none"> Record the specific ISCO displayed message for each bottle, if present, in the "Comments" column on Item 21. Record total volume retrieved in Item 22. Skip to step 11 below.
5	For samples retrieved, place lids onto the sample bottles with storm water.
6	Write the date and time collected, Station Number, and the corresponding carousel number on each retrieved sample bottle. Obtain the sample collection date and time from the ISCO sampler.
7	Item 21: Record the date and time the ISCO collected water in each glass and poly bottle by the position number in the carousel. Record the specific ISCO displayed message for each bottle, if present, in the "Comments" column.
8	Item 22: For "Partial Volume Retrieval Allowed, Minimum Volume NOT Met" samplers, if sample volume was NOT sufficient, record the total volume retrieved as "0" and discard sample water on ground. For "Partial Volume Retrieval Allowed" samplers, record the total volume retrieved.
9	Place retrieved sample bottles in a cooler with blue ice (or equivalent).
10	Return any excess water or collected volume that exceeded the amount required to the ground.
11	Install new sample bottles in the carousel for the next sampling event. The number and type of bottles may vary. Ensure bottles match the configuration specified on page 1 of the work order.
12	Item 23; Document any additional notes or site information in the "Additional Notes" section.
13	Return to steps in "Inspecting the Sampler" above.

5.5 DELIVERING SAMPLES

The following steps should be followed when delivering samples:

Step	Action
1	If samples were collected, deliver the samples, and completed, reviewed, and signed work order to the Storm Water Program Laboratory.
2	Item 25: Relinquish samples to MSGP personnel by signing "Relinquished By" or if self processed, refer to ENV-RCRA-QP-048, Processing MSGP Storm Water Samples.
3	Place samples in the refrigerators in the laboratory within the basement of TA-59-1 and lock the refrigerator to prevent tampering.

6.0 REFERENCES

None

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7.0 DEFINITIONS

None

8.0 ATTACHMENTS

Attachment 1- Flow Chart for Sample Retrieval

Attachment 2- ISCO Sampler Inspection and Sample Retrieval Form

By requesting credit for this required reading I acknowledge that I have read and understand the contents of this document and I will follow and meet the requirements in this document unless it is unsafe to do so.

[Click to Acknowledge](#)

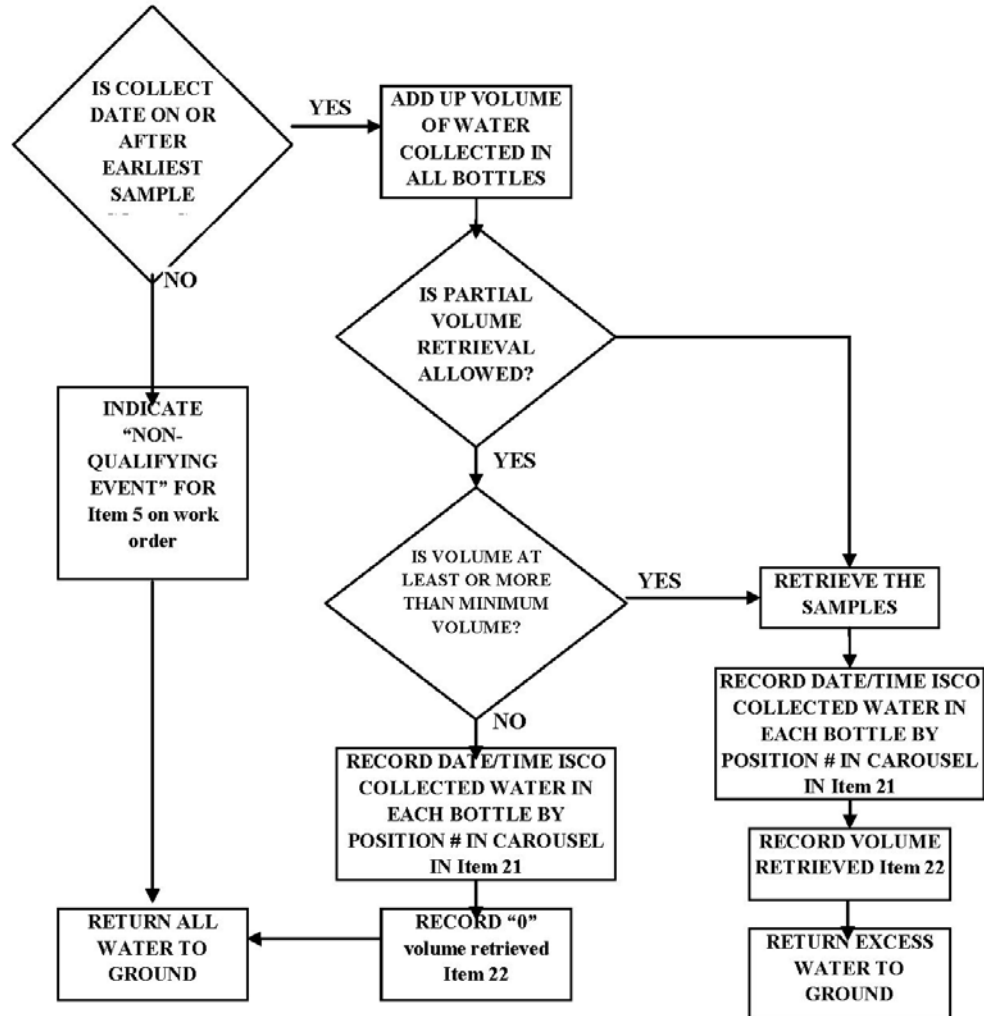
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ATTACHMENT 1- FLOW CHART FOR SAMPLE RETRIEVAL



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ATTACHMENT 2- ISCO SAMPLER INSPECTION AND SAMPLE RETRIEVAL FORM

ENV-QP-047.0

LANL Multi-Sector General Permit
ISCO Sampler Inspection and Sample Retrieval Form

Form 047-1 (3/2011)

Outfall: 3-MFS-1 : 03-0038W

Project ID: P-MSGP-2046

Work Order ID: MSGP-26090

Target Date: 9/30/2012 Project: MSGP Q3 Sampler Inspection & Retrieval Reason: MSGP ISCO Sampler Inspection - Sample Retrieval Earliest Sample Collect Date: 8/1/2012	Date: _____ Time: _____ Name/Z#: _____ Name/Z#: _____ Lead Signature: _____ "I confirm the information as recorded is true, accurate and complete."
--	---

Equipment	Manufacturer	Model	Serial No.	Specification	Configuration
Actuator	ISCO	1640	210J01655	Actuator Height	2"
ISCO 3700 Sampler	Teledyne	3700	209H01284	Bottle Set	12x 1 L Glass, 11 1L Poly
ISCO 3700 Sampler	Teledyne	3700	209H01284	Program	Storm / Multiplex 10 min delay
Pb-Acid Battery	MK Powerd	110 A-h	MSGP-110-0310-06	Voltage	> 11.7 V

ISCO Sampler Inspection Tasks	Note: If "No", provide explanation and/or correct information.
ON ARRIVAL	
Is sampler ON and functioning properly upon arrival?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does ISCO display either "Sampler Inhibited" or "Program Disabled" ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is ISCO time delta < 1 min (MST)? If NO, record adjustment.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is any water collected? If YES, complete Page 2.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does the Sampling Results report indicate any error messages(s)? If YES, record error message(s) in the applicable Bottle Comment field on Page 2.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is any water collected on or after the "Earliest Sample Collect Date"?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Was sample volume retrieved?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Was a Visual Assessment performed? If YES, complete the MSGP Visual Assessment form (ENV-RCRA-QP-064.0 Alt. 1).	<input type="checkbox"/> Yes <input type="checkbox"/> No
ON DEPARTURE	
Is the equipment information listed above, including specifications, correct?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are electrical connections secure?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Record battery voltage(s). Voltage(s) > 11.7 V ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does the ISCO diagnostics test pass?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does sample tubing pass suction test?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is sampler ON upon departure?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Has the actuator switch been reset to "Latch"?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does ISCO display either "Sampler Inhibited" or "Program Disabled"?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If any maintenance completed during inspection, check YES and describe.	<input type="checkbox"/> Yes <input type="checkbox"/> No
If any follow-on maintenance is required, check YES and describe.	<input type="checkbox"/> Yes <input type="checkbox"/> No

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ENV-QP-047.0

**LANL Multi-Sector General Permit
ISCO Sampler Inspection and Sample Retrieval Form**

Form 047-1 (3/2011)

Outfall: **3-MFS-1 : 03-0038W**Project ID: **P-MSGP-2046**Work Order ID: **MSGP-26090**

Complete if sample bottles contain water OR to record ISCO message

Sample Volume Requirements		
Bottle Type: Poly or Glass bottles	Minimum Volume (L): 0.5	Maximum Volume (L): 1

Bottle #	Bottle Type	Date:	Time (MST):	Comments
1	<input type="checkbox"/> P <input type="checkbox"/> G	/ / 2012		
2	<input type="checkbox"/> P <input type="checkbox"/> G	/ / 2012		
3	<input type="checkbox"/> P <input type="checkbox"/> G	/ / 2012		
4	<input type="checkbox"/> P <input type="checkbox"/> G	/ / 2012		
5	<input type="checkbox"/> P <input type="checkbox"/> G	/ / 2012		
6	<input type="checkbox"/> P <input type="checkbox"/> G	/ / 2012		
7	<input type="checkbox"/> P <input type="checkbox"/> G	/ / 2012		
8	<input type="checkbox"/> P <input type="checkbox"/> G	/ / 2012		
9	<input type="checkbox"/> P <input type="checkbox"/> G	/ / 2012		
10	<input type="checkbox"/> P <input type="checkbox"/> G	/ / 2012		
11	<input type="checkbox"/> P <input type="checkbox"/> G	/ / 2012		
12	<input type="checkbox"/> P <input type="checkbox"/> G	/ / 2012		
13	<input type="checkbox"/> P <input type="checkbox"/> G	/ / 2012		
14	<input type="checkbox"/> P <input type="checkbox"/> G	/ / 2012		

Total Volume Retrieved (liters):	Poly	Glass
----------------------------------	------	-------

Relinquished by Signature	Date:	Time:	Received by Signature	Date:	Time:

Additional Notes:

LANL PERSONNEL USE ONLY (Initials and dates)		
Accepted	Tech QC	ENV-RCRA Review

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ENV-CP-QP-048.1Effective Date: September 5,
2013Next Review Date: August 5,
2015**Environment, Safety, Health Directorate****Environmental Protection – Compliance Programs
Quality Procedure****Processing MSGP Stormwater Samples****Reviewers:**

Name:	Organization:	Signature:	Date:
Melanie Lamb	ADESH-OIO, QA Specialist	Signature on file	8/28/13

Derivative Classifier: ☐ Unclassified ☒ DUSA ENVPRO

Name:	Organization:	Signature:	Date:
Ellena Martinez	ADESH-OIO	Signature on file	8/29/13

Approval Signatures:

Subject Matter Expert:	Organization:	Signature:	Date:
Holly Wheeler	ENV-CP	Signature on file	8/29/13
Responsible Line Manager:	Organization:	Signature:	Date:
Michael Saladen	ENV-CP Team Lead	Signature on file	8/29/13
Responsible Line Manager:	Organization:	Signature:	Date:
Anthony Grieggs	ENV-CP Group Leader	Signature on file	9/5/13

CONTROLLED DOCUMENT

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Users are responsible for ensuring they work to the latest approved version

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History of Revisions

Document Number <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	07/11	New Document.
1	09/13	Annual Review and Revision, new format, process change, and new organization name.

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1.0 PURPOSE

This procedure describes the process for preserving stormwater samples for shipment to an offsite analytical laboratory.

2.0 SCOPE

This procedure applies to all LANL personnel and subcontractors who conduct chemical preservation of stormwater samples either in the stormwater Laboratory located in TA-59-1 or out in the field.

2.1 HAZARD REVIEW

The work specified in this procedure is conducted in accordance with the following integrated work documents: IWDs 007, 007a, 007b, 007c, 007d, 007e, 007f, 008, 010, 010b, and 010c. Each IWD is associated with a specific FOD depending on location of sample activity. The hazard level of this procedure is **MODERATE**.

3.0 RESPONSIBILITIES

The following personnel require training before implementing this procedure:

- ENV-CP staff and contract personnel who process Stormwater samples for the MSGP.

The training method for this procedure is “self-study” (reading). For ENV-CP staff, this is documented in accordance with [ENV-DO-QP-115, *Personnel Training*](#). Other participating groups may require training documentation pursuant to local procedures.

Actions specified within this procedure, unless preceded with “should” or “may,” are to be considered mandatory (i.e., “shall”, “will”, “must”).

3.1 PREREQUISITES

In addition to training to this procedure, the following training and data systems access is also required prior to performing this procedure:

- Personnel performing this procedure will be familiar with the most recent version of the ENV-CP MSGP Sampling and Analysis Plan.
- WES-EDA-QP-219, *Sample Control and Field Documentation*
- ENV-RCRA-QP-022, *MSGP Stormwater Corrective Action*

4.0 DOCUMENT CONTROL/RECORDS MANAGEMENT

The following records are generated as a result of this procedure and are maintained in accordance with [ENV-DO-QP-110, *Records Management Program*](#) with the originals on file at ENV-CP records room:

- Copy of the Sample Collection Log/Field Chain of Custody Form

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5.0 WORK PROCESSES

The Environmental Protection Agency (EPA) issued the National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP) on September 29, 2008. The MSGP requires LANL to monitor stormwater runoff from industrial sites relative to potential pollutants.

Stormwater samples are collected in the field either from refrigerated Avalanche™ or ISCO 3700™ automated samplers. Chemical preservation is conducted in the Stormwater Laboratory (in TA-59-01) immediately following sample collection or in the field.

A LANL Project Leader is the primary person responsible for the steps in this procedure.

The following equipment and tools are required:

- Copy of this procedure
- Copy of Integrated Work Documents (IWDs)
- Copy of the ENV-CP MSGP Sampling and Analysis Plan
- Work Orders (if issued)
- Sample Collection Log/Field Chain of Custody Form (provided by the Sample Management Office (SMO))
- Sample containers
- Sample container labels
- Necessary keys
- Safety glasses with side shields
- Nitrile gloves
- Leather gloves or equivalent work gloves
- Glass and poly bottles appropriate for samples to be collected at the site (reference sampling plan)
- Preservative
- Lids for bottles
- Teflon tubing for intake
- Tygon tubing for exhaust

5.1 PROCESSING SAMPLES

Step	Action
1	Obtain required Sample Collection Log/Field Chain of Custody Form(s) from the SMO. Collect samples and deliver them to the Water Laboratory in coolers containing Blue Ice®.
2	Double check to make sure the Location ID on the Sample Collection Log/Field Chain of Custody Form matches the sample collection station number. If preservation beyond ice is indicated on the form, obtain required preservative and sample containers for identified volume if different from the amount of sample collected. NOTE: Specific preservatives and required sample volumes are listed on the Sample Collection Log/Field Chain of Custody Form.
3	Process only one sample set (i.e., samples from one site) at a time. NOTE: Sample collection bottles are the bottles used to collect the sample in the field. Sample containers are containers/bottles that the original sample is transferred to after processing. These

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	containers are transferred to the Sample Management Office for shipment to the analytical laboratory.
4	Affix appropriate label to sample container.
5	Split up samples into appropriate sample containers.
6	Verify that the sample ID number on the container label matches the sample ID number on the Sample Collection Log/Field Chain of Custody Form

The following steps should be followed when preserving samples:

Step	Action
1	IMPORTANT: Preservation entails the addition of acid or base to a sample. Acids used include hydrochloric acid (HCl), nitric acid (HNO ₃), and sulfuric acid (H ₂ SO ₄). Bases used in preservation include sodium hydroxide (NaOH). These are all strong acids and bases that can cause severe burns. Extreme care should be taken when using these acids and bases.
2	Preserve (add acid or base) samples according to the requirements on the Sample Collection Log/Field Chain of Custody Form. NOTE: Make sure the pre-measured preservative labeled size matches the sample container size. 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.
3	Mark each container after preservative has been added to designate that the process has taken place.
4	Securely affix lid to sample container. Clean and dry the exterior of sample container, ensure lid is on securely, and check sample container for leakage and breakage.
5	Apply chain-of-custody tape around the mouth and lid of the bottle.
6	Carefully place sample containers in the cooler and package sample containers with Blue Ice®.

5.2 SUBMIT SAMPLES FOR SHIPPING

Submit samples with original Sample Collection Log/Field Chain of Custody Form to SMO for shipping to an offsite analytical laboratory. The person delivering the sample to SMO relinquishes the sample by signing, dating and recording the time under "Relinquished By." The SMO accepts samples by signing, dating and recording the time under "Received By." Obtain a signed copy of the Sample Collection Log/Field Chain of Custody Form from the SMO. Make a copy of the Sample Collection Log/Field Chain of Custody Form and provide it to the MSGP Project Leader.

Every attempt will be made to minimize the amount of waste generated. Field personnel will diligently collect only the volumes identified as the minimum or maximum allowable identified on Form. If there is not enough liquid collected to meet these volumes, the Stormwater will be

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discharged at the sampler location. Extra Stormwater collected will also be discharged at the sampler location. If waste is generated, contact the Waste Management Coordinator for TA-59-1 or the MSGP Project Leader.

5.3 DATA QUALITY OBJECTIVES

The 2008 MSGP permit requires quarterly and annual Stormwater monitoring to determine if pollutants from industrial activities are migrating into U.S. waters. The permit specifies benchmark parameters that are indicators of potential pollutant sources. In addition, certain impaired water quality standards must be met. Factors which must be considered in making the decision of whether pollutant sources are present or water quality standards have been exceeded are analytical data quality and whether the collected sample is representative of the permitted discharge.

To determine whether the Laboratory is in compliance with all relevant laws and regulations, sample collection and analytical data must be evaluated by the a representatives of ADESH, Operations and Integration Office (OIO) by requesting formal focused validation and/or by the MSGP Project Leader.

Sample collection and submission is conducted under the guidelines found in:

- NPDES Permit Tracking No. NMR05GB21
- 40 CFR Subpart 136 Guidelines establishing the test procedure for the analysis of pollutants.

Sample analysis must use EPA approved methods as set forth in the NPDES permit.

Benchmark levels are identified in the 2008 MSGP. Outfall and sampling locations are identified in the individual facility Stormwater Pollution Prevention Plans (SWPPP).

Monitoring frequencies and reporting requirements are specified in the 2008 MSGP.

Sampling location(s):

Annual, quarterly, and visual assessments shall be conducted in compliance with the monitoring requirements specified in the 2008 MSGP. As specified previously, specific sampling location(s) are identified in the facility specific SWPPP.

Grab Sample:

A minimum of one grab sample from a discharge resulting from a measurable storm event is required. Samples must be collected within the first 30 minutes of a measurable storm event. If that is not possible, 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 required time frame. In the case of snowmelt, samples must be taken during a period with a measurable discharge.

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NOTE: A grab sample is defined as a single sample collected at a NPDES outfall (using approved EPA methods) at a particular time that represents the composition of the stormwater at that time and place.

Representative Sampling:

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

MSGP Discharge Monitoring Reports and Other Reports (MDMRS):

Monitoring results must be reported on an MDMR form (EPA Form No. 2040-0004) in accordance with the "Instructions for Completing the MSGP Industrial Discharge Monitoring Report" provided on the form. The permittee shall submit the original MDMR signed and certified to EPA as required by Part 7.1 of the MSGP.

Duty to Comply:

The permittee must comply with all conditions of the 2008 MSGP permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action.

5.4 DEVELOP A DECISION RULE

If analytical results from monitoring activities are above benchmark and/or natural background levels, a corrective action is entered into the ENV-CP Corrective Action Report Database, in accordance with [ENV-RCRA-QP-022, MSGP Stormwater Corrective Actions](#). An e-mail is automatically generated and sent to personnel responsible for evaluating and modifying controls to prevent further exceedances. Data validation is conducted under the guidelines of the DOE Statement of Work.

Acceptable analytical error is addressed in the DOE Statement of Work.

The current MSGP monitoring program is based on the 2008 MSGP. Activities that could affect the current or next MSGP permit include:

- Addition or removal of constituents into the 303(b) list,
- Discontinued monitoring based on no detection or constituent levels below benchmark or natural background,
- Specific changes identified by EPA within the next permit,
- DOE Statement of Work requirement for analytical laboratories.

6.0 REFERENCES

None

Processing MSGP Stormwater Samples	No. ENV-CP-QP-048.1	Page 9 of 11
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7.0 DEFINITIONS

None

8.0 ATTACHMENTS

Attachment 1- Example Sample Collection Log/Field Chain of Custody Form

Attachment 2- Sample Container Labels

By requesting credit for this required reading I acknowledge that I have read and understand the contents of this document and I will follow and meet the requirements in this document unless it is unsafe to do so.

**Click to
Acknowledge**

Processing MSGP Stormwater Samples	No. ENV-CP-QP-048.1	Page 10 of 11
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ATTACHMENT 1- SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY FORM

Los Alamos National Laboratory

Page 1 of 1

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 4179

EVENT NAME: MSGP - 2013

SAMPLE ID: WTMSGP-13-29841

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED (MM/DD/YYYY):		08/10/13	FIELD MATRIX:	WT	OK
TIME COLLECTED (HH:MM):		1334	MEDIA:		
PRS ID:		OK	SAMPLE TECH CODE:	APS	
LOCATION ID: 03-0038W			FIELD PREP:	UF	
LOCATION TYPE:			FIELD QC TYPE:	REG	
TOP DEPTH:			SAMPLE USAGE:	COMP	
BOTTOM DEPTH:			EXCAVATED:		YES / NO (NA)

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	MSGP-Zn	1 LITER POLY	1	HNO3	y	

SAMPLE COMMENTS:

Q3

LOCATION COMMENTS:

FIELD PARAMETERS:

COLLECTED BY (PRINT) MARWIN STENDO

RELINQUISHED BY (Printed Name) Marwin Stendo (Signature) <i>MSL</i>	Date/Time 8/20/13 11:45	RECEIVED BY (Printed Name) S. Stenwood (Signature) <i>S. Stenwood</i>	Date/Time 8/20/13 11:45
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date 08/01/2013

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Processing MSGP Stormwater Samples	No. ENV-CP-QP-048.1	Page 11 of 11
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ATTACHMENT 2- SAMPLE CONTAINER LABELS

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Los Alamos National Laboratory	
Sample ID: WTMSGP-13-29856	
Container: 1 LITER POLY	1 of 1
Preservative: HNO3	
Analysis: Ag+As+Cd+Mg+Pb+Se+Hg	
Date:	Time:

Los Alamos National Laboratory	
Sample ID: WTMSGP-13-29856	
Container: 0.5 LITER POLY	1 of 1
Preservative: NaOH	
Analysis: MSGP-CN(TOTAL)	
Date:	Time:

Los Alamos National Laboratory	
Sample ID: WTMSGP-13-29856	
Container: 0.5 LITER POLY	1 of 1
Preservative: H2SO4	
Analysis: MSGP-COD	
Date:	Time:

Los Alamos National Laboratory	
Sample ID: WTMSGP-13-29856	
Container: 0.5 LITER POLY	1 of 1
Preservative: H2SO4	
Analysis: MSGP-NH3-N	
Date:	Time:

Los Alamos National Laboratory	
Sample ID: WTMSGP-13-29858	
Container: 1 LITER POLY	1 of 1
Preservative: HNO3	
Analysis: MSGP-GrossA	
Date:	Time:

Los Alamos National Laboratory	
Sample ID: WTMSGP-13-29858	
Container: 1 LITER GLASS	1 of 3
Preservative: ICE	
Analysis: MSGP-PCB(Aroclor)	
Date:	Time:

Los Alamos National Laboratory	
Sample ID: WTMSGP-13-29858	
Container: 1 LITER GLASS	2 of 3
Preservative: ICE	
Analysis: MSGP-PCB(Aroclor)	
Date:	Time:

Los Alamos National Laboratory	
Sample ID: WTMSGP-13-29858	
Container: 1 LITER GLASS	3 of 3
Preservative: ICE	
Analysis: MSGP-PCB(Aroclor)	
Date:	Time:

Los Alamos National Laboratory	
Sample ID: WTMSGP-13-29859	
Container: 1 LITER POLY	1 of 1
Preservative: HNO3	
Analysis: Ag+As+Cd+Mg+Pb+Se+Hg	
Date:	Time:

Los Alamos National Laboratory	
Sample ID: WTMSGP-13-29859	
Container: 0.5 LITER POLY	1 of 1
Preservative: NaOH	
Analysis: MSGP-CN(TOTAL)	
Date:	Time:

Use template for 5163™

Weatherproof Laser Labels

MSGP STORM WATER VISUAL INSPECTIONS

Purpose	This procedure is written to provide requirements for conducting visual monitoring under the 2008 National Pollutant Discharge Elimination System (NPDES) Storm Water Multi-Sector General Permit (MSGP) for industrial facilities.
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 and several hazardous waste treatment, storage or disposal (TSD) facilities. Inspection waivers may be granted by ENV-RCRA for adverse weather conditions and unstaffed or inactive sites.
Hazard review	The work described in this procedure is <u>field work</u> and consists solely of visual evaluations, and has been documented to have a LOW hazard rating by submittal of a completed <u>ENV Low Hazard Verification form</u> to the Quality Assurance Specialist.

Signatures

Prepared by: Signature on File Holly Wheeler, ENV-RCRA	Date: 02/22/12
Approved by: Signature on File Melanie Lamb, ENV Quality Assurance Specialist	Date: 02/14/12
Authorized by: Signature on File Terill Lemke, ENV-RCRA Team Leader	Date: 02/27/12
Authorized by: Signature on File Anthony Grieggs, ENV-RCRA Group Leader	Date** 03/06/12
Classification Review by: Signature on File Anthony Grieggs, Derivative Classifier	Date: 03/06/12 <input checked="" type="checkbox"/> Unclassified

** Effective Date

CONTROLLED DOCUMENT

This copy is uncontrolled. The controlled copy can be found on the ENV Division Web page.
Users are responsible for ensuring they work to the latest approved revision.

General information about this procedure

In this procedure

This procedure addresses the following major topics:

Topic	Page
General information about this procedure	2
Who requires training to this procedure?	2
Roles and responsibilities	5
Visual examinations	5
Completing the MSGP storm water visual inspection form	6
Guidance	8
Records resulting from this procedure	9

Attachments

This procedure has the following attachments:

Number	Attachment Title	No. of pages
1	MSGP Visual Inspection Form	1
2	Example MSGP Visual Inspection Form	1
3	Facilities and Storm Water Stations Associated With Industrial Activity	1

History of revision & review

This table lists the revision history, reviews, and effective dates of this procedure:

Revision	Date	Description of Changes or Review
0	7/09	New document.
1	3/10	Clarifications and added attachments.
2	2/12	Biennial review/revision.

Who requires training to this procedure?

The following personnel require training before implementing this procedure:

- Group and Project Leader
- MSGP Visual Assessors
- ENV-Deployed Environmental Professional (DEP)
- ENV-RCRA Sampling Team

Training method

Training to this procedure will be by **“self-study” (reading)** and will be documented in accordance with [ENV-DO-QP-115 Personnel Training](#).

General information about this procedure, continued

Prerequisites	<p>In addition to training to this procedure, the following training is also required prior to performing this procedure:</p> <ul style="list-style-type: none"> • <u>ENV-RCRA-QAPP-MSGP Multi-Sector General Permit Quality Assurance Project Plan</u>
Definitions specific to this procedure	<p><u>Adverse weather conditions</u>: 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.</p> <p><u>Best Management Practices (BMPs)</u>: 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.</p> <p><u>Clarity</u>: Cleanness or cleanness of appearance. This includes the visual observation of suspended sediment.</p> <p><u>Color</u>: Unpolluted water will be clear and colorless. Color should not be confused with clarity.</p> <p><u>Floating solids</u>: Particulate material floating on the surface of the water. Examples include: leaves, pinecones, pine needles, dead grass, twigs, branches, and common trash.</p> <p><u>Foam</u>: 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.</p> <p><u>Odor</u>: The property or quality of waters that affects or stimulates the sense of smell. Examples of odors that may be present are burnt oil, sewage, diesel, sulfuric, or detergent odors.</p> <p><u>Oil sheen</u>: 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.</p> <p><u>Settled solids</u>: Settled particulate material i.e. heavier than water. Examples include sand, gravel, metal turnings, and glass.</p> <p><u>Suspended solids</u>: Particulate materials that are floating between the bottom of the sample and the surface of the water.</p> <p><u>Unstaffed and Inactive Sites</u>: A facility maintaining certification with the SWPPP that it is inactive and unstaffed and visual examinations are not required.</p>

General information about this procedure, continued

References

- [Federal Register: Final National Pollutant Discharge Elimination System \(NPDES\) General Permit for Storm Water Discharges from Industrial Activities. Federal Register: September 29, 2008, Volume 73, Number 189.](#)
- [P300, Integrated Work Management for Work Activities](#)
- [P315, Laboratory Institutional Operations Program](#)
- [PD103, Worker Safety and Health Policy](#)
- [SD100, Integrated Safety Management System Description](#)
- [P101-18, Procedure for Pause/Stop Work](#)
- [PD410, Los Alamos National Laboratory Environmental ALARA Program P121 Radiation Protection](#)
- [ENV-DO-QP-106, Document Control](#)
- [ENV-DO-QP-102, Office Safety and Security](#)
- [ENV-DO-QP-104, Work Safety Review](#)
- [ENV-DO-QP-115, Personnel Training](#)

In addition to these documents, please read any site specific requirements before proceeding with work.

Note

Actions specified within this procedure, unless preceded with “should,” or “may,” are to be considered mandatory (i.e., “shall,” “must,” “will”).

Roles and Responsibilities

Deployed Environmental Professionals	Deployed environmental professionals (DEPs) are responsible for collecting quarterly visual samples at substantially identical outfalls and completing required documentation, unless arrangements are made to use ENV-RCRA resources. DEPs will be fully knowledgeable of the site specific SWPPP. Whenever practicable the same person should carry out the inspection and examination of the discharges throughout the life of the permit to ensure consistency in interpretation of results. Further, DEPs shall be familiar with facility operations so that potential pollution discharge sources can be determined.
ENV-RCRA MSGP storm water compliance personnel	MSGP storm water compliance personnel are responsible for filling out a visual assessment form if requested by work order for MSGP monitored outfalls. Storm water compliance personnel are also responsible for evaluating the quality of completed visual assessments, retaining a record of QA'd forms on the server and distributing these forms to the DEPs for inclusion into the appropriate facility SWPPP.

Visual Examinations

Visual examinations	Visual examinations of storm water discharge shall be conducted quarterly for each discharge point covered by the MSGP and the site specific SWPPP.
Grab samples	<p>A grab sample will be collected during daylight hours in a 1 liter wide mouth clear glass bottle or plastic container within 30 minutes of 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. The sampler will document the reason a sample could not be collected within 30 minutes.</p> <p>If no samples are collected because the sampler was not triggered (or for some other reason), documentation shall be kept in the facility's SWPPP explaining why visual examinations were not conducted.</p>

Completing the MSGP Storm Water Visual Inspection Form

Location, date & time, inspector, etc. Complete the top section of form including location as indicated on site map, date and time, outfall ID (i.e. the monitored outfall), person collecting and examining the sample and signature, and inspection quarter.

NOTE: See Attachment 2 for an example of a filled-out MSGP Visual Inspection form.

NOTE: See Attachment 3 for facility name, location, and station numbers.

Include the date and time the discharge began, sample collection date and time and visual assessment date and time for each sample. Identify the nature of the discharge (i.e., rainfall or snowmelt). Determine whether it has been greater than 72 hours from the last storm event. If "No", explain when the last storm event occurred.

Sample documentation

Provide documentation if sample is not collected within 30 minutes of discharge.

**Completing the MSGP Storm Water Visual Inspection Form,
continued****Describe
sample
parameters**

Refer to section 3.0, Definitions. See attachment 2 for an example of a filled-out MSGP Visual Inspection form.

Parameter	Description
Color	Describe the color of the discharge.
Odor	Describe any odors that may be observed in the discharge. Caution: any unusual odors should be documented.
Clarity	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.
Floating Solids	Note any floating solids in the sample. Careful examination should determine whether the solids are raw or waste materials (i.e. vegetative materials).
Settled Solids	Note any settled solids in the sample. Settled solids may be an indicator of unstable ground cover combined with a high intensity storm water runoff event.
Suspended Solids	Note any suspended solids in the sample. 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.
Foam	Note an accumulation of fine frothy bubbles formed in or on the surface of water. Describe the color of the foam.
Oil Sheen	Note if there is an oil sheen present, the thickness, and consistency. If yes, contact the ENV-RCRA Project Leader for MSGP <u>immediately</u> . Follow-up action is required within 24 hours.
Other	Describe any other indicators of storm water pollution in addition to the descriptions mentioned above.

Completing the MSGP Storm Water Visual Inspection Form, continued

ENV Deployed Environ- mental Professional	Place completed and signed form into the facility SWPPP. Provide a copy to the MSGP Project Leader or other designee at ENV-RCRA.
Site observations	<p>Note if there are any potential sources of pollutants on site. If yes, contact an MSGP representative of ENV-RCRA and document the following:</p> <ul style="list-style-type: none"> • potential sources; • indicate if there are any BMPs on site and evaluate and note effectiveness; • if no BMPs, determine if installation could correct future pollutant migration; and • the nature of discharge (i.e., runoff or snow melt).
Source of pollutants	While conducting the visual examinations, personnel should constantly be attempting to relate any pollutant that is observed in the samples to the sources of pollutants that are on the site.

Guidance

Clean up	<p>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 ENV-RCRA should also be contacted and made aware of the situation. A design change could also be incorporated into the storm water 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, and if BMPs have already been implemented, evaluate whether or not these are working correctly or need maintenance. Corrective actions must be taken if BMPs are not performing effectively. Actions should be taken as soon as practicable from the discovery of any pollutants.</p>
-----------------	---

NOTE: This time frame (and those listed below) is not a grace period. Rather, it is a schedule considered reasonable for documenting your findings and for making repairs and improvements. The time frame is to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely. Failure to take prompt action can result in fines and penalties for non-compliance.

Guidance, continued

Corrective action If storm water contamination is identified through visual assessment, a corrective action must be entered into the ENV-RCRA MSGP Corrective Action Report database within 24 hours of the observation. A corrective action plan must be identified within 14 days of the observation.

NOTE: If possible, the corrective action must be implemented before the next anticipated storm event.

Follow up A date for completion of implementation must be entered into the database to ensure that appropriate actions are taken in response to the examinations.

Records resulting from this procedure

Records The following records generated as a result of this procedure are to be submitted to an MSGP representative of ENV-RCRA in accordance with [ENV-DO-QP-110 Records Management](#).

- MSGP Quarterly Visual Assessment Form

[Click here to record "self-study" training to this procedure.](#)

Water Quality & RCRA Group
Los Alamos National Laboratory

ENV-RCRA-QP-064.2
Attachment 1, Page 1 of 1

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 @ 899-7621 or 864-0105			
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.			

RCRA and Water Permitting/Compliance Group
Los Alamos National Laboratory

ENV-RCRA-QP-064.2
Attachment 2, Page 1 of 1

Example of Filled-Out MSGP Quarterly Visual Assessment Form

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: TA-3-66 Sigma Foundry	Permit Number: NMR05GB21	Inspection Quarter: <input checked="" type="checkbox"/> Jan-Mar <input type="checkbox"/> Apr-Jun <input type="checkbox"/> Jul-Sep <input type="checkbox"/> Oct-Dec	
Outfall ID: 3-Sigma-1	"Substantially Identical Outfall"? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES identify other Outfalls in the Group: 3-Sigma-2, 3-Sigma-3, 3-Sigma-4, 3-Sigma-5, 3-Sigma-6 and 3-Sigma-7	
Person(s) collecting sample (PRINT): PPT Member? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Joe Doe		Signature: <i>Joe Doe</i>	
Person(s) examining sample (PRINT): PPT Member? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Joe Doe		Signature: <i>Joe Doe</i>	
Date & Time Discharge Began: 1/14/2010 at 3:00 P.M.	Date & Time Sample Collected: 1/14/2010 at 3:25 P.M.	Date & Time Sample Examined: 1/14/2010 at 4:30 P.M.	
Substitute Sample? <input type="checkbox"/> Yes <input checked="" 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, explain why not:			
Nature of Discharge: <input type="checkbox"/> Rainfall. Amount _____ inches <input checked="" type="checkbox"/> Snowmelt. Amount <u>0.25</u> inches			
Previous Storm Ended > 72 hours Before Start of This Storm? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If No, Explain: *	
PARAMETERS			
Color	<input type="checkbox"/> None <input checked="" type="checkbox"/> Other	If Other describe: <u>light brown</u>	
Odor	<input checked="" 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 checked="" type="checkbox"/> Slightly Cloudy <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque <input type="checkbox"/> Other (describe):		
Floating Solids:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, describe if raw or waste materials(s):	
Settled Solids:**	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, are solids Fine <input type="checkbox"/> Coarse <input type="checkbox"/> If Other describe:	
Suspended Solids:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, are solids Fine <input checked="" type="checkbox"/> Coarse <input type="checkbox"/> If Other describe:	
Foam (gently shake sample):	<input type="checkbox"/> Yes <input checked="" 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 checked="" type="checkbox"/> No	Thickness: Flecks <input type="checkbox"/> Globs <input type="checkbox"/> Describe if other:	
Color of Sheen:			
Other Obvious Indicators of Pollution Present in the sample?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	If YES describe:	
SITE OBSERVATIONS			
Potential pollutants found during visual examination? <input type="checkbox"/> Yes <input checked="" 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 checked="" 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.			

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RCRA and Water Permitting/Compliance Group
Los Alamos National Laboratory

ENV-RCRA-QP-064.2
Attachment 3, Page 1 of 1

Los Alamos National Laboratory
FACILITIES AND STORM WATER STATIONS ASSOCIATED WITH INDUSTRIAL ACTIVITY
2008 MSGP PERMIT #NMR05GB21

LOCATION	OPERATION	Activity	Sector	STATION	DRAINAGE
TA-3-22	POWER PLANT	STEAM ELECTRIC POWER	Q	E121.9, 03-0022N, 03-0022S	Sandia
TA-3-38	METAL SHOP	FABRICATED METALS	AA	03-0038W	Sandia
TA-3-39, 102	METAL SHOP	FABRICATED METALS	AA	03-0039E	Pajarito
TA-3-66	SIGMA FOUNDRY	PRIMARY METALS	F	E122.3	Sandia
TA-60	ASPHALT BATCH PLANT	ASPHALT BATCH PLANT	D	E200.5	Mortandad
TA-54	AREA G - South Side	TSD	K	54-PAD10E, E248.5, E248	Pajarito
TA-54	AREA G - North Side	TSD	K	E227	Canada del Buey
TA-54	AREA L	TSD	K	E223	Canada del Buey
TA-54-38	RANT	TSD	K	E220	Canada del Buey
TA-15-185	VEHICLE MAINTENANCE SHOP	VEHICLE MAINTENANCE	P	E262.4	Water
TA-60-1	MOTORPOOL	VEHICLE MAINTENANCE	P	60-0001	Sandia
TA-60	MATERIALS RECYCLING FACILITY	RECYCLING	N	E122.35	Sandia
TA-60-250	ROADS & GROUNDS FACILITY	VEHICLE MAINTENANCE & STORAGE	P	E123.4, 60-00RG, 60-00RGE	Sandia
TA-3-0034	METAL SHOP	FABRICATED METALS	AA	03-0034	Sandia
TA-9-28	HEAVY EQUIPMENT MAINTENANCE OPERATIONS	VEHICLE MAINTENANCE AND STORAGE	P	09-0028W	Upper Pajarito
TA-60-2	WAREHOUSE	WHAREHOUSE	P	60-002E	Sandia

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ENV-DO-QP-101.2

Effective Date: June 12, 2012

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**Environment, Safety, Health Directorate****Environmental Protection – Division Office****Quality Procedure**

**Title: Environmental Reporting Requirements for
Releases or Events**

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History of Revisions

Document Number <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
2	6/12	Biennial Review/Revision, new template implemented.

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1.0 PURPOSE

This Environmental Protection Division (ENV-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 [P322-3, Performance Improvement from Abnormal Events](#). Environmental reporting requirements regarding releases or other events are included in this procedure.

2.0 SCOPE

This procedure applies to ENV-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 or Pueblo Environmental Departments (refer to [ENV-DO-QP-111, Reporting Environmental Releases To Pueblo Governments](#)) and describes the actions that must be performed within the first 24 hours. This procedure does **not** cover the response procedures for “continuous releases” under CERCLA and EPCRA (see definitions) nor the follow-up notifications and reports.

2.1 WORK HAZARD ANALYSIS

The work described in this procedure consists of field work that does not require an Integrated Work Document (IWD) and is rated as having a **LOW hazard** level as documented by submittal of an [ENV Low Hazard Verification form](#) to the Quality Assurance Specialist.

3.0 RESPONSIBILITIES/PREREQUISITES

The following personnel require training before implementing this procedure:

- ENV-DO managers and designated on-call representatives and SMEs who may be asked to fulfill reporting requirements during release-related exercises or during actual releases, or within 24 hours.

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.

3.1 PREREQUISITES

- None

Note: Actions specified within this procedure, unless preceded with “should,” or “may,” are to be considered mandatory (i.e., “shall,” “must,” “will”).

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4.0 DOCUMENT CONTROL/RECORDS MANAGEMENT

The following records generated as a result of this procedure are to be submitted as records according to the responder's group's internal records management process:

- 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
- Documentation of any analytical results, and quality assurance of results
- Any other contingency plan or emergency plan documentation
- Documentation of any PCB notification
- 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

5.0 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 inside or outside of buildings, wastewater spills, potable water or fire fighting water as well as impacts to cultural and biological resources not adequately documented, and other releases to the environment.

On a semi-annual basis ENV-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 PADOPS, ADES&H, ADEP, Emergency Operations (ADSS-EO), ENV-DO, ENV-RCRA, and ENV-ES. The on-call representative can be reached by pager at 664-7722.

5.1 RESPONSIBILITY OF ON-CALL REPRESENTATIVE

The ENV 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 ENV Division management of immediate reporting requirements; and

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- 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 ENV-DO on-call representative is not responsible for the following, EOC will make these determinations:

- determining if the RCRA Contingency Plan must be implemented, or
- 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 ENV on-call representative may immediately confer with an SME of the ENV 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 ENV groups (ES & RCRA) is available in the ENV-RCRA group office. The ENV-DO and ADSS-EO may also be contacted to determine the on-call representative for each group.

5.2 FOLLOW-UP REPORTING

This procedure describes the initial external notifications (within the first 24 hours) to regulatory agencies and Pueblo Environmental Departments. After completion of the steps in this procedure, the ENV group specifically responsible for compliance with the relevant regulations (responsible group) will complete the required notifications and reports, as applicable under the appropriate regulations, according to established procedures.

5.3 SUMMARY OF POLICY ON REPORTING

The ENV on-call representative and SMEs have the authority and responsibility for deciding when to report and for making the report to regulatory agencies within regulatory deadlines and to Pueblo Environmental Departments when potentially impacted.

LANL management and DOE LASO 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 or Pueblo. LANL management, with input from ENV SMEs, will determine if an ORPS (Occurrence Reporting Processing System) report or other type of Lessons Learned will be necessary.

NOTE: ADSS-EO maintains a current list of on-call LANL managers.

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5.4 USING THIS PROCEDURE

This procedure has four 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:

- RCRA
- TSCA
- CWA, NM WQA, and NM WQCC Regulations
- CERCLA and EPCRA.
- CAA
- Endangered Species Act (ESA), New Mexico Endangered Plant Species Act
- Bald Eagle Protection Act, Migratory Bird Treaty Act
- New Mexico Wildlife Conservation Act
- National Environmental Policy Act (NEPA)
- National Historic Preservation Act (NHPA)
- Native American Graves Protection and Repatriation Act (NAGPRA)
- Archaeological Resources Protection Act (ARPA)

Under CERCLA or EPCRA, a Reportable Quantity (RQ) is the action level that may trigger an appropriate response to a release under the provisions of these regulations. A release may not meet RQ reporting limits **but still may be reportable** under RCRA and CWA requirements.

NOTE: The 24-hour deadline (15 minutes in some cases) applies regardless of whether it occurs during business hours, non-business days or after business hours.

Additional information and guidance on how and when to report a release is available at this link: <http://homer.ornl.gov/nuclearsafety/env/guidance/cercla/rqs-gen.pdf>.

All potential ENV-DO on-call representatives or SMEs should follow the various links at this site and be familiar with the guidance before any release or event occurs.

5.5 DETERMINING IF A RELEASE IS REPORTABLE UNDER RCRA

Follow the flow charts in Attachment 1 to determine if an event is reportable under RCRA. The three groups of circumstances described below (also delineated in the flow charts in Attachment 1) are evaluated to determine if an event is reportable.

Under the RCRA permit requirements, the ADSS-EO manager determines if the “RCRA Contingency Plan” provisions should be implemented. The flow chart in Attachment 1 starts with this determination. The ENV on-call representative or an ENV-RCRA SME performs notifications that are necessary.

The ADSS-EO Manager will normally attempt to contact the ENV-RCRA SME for guidance in making this decision. If the ENV-RCRA SME is successfully contacted, the completion of the remainder of this procedure may be passed on to this individual.

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The ENV on-call representative makes the determination that one or more of these conditions occurred through consultation with ENV-RCRA and appropriate SMEs. 24-hour notification can be made by the on-call representative or by an SME of ENV-DO.

The EOC manager makes the determination that unstable chemicals, leaking or compromised gas cylinders represent an emergency situation and, typically with ENV-RCRA, how best to respond. 24-hour notification can be made by the on-call representative or ENV-RCRA 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 *Reporting a Release or Event*.

5.6 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 release of PCB's is reportable to the EPA under TSCA if it is over 10 pounds PCB's by weight or at concentrations of 50 ppm or greater.

Follow the steps in *Determining if a Release is Reportable under CERCLA, EPCRA, or Other Regulations* to determine if the RQ (of 1 pound) for PCBs has been triggered. Additionally, reporting requirements are triggered if over 270 gallons of untested mineral oil suspected of containing PCBs has been spilled.

There are nine items containing PCBs that are in use at the CMR Building. In addition, there is one PCB contaminated transformer in use at TA-48. 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 (see definitions) 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 (below).

If the spill is ...	Then...
over 10 pounds by weight of PCBs (TSCA)	Report to EPA Region 6 (Office of Prevention, Pesticides and Toxic Substances Branch) through EPA's 24-hour spill
OR	
if PCBs are at concentrations ~50 ppm that directly contaminate surface water sewers, drinking water supplies, grazing lands, or vegetable gardens	response number 866-372-7745 as soon as possible after discovery but no later than 24 hours after discovery.

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5.7 DETERMINING IF A RELEASE IS REPORTABLE UNDER CWA OR NM WATER QUALITY ACT

The CWA and NM Water Quality Act (NMWQA) (equivalent to the national Clean Water Act) does not use RQs (as described in the next section). Instead the NM Water Quality Control Commission (NMWQCC) regulations state: *"Any amount of any material in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or may unreasonably interfere with the public welfare or the use of property. This includes chemical, biohazardous, petroleum-product, and sewage spills and incidents. In addition to recent spills, the discovery of evidence of previous unauthorized discharges, such as contaminated soil or ground water, also must be reported."*

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, however. The ENV on-call representative or SME has the authority and responsibility to make this determination.

Spills of potable water or fire fighting water (e.g., water line breaks) require reporting if there is a release of over 5000 gallons or if the release impacts a Solid Waste Management Unit (SWMU). Contact the ADEP for the location of SWMUs and coordinate any necessary water quality notifications with ENV-RCRA.

For oil discharges (film/sheen/discoloration) to water in stream channels, additionally notify the National Response Center (24-hour verbal notification) and EPA Region 6.

5.7.1 ADDITIONAL REPORTING REQUIREMENT FOR PETROLEUM STORAGE TANKS

New Mexico Environment Department (NMED) regulations from June 2009 require verbal reporting within 24 hours of release of petroleum products from regulated tanks to the Petroleum Storage Tank (PST) Bureau when there is:

- evidence of release of regulated substances;
- unusual operational conditions (that would cause concern about a release); or
- monitoring results that show loss from the system.

Regulated tanks include those of 1320 gallons to 55,000 gallons and exclude all sizes of tanks used to fuel emergency generators.

This reporting requirement is in addition to the reporting under NMWQCC Regulations and CWA requirements for such releases. Call the PST Bureau at 476-4397 during business hours and 827-9329 after closing.

If there is more than one activity team member, the PIC conducts a readiness check during the tailgate briefing to note any local work conditions that could affect the work and reminds the team of the documented hazards and controls. At this time workers also verify that each other's PPE is adequate.

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If a release (see Definitions) is reportable under NMWQCC Regulations, continue through the next sections to determine if the release/event is reportable under other rules and proceed to the Section, *Reporting a Release or Event*.

5.7.2 ADDITIONAL REPORTING REQUIREMENTS UNDER NPDES PESTICIDE GENERAL PERMIT

Adverse incidents, an unusual or unexpected incident that an Operator has observed upon inspection or of which the Operator otherwise becomes aware, requires reporting under the NPDES Pesticide General Permit (PGP).

The Operator should report any adverse incidents 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; and/or
 - 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.

If an Operator observes or otherwise becomes aware of an adverse incident due to pesticide application, the Operator must immediately notify the appropriate EPA Incident Reporting contact within 24 hours of the incident of the Operator becoming aware of the adverse incident. EPA Incident Reporting Contacts are listed at www.epa.gov/npdes/pesticides. These reporting requirements are in addition to any required under Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

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5.8 DETERMINING IF A RELEASE IS REPORTABLE UNDER CERCLA OR EPCRA

Under CERCLA or EPCRA, a Reportable Quantity is the action level that may trigger an appropriate response to a release under the provisions of these regulations. RQs are summarized in 40 CFR Part 302. An RQ is based on the quantity of chemical released within any 24-hour period. The RQs for extremely hazardous substances can be found in 40 CFR Part 355, Appendices A and B, in the column labeled "RQ". This table has two columns of RQs: the Statutory RQ and the Final RQ. Use the weight in the Final RQ column for determining if the release must be reported. The chemicals that have not been assigned RQs by EPA have been given statutory RQs of one pound by Congress.

Releases (see definitions) that occur within a closed space with no emissions to the ambient environment (see definitions) are exempt from this requirement.

The exceedance of an RQ requires immediate notification.

NOTE: Response procedures for "Continuous Releases" are not covered in this procedure.

5.8.1 REGULATORY CLASSIFICATION OF THE RELEASED MATERIAL

Determine the regulatory classification of the substance released with respect to the hazard classifications: Extremely Hazardous Substance (EHS) and/or Hazardous Substance (HS) (see definitions).

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 estimates may require reporting, it is best to err on the side of caution and follow the reporting requirements in the section *Reporting a Release or Event*.

- Identify the constituents in the material released using the Material Safety Data Sheet (MSDS), laboratory analysis, data sheet, manifest, or manufacturer information.
- A summary of the RQs can be found in 40 CFR Part 302 and 40 CFR Part 355, Appendices A and B. The RQ may also be determined using the on-line RQ Calculator (<http://homer.ornl.gov/rq/>)
- Calculate the amount of the listed chemical involved in the release (the weight of the material released multiplied by the percentage of the concentration of the listed chemical present in the material).

After determining the RQ of a released material, the ENV-DO on-call representative or SME will perform the following steps to determine if an RQ has been released.

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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 Appendix B to 40 CFR 302 and 40 CFR 355, Appendices A and B.						
3	<p>If this is an airborne release of radioactive materials, it is reportable if the RQ is exceeded AND if the release could cause an annual exposure to the nearest downwind residence or business of 10 mrem (40 CFR 61, Subpart H).¹ The exposure estimate should be made by an environmental health physicist.</p> <table> <tr> <th>If the release...</th><th>Then...</th></tr> <tr> <td>Is over the RQ AND could cause the Laboratory to exceed the 10 mrem/yr standard to downwind businesses or residences</td><td>Proceed to section <i>Reporting a Release or Event</i>.</td></tr> <tr> <td>Is less than the RQ AND could NOT cause the Laboratory to exceed the 10 mrem/yr standard.</td><td>No reporting is required under CERCLA or EPCRA. Proceed to Step 4.</td></tr> </table>	If the release...	Then...	Is over the RQ AND could cause the Laboratory to exceed the 10 mrem/yr standard to downwind businesses or residences	Proceed to section <i>Reporting a Release or Event</i> .	Is less than the RQ AND could NOT cause the Laboratory to exceed the 10 mrem/yr standard.	No reporting is required under CERCLA or EPCRA. Proceed to Step 4.
If the release...	Then...						
Is over the RQ AND could cause the Laboratory to exceed the 10 mrem/yr standard to downwind businesses or residences	Proceed to section <i>Reporting a Release or Event</i> .						
Is less than the RQ AND could NOT cause the Laboratory to exceed the 10 mrem/yr standard.	No reporting is required under CERCLA or EPCRA. Proceed to Step 4.						
4	<p>If this is a release of non-rad material, it is reportable if the RQ is exceeded.</p> <table> <tr> <th>If the amount released is...</th><th>Then...</th></tr> <tr> <td>Equal to or greater than the RQ</td><td>Proceed to Section <i>Reporting a Release or Event</i>.</td></tr> <tr> <td>Less than the RQ</td><td>Proceed to Step 3</td></tr> </table>	If the amount released is...	Then...	Equal to or greater than the RQ	Proceed to Section <i>Reporting a Release or Event</i> .	Less than the RQ	Proceed to Step 3
If the amount released is...	Then...						
Equal to or greater than the RQ	Proceed to Section <i>Reporting a Release or Event</i> .						
Less than the RQ	Proceed to Step 3						
5	Continue to re-evaluate the release as new data becomes available. Perform Steps 1 through 3 as necessary.						

¹ It should be noted that "Area sources and other sources that are subject to regulations that limits their total annual emissions should generally report their releases at or above the RQ of hazardous substances (HSs) and extremely hazardous substances (EHSs) that are caused by accidents, malfunctions, unanticipated releases and other releases that are not part of the facility's normal operations." 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".

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5.9 DETERMINING IF A RELEASE IS REPORTABLE UNDER BIOLOGICAL OR CULTURAL REQUIREMENTS

There are a number of 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 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 resources under the preceding laws and associated regulations is not specifically defined. This is also the case for reporting of most cultural resources impacts under the National Historic Preservation Act. The use of professional judgment by the ENV-DO on-call representative and SME is required.

Reporting of impacts under the Native American Graves Protection and Repatriation Act is specifically governed by the following document "A Standard Operating Procedure for the Inadvertent Discovery of Native American Human Remains and Associated Funerary Objects, Sacred Objects, or Objects of Cultural Patrimony at Los Alamos National Laboratory" (LA-UR-06-6712) prepared for the Department of Energy Los Alamos Site Office (DOE LASO) by the LANL Cultural Resources Team and implemented on January 30, 2008.

Reporting of impacts under the Archaeological Resources Protection Act (ARPA) is governed in part by the Act and also by LANL Cultural Resources Team Procedure [ES-415, Archaeological Resources Protection Act](#).

5.9.1 REPORTS TO DOE LASO

In general, any release or event that poses a significant impact to biological or cultural resources requires reporting to DOE LASO as soon as possible and may require reporting to LANL management and DOE HQ through the ORPS. Examples of significant impacts to biological resources include:

- Release of toxic substances into listed species habitat
- Damage to a wetland or listed species habitat by a landscape-altering event such as wildfire
- Other events that would likely result in death or injury of a threatened or endangered species

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- Examples of significant impacts to cultural resources include:
- Unauthorized excavation of an archaeological site
- Damage to an archaeological or historic site
- Removal of archaeological or historic artifacts

The ENV on-call representative or SME for biological or cultural resources should notify DOE LASO as soon as possible so that DOE LASO can complete the required notifications to the appropriate agencies (e.g., U.S. Fish and Wildlife Service, State Historic Preservation Office) within 24 hours.

5.10 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 in this section must be followed upon determination that a release or event is reportable.

For informational purposes, a summary of emergency release/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 *Records Resulting from This Procedure*).

If RCRA reporting requirements are triggered, see the flow chart in Attachment 1, Emergency Notification Requirements for RCRA.

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Perform the following steps immediately after establishing that reporting will be performed:

Step	Action
1	<ul style="list-style-type: none"> • Number of persons injured and the nature of injuries (e.g., life-threatening or minor injury) • Extent of any protective actions taken (e.g., evacuations) • Name, address, and telephone number of the person to contact for further information • Whether the substance is an HS or EHS (see definitions) • 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.
2	<p><i>[For RCRA: skip this step; see flow chart (Attachment 1).]</i></p> <p>For releases of substances that are classified as CERCLA hazardous substances, contact the National Response Center at 800-424-8802.</p> <p>Note: If it is an EHS but not a CERCLA hazardous substance, reporting is only necessary to state and local authorities.</p> <p>Exception: For reportable water releases, the NRC needs to be notified ONLY if the release includes oil (such as a sheen on the water surface).</p>

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Step	Action
3	<p><i>[For RCRA: skip this step; see flow chart (Attachment 1).]</i></p> <p>If the release is outside the LANL boundaries, or has the potential to go outside, additionally contact the New Mexico State Police at 505-827-9126 (State Emergency Response Commission—SERC).</p> <p>Contact the Los Alamos County Police at (505) 662-8222 (Local Emergency Planning Committee—LEPC).</p> <p>Contact the New Mexico Environment Department:</p> <ul style="list-style-type: none"> • During work hours: 505-476-6000 • 24-hr Emergency Hotline: 505-827-9329 <p>DOE O 231.1A Requires notification and reporting through the Facility Operations Director to DOE LASO and DOE HQ given a set of reporting criteria where the timelines from time of event and categorization given the circumstances of the event to verbal and/or written notification is 2-hours. For certain types of environmental events, the reporting criteria are more stringent than what is required in Federal and State laws and requirements (e.g. 50 percent of an RQ is ORPS reportable within the ORPS system). For all environmental events, the ENV On Call individual and/or ENV SME must ensure that the appropriate FOD or designee has been engaged as per P322-3, Performance Improvement from Abnormal Events, and this will ensure that ORPS notification and reporting criteria are being met.</p>
4	If requested by any of the above organizations, provide updates as new information becomes available.

Any release to the environment that has been determined to be reportable by the ENV on-call representative or SME shall be reported through the LANL management chain in accordance with [PD1200, Emergency Management](#) and [P322-3, Performance Improvement from Abnormal Events](#). LANL management shall be notified immediately that a release notification to state or federal regulatory agencies is required so that DOE notification and reporting requirements are met. LANL management approval is not required prior to environmental reports and notifications made to the regulatory agencies in order to assure that the deadline for reporting is not exceeded.

5.10.1 STEPS TO NOTIFY LANL MANAGEMENT

To notify LANL management and to complete the environmental reporting process to DOE, state and federal agencies, and Pueblo Environmental Departments, perform the following steps:

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Who	Step	Action
ENV-DO on-call representative or SME	1	Determine that a release to the environment is reportable to state, federal, or Pueblo entities and required under regulations. NOTE: ORPS reporting is a FOD and RAD responsibility and will seek advisement from ENV SMEs.
	2	Contact the following individuals by phone. <ul style="list-style-type: none">• Team Leader/Direct Supervisor• Group Leader/Deputy Group Leader• ENV-DO Division Leader or Designee for Reporting If no direct contact can be made, leave messages by pages or phone.
ENV-DO Division Leader or Designee for Reporting	3	Notify the ADES&H Directorate Office and assure that the notification process continues through the LANL management chain to the PADOPs Office as specified in PD 1200-1 Emergency Management, and P322-3, Performance Improvement from Abnormal Events .
	4	Notify the ADEP Directorate Office if the release originated or impacted a Solid Waste Management Unit (SWMU) or Potential Release Site (PRS).
		As per PD1200 , verbal and written notifications must be made up the management chain by use of the PADOPS report. Generally, this is the responsibility of the FOD or the FOD designee. However, ENV on-call personnel may be required to perform this function from time to time. Therefore, on-call personnel must understand who will perform this reporting function.
ENV-DO on-call representative or SME	5	Notify the DOE LASO program contact for the release.
	6	Complete the environmental reporting to state and federal agencies prior to the regulatory deadline for reporting.
	7	Notify Pueblo Environmental Departments of the release when potentially impacted.
SME	8	Complete 14-day and other follow-up reports to the state and federal agencies.

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If the release involved radioactive materials, the ENV on-call representative or SME will notify ENV-ES. ENV-ES will additionally notify:

EPA Region 6

(214) 665-8541

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 ENV on-call representative or SME will notify DOE LASO Environmental Office as soon as possible. DOE LASO is required to notify U.S. Fish and Wildlife Service within 24 hours.

After all the above notifications have been made, or when requested, the ENV on-call representative or SME will hand off responsibility for additional actions and follow-up to the affected environmental group. (Which group is responsible will depend on the type and location of the release and the governing regulations or statutes.) Provide all relevant records. See Section: Records Resulting from this Procedure.

In order to communicate events at LANL which may impact the public and or the environment, ENV staff will notify the 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.

6.0 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 ENV-RCRA 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. NM00283 National Response Center (NRC) Web Site: <http://www.nrc.uscg.mil/>
- NMWQCC Regulations, 20.6.2 NMAC, dated December 1, 2001
- [P407, Water Quality](#)

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- [QP-5.8. Identification, Documentation, and Reporting of Newly Discovered Potential Release Sites.](#) ADEP Procedure.
- RQ Calculator Web Site: <http://homer.ornl.gov/rq/>

7.0 DEFINITIONS

ADES&H: Associate Directorate for Environment, Safety, and Health

ADEP: Associate Directorate for Environmental Programs

CAA: Clean Air Act

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act

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. [DOE/EH-0441, guidance document, 372,099 bytes, 51 pp.], available at: <http://homer.ornl.gov/sesa/environment/guidance/cercla/CONTIN.PDF>.

CWA: Clean Water Act

ENV-DO: Environmental Protection Division

Environment: includes "water, air, land, and the interrelationship which exists among and between water, air, land, and all living things." (40 CFR 355.20)

EPCRA: Emergency Planning and Community Right-to-Know Act

ER-DO: Emergency Response Division

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

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)

LEPC: Local Emergency Planning Committee. Locally, the contact is through Los Alamos County Police and Fire Departments

NMWQA: New Mexico Water Quality Act

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NMWQCC: New Mexico Water Quality Control Commission

NPDES: National Pollutant Discharge Elimination System

NRC: National Response Center

OSC: On-Scene Commander

PADOPS: Principal Associate Director for Operations

PCBs: Polychlorinated Biphenyls

PST: Petroleum Storage Tank

RCRA: Resource Conservation and Recovery Act

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

SERC: State Emergency Response Commission. In NM, the contact is through the NM Department of Public Safety.

SME: Subject Matter Expert.

TSCA: Toxic Substances Control Act

8.0 ATTACHMENTS

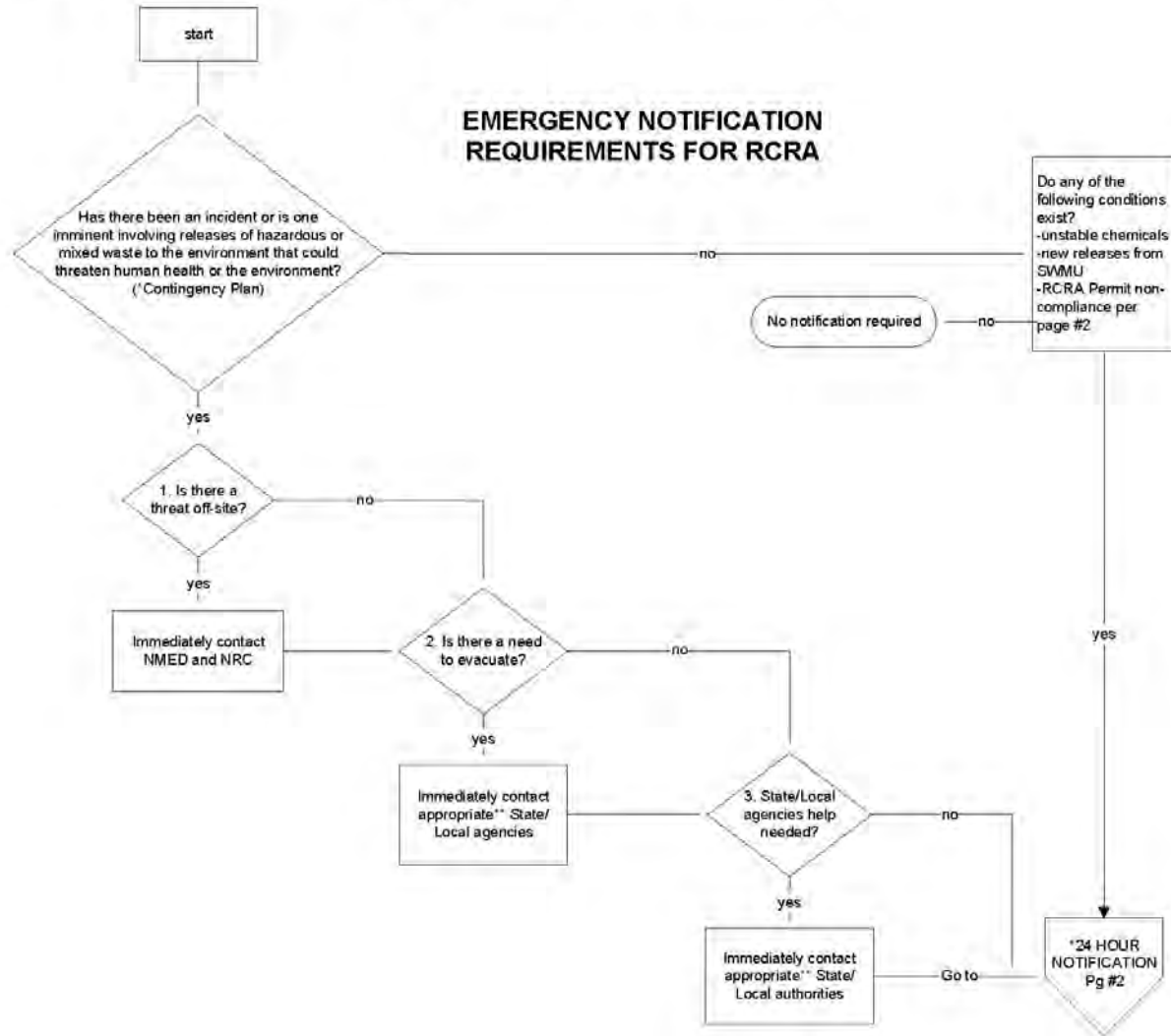
Attachment 1: Emergency Notification Requirements for RCRA

Attachment 2: Summary of Emergency Release or Event Reporting Requirements

By requesting credit for this required reading I acknowledge that I have read and understand the contents of this document and I will follow and meet the requirements in this document unless it is unsafe to do so.

**Click to
Acknowledge**

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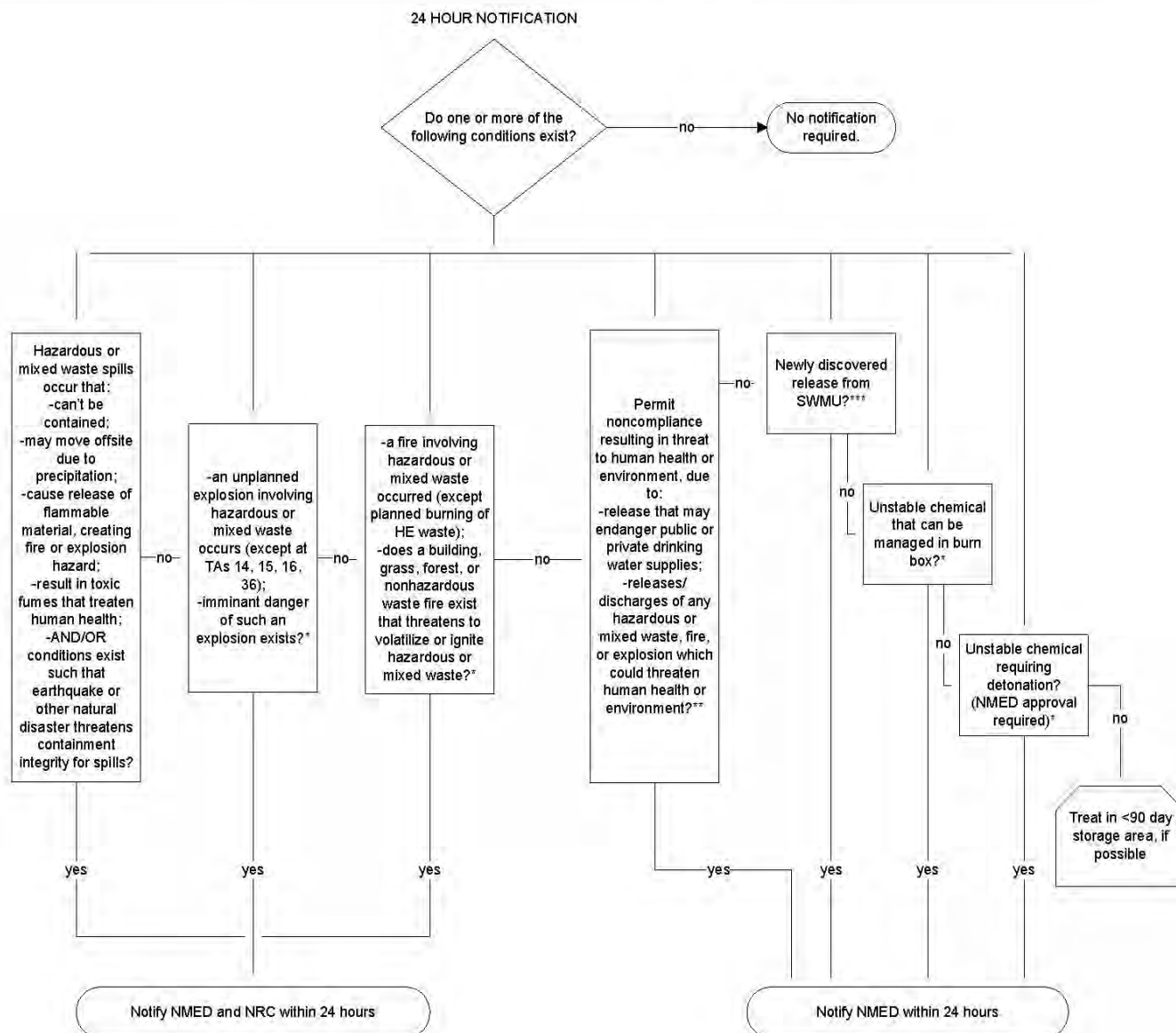
ATTACHMENT 1: EMERGENCY NOTIFICATION REQUIREMENTS FOR RCRA

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*Contingency Plan implementation, need for burn box use, or for detonation to be determined by EM&R

**To be determined by ENV-RCRA

***To be determined by WES-WA and ENV-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	REPORT TO/BY	REPORTING
Clean Water Act(CWA)	40 CFR 110.6	Oil discharge (film/sheen/discoloration) to water surface or shoreline, or violation of water quality standards.	NRC. If not practical then EPA by person in charge of facility.	Immediately, no later than 24 hours. Follow-up not required.
Clean Water Act (CWA)	40 CFR 117.21	Discharge of hazardous substance (equal to or above RQ)	Appropriate govt. agencies by person in charge of facility.	Immediately Follow-up not required.
Clean Water Act (CWA)	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.	Report to EPA within 24 hrs.	30 Day Adverse Incident Written Report for PGP required.
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.	New Mexico Environment Department by ENV-RCRA. Copy to EPA.	As soon as possible after learning of such a discharge, but in no event more than 24 hours thereafter (verbal notification). 7 day written report (Calendar Days) 15 day written Corrective Action Plan.
Comprehensive Environmental, Response, Compensation, and Liability Act (CERCLA)	40 CFR 302.6(a)	Hazardous substance release (Equal to or greater than RQ).	Report to NRC by ENV or WES SME	Within fifteen minutes Follow-up not required
Emergency Planning and Community Right- to-Know Act (EPCRA)	40 CFR 355.40	Release of SARA extremely hazardous substance or CERCLA hazardous substance equal to or greater than RQ.	LEPC, SERC, or local emergency response personnel (911 in case of transportation related release) by owner/operator.	Within fifteen minutes Follow-up required within seven calendar days.

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STATUTE	REGULATIONS	INCIDENT	REPORT TO/BY	REPORTING
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,	Release, fire, or facility explosion that threatens human health or environment.	NRC/OS C/state/ local /EPA Regional Administrator by ENV-DO or ENV-RCRA SME.	Immediate and/or within 24 hours (see flow chart) Follow-up: varies from 5 to 30 days report to OSC/NRC/EPA Regional Administrator.
Toxic Substance Control Act (TSCA)	40 CFR 761.120, 761.125	PCB spill (equal to or greater than 50 ppm) with release to surface water/drinking water supplies/sewers/ grazing lands, etc. OR PCB spill over 10 pounds	NRC and EPA Region 6 Office of Pesticides and Toxic Substances by person in charge.	Within 24 hours Follow-up: as required by agency.
Operational events to include environmental releases and reporting	DOE Order 231.1A	As per criteria within DOE Order 231.1A. Examples include 50 percent of an RQ	DOE LASO and DOE HQ by FOD through ESH-OFF	Verbal notifications in 2 hours after categorization and written notifications within from 2 hours to NLT 2 business days depending on the severity and DOE criteria
N/A	N/A	Incidents which may be of concern to the public, such as wild land fires, activities which may have a visual impact that concerns the public, etc.	NMED	As soon as possible

2016 MSGP LD R5

1



Environmental Protection Division
Environmental Compliance Programs (ENV-CP)
PO Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-0666

Date: OCT 29 2015
Symbol: ENV-DO-15-0309
LA-UR: 15-28383
Locates Action No.: N/A

Mr. Brent Larsen
Water Quality Protection Division (6WQ)
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Dear Mr. Larsen:

Subject: National Pollutant Discharge Elimination System (NPDES) Permit Tracking No. NMR053195, Multi-Sector General Permit (MSGP) Notice of Intent (NOI) Reporting Pursuant to Part B.12.H.

In submitting a NOI for coverage under the new NPDES Multi-Sector General Permit, Los Alamos National Security (LANS) experienced significant problems with EPA's NeT NPDES eReporting Tool which resulted in certification of the NOI on September 3 and initial submission of a NOI with incomplete outfall attribute data and incorrect information. During this time LANS staff contacted EPA's NOI Processing Center for support and was given the recommendation to contact Region 6 personnel for further guidance. Per this direction, on September 1, 2015, Terrill Lemke left you a voicemail summarizing the issues and potential impacts of the difficulties experienced with the new electronic reporting system. For additional clarification, the following is a summary of the timeline of events associated with the NOI submission.

- Monday, August 31, 2015
 - Initiated NOI submission using the NeT NPDES eReporting Tool.



Mr. Brent Larsen
ENV-DO-15-0309

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- As data was entered into each data field on the NOI form, the Tool was very slow in processing the data and allowing entry into the next field. This created a significant waiting time.
- Upon reaching the fields on the NOI form where outfall attribute data was entered the Tool began to randomly crash, repeatedly deleting all unsaved data.
- Tuesday, September 1, 2015
 - Tool continued to be very slow and randomly crash, repeatedly deleting all unsaved data.
 - For each outfall, when listing the constituents associated with impaired waters, the Tool's auto population feature initially displayed incorrect data which required additional editing and then eventually stopped functioning and caused the Tool to crash.
 - Much of the outfall attribute data had to be reentered multiple times before it was possible to successfully save it to the system.
 - After each save or Tool crash the eReporting Tool would close the NOI form. The time required for the Tool to repeatedly reopen the form made data entry very time consuming.
 - LANS staff contacted the EPA NOI Processing Center on the afternoon of Sept 1 for technical support:
 - NOI Processing Center staff stated that they had been "flooded" with calls over the past week on Tool problems.
 - LANS staff expressed their concern about the length of time being required to enter data and the potential inability to complete the NOI form by the Sept 2 deadline. No solution was available.
 - LANS staff explained the difficulty with entering outfall information for 73 outfalls and NOI Processing Center staff stated that they had received numerous calls on problems with entering outfall data and that some permittees couldn't even enter 20 outfalls.
 - NOI Processing Center staff recommended contacting Regional personnel to notify them of the situation and to seek additional guidance.
 - The eReporting Tool went down at approximately 3:30 pm MDT and remained down until after 9 pm MDT. This eliminated the opportunity to input data during normal business hours.
- Wednesday, September 2, 2015
 - Continued decrease in the performance of the eReporting Tool.
 - Increase in the time for the Tool to process information after entry of each item of data.
 - Increased frequency in the Tool crashing.
 - For each outfall, when listing the constituents associated with impaired waters, the form had to be saved after entry of each individual constituent. Entry of more than one constituent without saving would cause the Tool to crash.

Mr. Brent Larsen
ENV-DO-15-0309

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- With the decreased performance of the eReporting Tool LANS staff contacted the EPA NOI Processing Center for direction and Processing Center staff stated the following:
 - They were aware of the problems with the Tool but could provide no solutions or technical direction.
 - They had been reporting daily to EPA on the problems and EPA was definitely aware of the issues.
 - When asked about taking the Tool down at 3:30 MDT on Sept. 1, staff stated that they thought the programmers may have taken the system down to assess the problems.
 - Stated again that they had received many calls about technical issues with the Tool.
 - The more data that was entered the slower the Tool would get.
 - When asked again about the possibility that LANS may not be able to get all information into the NOI, staff stated that LANS would be able to access the submitted NOI to modify/add data after the 30 day waiting period.
- eReporting Tool went down again at 3:30 pm MDT and did not come back up until after 10 pm MDT, again eliminating the opportunity to input data during normal business hours.
- The LANS NOI with all information except some remaining outfall attribute data was submitted by the Preparer at 10:50 pm MDT.
 - The LANS NOI certification signatory was prepared to certify the NOI at this time but didn't get notification that the NOI was ready for certification until 9:37 am MDT on Sept. 3, almost 11 hours later.
 - The NOI was certified on Sept 3, 2015.

Additionally, the NeT NPDES eReporting Tool did not provide dissolved Thallium as a constituent option, but only allowed the selection of total Thallium as an impaired water pollutant under a "Cause Group" when "Metals (other than Mercury)" was selected from the drop down menu. This resulted in LANS having to enter total Thallium as an impaired water pollutant in error for the following outfalls: 002, 005, 006, 007, 008, 009, 010, 011, 012, 016, 017, 018, 019, and 020. LANS appreciates any assistance you may have relative to the total Thallium vs. dissolved Thallium issue. During a subsequent quality assurance evaluation, LANS staff also determined that total Copper was erroneously entered as an impaired water pollutant for outfall 051 and needs to be deleted from the NOI.

LANS is committed to maintaining compliance with the MSGP requirements. Per Section B.12.H of the MSGP, the LANS NOI will be modified to include the remaining outfall attribute data that could not be included on the initial submission and to delete Copper as an impaired water pollutant for outfall 051. LANS coverage under the 2015 MSGP became effective on October 3, 2015, and with the NOI now accessible, actions to update the NOI have been initiated.

Mr. Brent Larsen
ENV-DO-15-0309

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Any additional direction or guidance you may have would be appreciated. Please contact Terrill W. Lemke at (505) 665-2397 of the Environmental Compliance Programs (ENV-CP) if you have any questions.

Sincerely,



Anthony R. Grieggs
Group Leader
Environmental Compliance Programs (ENV-CP)
Los Alamos National Security, LLC

ARG:MTS:TWL:HLW/lm

Cy: Nasim Jahan, USEPA/Region 6, Dallas, TX, (E-File)
Bruce Yurdin, NMED/SWQB, Santa Fe, NM, (E-File)
Gene E. Turner, LASO-NS-LP, (E-File)
Jordan Arnsward, LASO-NS-PI, (E-File)
Kirsten Laskey, EM-LA, (E-File)
Craig Leasure, PADOPS, (E-File)
Amy E. De Palma, PADOPS, (E-File)
Michael T. Brandt, ADESH, (E-File)
Raeanna Sharp-Geiger, ADESH, (E-File)
Alison M. Dorries, ENV-DO, (E-File)
Michael T. Saladen, ENV-CP, (E-File)
Terrill W. Lemke, ENV-CP, (E-File)
Holly L. Wheeler, ENV-CP, (E-File)
Timothy A. Dolan, LC-ESH, (E-File)
lasomailbox@nnsa.doe.gov, (E-File)
locatesteam@lanl.gov, (E-File)
env-correspondence@lanl.gov

From: [Lemke, Terrill W](#)
To: [Wheeler, Holly Lynn](#); [Greggs, Tony](#)
Subject: FW: EPA Multi-Sector General Permit (MSGP) Authorization is Active – Los Alamos National Laboratory, NPDES ID: NMR053195, NeT Submission ID: MSGP-3095
Date: Monday, October 05, 2015 8:22:15 AM
Attachments: [AcceptedNewNOIReceipt.pdf](#)

Terrill Lemke, PE, CPESC, CISEC
Environmental Compliance Programs
Los Alamos National Laboratory
Los Alamos, NM
Office: 505-665-2397
Cell: 505-699-0725

From: NeT@epa.gov [mailto:NeT@epa.gov]
Sent: Saturday, October 03, 2015 5:48 PM
To: Dorries, Allison Marie
Cc: Lemke, Terrill W; lee.won@epa.gov; lescur.nasrin@epa.gov; emily@avantincorporation.com; farris.erika@epa.gov; Christiane@avantincorporation.com; blus.catherine@epa.gov
Subject: EPA Multi-Sector General Permit (MSGP) Authorization is Active – Los Alamos National Laboratory, NPDES ID: NMR053195, NeT Submission ID: MSGP-3095

2015-10-03

Your Notice of Intent (NOI) requesting coverage for Los Alamos National Laboratory, PO Box 1663 MS K490 Los Alamos NM 87545 under EPA's Multi-Sector General Permit (MSGP) has been accepted and authorization to discharge under the MSGP became effective at the conclusion of your 30-day waiting period, on 2015-10-03.

For tracking purposes, the following NPDES ID has been assigned to your NOI: NMR053195. Attached to this email, you will find a copy of your completed NOI form. To access your NOI in NeT, please visit: https://cdx.epa.gov/epa_home.asp.

As you know, the MSGP requires you to have developed a Stormwater Pollution Prevention Plan (SWPPP) prior to submitting your NOI. The MSGP also includes specific requirements for implementing control measures (e.g., minimize exposure, good housekeeping, maintenance, spill prevention and response), conducting self-inspections and visual assessments of your discharges, taking corrective actions, and conducting staff training. You must comply with any specific requirements applicable to your industrial sector(s) in Part 8 and any state/tribal-specific requirements in Part 9 (see <http://water.epa.gov/polwaste/npdes/stormwater/EPA-Multi-Sector-General-Permit-MSGP.cfm>). You are also required to submit an Annual Report in accordance with Part 7.5 of the MSGP that will contain the results from your past year's routine facility inspections, quarterly visual assessments, and corrective actions. Annual Reports must be submitted to EPA through NeT.

The MSGP 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 and Part 8);
- Annual effluent limitations guidelines monitoring (see Part 6.2.2 and Part 8);
- State- or tribal-specific monitoring (see Part 6.2.3 and Part 9);
- Impaired waters monitoring (see Part 6.2.4); and
- Other monitoring as required by EPA (see Part 6.2.5).

Monitoring requirements in the MSGP (i.e., parameters required to be monitored and sample frequency) will be prepopulated on your electronic Discharge Monitoring Report (DMR) in EPA's NetDMR system, which is accessed at <http://www.epa.gov/netdmr/>. Where you have determined that no monitoring requirements apply to your discharge, there is no need to access the NetDMR system. In order to obtain access to this system, you must complete the electronic signature process. Please refer to the following guidance for information about submitting monitoring reports through NetDMR:

<http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm>.

Please note that this email does not represent a determination by EPA regarding the validity of the information you provided in your NOI. Your eligibility for coverage under this permit is based on the validity of the certification you provided. Your electronic signature on the NOI form certifies that you have read, understood, and are implementing all of the applicable requirements. An important aspect of this certification requires that you have correctly determined whether you are eligible for coverage under this permit.

The 2014 MSGP and additional guidance are available at:

<http://water.epa.gov/polwaste/npdes/stormwater/EPA-Multi-Sector-General-Permit-MSGP.cfm>. Please contact your EPA Regional permitting authority at lee.won@epa.gov; lescure.nasrin@epa.gov; emily@avanticorporation.com; farris.erika@epa.gov; Christiane@avanticorporation.com; bius.catherine@epa.gov for more information.

This is an automated response; please do not reply to this email.



Environmental Protection Division
Environmental Compliance Programs (ENV-CP)
 PO Box 1663, K490
 Los Alamos, New Mexico 87545
 (505) 667-0666

Date: NOV 24 2015
Symbol: ENV-DO-15-0328
LA-UR: 15-29016
Locates Action No.: N/A

U.S. Environmental Protection Agency
 Office of Water, Water Permits Division
 Mail Code 4203M, ATTN: MSGP Reports
 1200 Pennsylvania Avenue, NW
 Washington, D.C. 20460

To Whom It May Concern:

Subject: National Pollutant Discharge Elimination System (NPDES) Permit Tracking No. NMR05GB21, Multi-Sector General Permit (MSGP) 2015 Comprehensive Site Inspection Documentation

The purpose of this letter is to notify EPA that Los Alamos National Security (LANS) conducted its Comprehensive Site Inspection at Los Alamos National Laboratory September 8 through 29, 2015, in accordance with Part 4.3 of the 2008 MSGP. On October 3, 2015, the LANS authorization to discharge under the 2015 MSGP became effective. The 2015 Annual Report would have been due on November 13, 2015 (45 days after the last day of the inspection) under the 2008 MSGP. However, due to coverage under the new 2015 MSGP superseding the 2008 requirements, LANS will provide the information collected from the 2015 Comprehensive Site Inspection and other required documentation identified in Part 7.5 of the 2015 MSGP in the 2015 Annual Report to be submitted by January 30th 2016. This Report will contain the following:

- A summary of the past year's routine facility inspection documentation (2015 MSGP Part 3.1.2) from September 1, 2015 through the end of 2015 calendar year;
- A summary of the past years quarterly visual assessment documentation (2015 MSGP Part 3.2.2);
- For any four-sample (minimum) average benchmark monitoring exceedance, if after reviewing the selection, design, installation, and implementation of control measures and considering whether any modifications are necessary to meet the effluent limits in the permit, a determination is made that no further pollutant reductions are technologically available and economically practicable and

USEPA MSGP Reports
ENV-DO-15-0328

achievable in light of best industry practice, the rationale for no further reductions being achievable (2015 MSGP Part 6.2.1.2); and

- A summary of the past year's corrective action documentation (2015 MSGP Part 4.4) from September 1, 2015 through the end of the 2015 calendar year.

The Annual Report will be signed and certified in accordance with Appendix B, Subsection 11. Please contact Terrill W. Lemke at (505) 665-2397 or Holly Wheeler at (505) 667-1312 if you have questions.

Sincerely,



Anthony R. Grieggs
Group Leader
Environmental Compliance Programs (ENV-CP)
Los Alamos National Security, LLC

ARG:TWL:HLW/lm

Cy: Nasim Jahan, USEPA/Region 6, Dallas, TX, (E-File)
Bruce Yurdin, NMED/SWQB, Santa Fe, NM, (E-File)
Michelle Hunter, NMED/GWQB, Santa Fe, NM, (E-File)
Gene E. Turner, LASO-NS-LP, (E-File)
Jordan Arnsward, LASO-NS-PI, (E-File)
Kirsten Laskey, LASO-SUP, (E-File)
Craig Leasure, PADOPS, (E-File)
Amy E. De Palma, PADOPS, (E-File)
Michael T. Brandt, ADESH, (E-File)
Raeanna Sharp-Geiger, ADESH, (E-File)
Alison M. Dorries, ENV-DO, (E-File)
Terrill W. Lemke, ENV-CP, (E-File)
Holly L. Wheeler, ENV-CP, (E-File)
lasomailbox@nnsa.doe.gov, (E-File)
locatesteam@lanl.gov, (E-File)
env-correspondence@lanl.gov



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

Note: This is a "smart form"; as you fill out the form, additional questions will appear that you will need to answer.

Permit Information

1. What action would you like to take? *

File a New Notice of Intent Form

Submission of this Notice of Intent (NOI) constitutes notice that the operator identified in the Facility Operator Information section of this form requests authorization to discharge pursuant to the NPDES Stormwater Multi-Sector General Permit (MSGP) permit number identified in the Permit Information section of this form. Submission of this NOI also constitutes notice that the operator identified in the Facility Operator Information section of this form meets the eligibility conditions of Part 1.1 of the MSGP for the facility identified in the Facility Information section 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.

Operator Name (Organization Name) *

LOS ALAMOS NATIONAL LABORATORY

Operator Name as Noted by the NOI Preparer

Los Alamos National Security, LLC

2. Select the state/territory where your facility is located *

NM

3. Is your facility located on Indian Country lands? *

☐ Yes

☒ No

4. Are you requesting coverage as a "federal operator" as defined in Appendix A? *

☒ Yes

☐ No

5. Are you a new discharger or a new source as defined in Appendix A7? *

☐ Yes ☒ No

5a. Have stormwater discharges from your facility been covered previously under an NPDES permit? *

☒ Yes ☐ No

5aa. Provide your most current NPDES ID (i.e., permit tracking number) if you had coverage under EPA's MSGP 2008 or the NPDES permit number if you had coverage under an EPA individual permit *

NMR05GB21

6. Do you directly 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 3 water (Outstanding Natural Resource Water) (See Appendix L)? Your project will be considered to discharge to a Tier 3 water if the first water of the US to which you discharge is identified by a state, tribe, or EPA as a Tier 3 water. For discharges that enter a storm sewer system prior to discharge, the first water of the US to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system. *

☐ Yes ☒ No

7. Does your facility directly discharge to a Federal CERCLA site listed in Appendix P? 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 through a conveyance owned by others, such as a municipal separate storm sewer system. *

☐ Yes ☒ No

8. Has the Stormwater Pollution Prevention Plan (SWPPP) been prepared in advance of filing this NOI, as required? *

☒ Yes ☐ No

9. By indicating "Yes", 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 in Part 1.1.3. Any discharges not expressly authorized under the MSGP are not covered by the MSGP and they cannot become authorized by disclosure to EPA and/or a state via this Notice of Intent to be covered by the permit or by any other means (e.g., in the Stormwater Pollution Prevention Plan 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 be covered under another NPDES permit. *

☒ Yes ☐ No

10. Master Permit Number

NMR050000

A: Facility Operator Information

1. Operator Name (Organization Name) *

LOS ALAMOS NATIONAL LABORATORY

2. Street *

PO Box 1663

3. Supplemental Address

MS K490

4. City *

Los Alamos

5. State *

NM

6. Zip Code *

87545

7. Facility County or Similar Govt. Subdivision *

Los Alamos

8. Phone (10-digits, No dashes) *

5056671312

9. Extension

10. E-Mail *

hbenson@lanl.gov

Operator point of contact information

11. First Name *

Holly

12. Middle Initial

13. Last Name *

Wheeler

14. Professional Title *

Environmental Professional

B: Facility Information

1. Facility Name *		<input checked="" type="checkbox"/> Facility address same as facility operator address	
Los Alamos National Laboratory			
2. Street/Location *			
PO Box 1663			
3. Supplemental Address			
MS K490			
4. City *	5. State *	6. Zip Code *	7. Facility County or Similar Govt. Subdivision *
Los Alamos	NM	87545	Los Alamos
Latitude/Longitude for the facility:			
8. Latitude (Decimal Degrees) *	9. Longitude (Decimal Degrees) *	10. Latitude/Longitude Data Source *	11. Horizontal Reference Datum
+ 35.872777	- 106.321127	Other	WGS84
12. What is the ownership type of the facility *	13. Estimated area of industrial activity at your facility exposed to stormwater (to the nearest quarter acre) *		
Federal Facility (U.S. Government)	126		
Identify the applicable sector and subsector of your primary industrial activity (See Appendix D) that best represents the products produced or services rendered for which your facility is primarily engaged, as defined in the MSGP, and the 4-digit Standard Industrial Classification (SIC) code or 2-letter Activity Code:			
15. Sector *	16. Primary SIC Code *		
SECTOR AA: FABRICATED METAL PRODUCTS	3449: Miscellaneous Metal Work		
17. Subsector			
AA1: Fabricated Metal Products, Except Machinery and Transportation Equipment, and Coating, Engraving, and Allied Services.			

18. Identify the applicable sector(s) of any co-located industrial activity for which you are requesting permit coverage.

Sector SECTOR P: LAND TRANSPORTATION AND WAREHOUSING	Subsector * P1: Motor Freight Transportation and Warehousing	Delete Sector
Sector SECTOR K: HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES	Subsector * K1: Hazardous Waste Treatment, Storage, or Disposal Facilities, including those that are operati	Delete Sector
Sector SECTOR A: TIMBER PRODUCTS	Subsector * A4: Wood Products, Not Elsewhere Classified	Delete Sector
Sector SECTOR D: ASPHALT PAVING AND ROOFING MATERIALS AND LUBRICANTS	Subsector * D1: Asphalt Paving and Roofing Materials	Delete Sector
Sector SECTOR O: STEAM ELECTRIC GENERATING FACILITIES	Subsector * O1: Steam Electric Generating Facilities, including coal handling sites	Delete Sector
Sector SECTOR F: PRIMARY METALS	Subsector * F4: Nonferrous Foundries (Castings)	Delete Sector
Sector SECTOR N: SCRAP RECYCLING FACILITIES	Subsector * N2: Source-separated Recycling Facility	Delete Sector
Add Sector		

22. Is your facility presently inactive and unstaffed? *

☐ Yes ☒ No

C: Discharge Information

1. Does your facility discharge into any saltwater receiving waters? *

☐ Yes ☒ No

2. What is the hardness of your receiving water(s) (see Appendix J) *

50-74.99 mg/L

3. Identify if the following Effluent Limitation Guideline(s) apply to any of your discharges

40 CFR Part/Subpart: Part 423	Eligible Discharges: Coal pile runoff at steam electric generating facilities	Affected MSGP Sector: O	New Source Date: 11/19/1982, 10/8/1974 ¹	Does your facility have any discharges subject to this effluent limitation guideline? *
				<input type="radio"/> Yes <input checked="" type="radio"/> No
40 CFR Part/Subpart: Part 429, Subpart I	Eligible Discharges: Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	Affected MSGP Sector: A	New Source Date: 1/26/1981	Does your facility have any discharges subject to this effluent limitation guideline? *
				<input type="radio"/> Yes <input checked="" type="radio"/> No
40 CFR Part/Subpart: Part 443, Subpart A	Eligible Discharges: Runoff from asphalt emulsion facilities	Affected MSGP Sector: D	New Source Date: 7/28/1975	Does your facility have any discharges subject to this effluent limitation guideline? *
				<input checked="" type="radio"/> Yes <input type="radio"/> No

Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	
002	+	35.875801	- 106.327538
			Lookup Receiving Waters Information <small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>
Delete Outfall			
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Pollutant			
Aluminum, total [as Al]			
Delete Pollutant			
Pollutant			
Copper, total [as Cu]			
Delete Pollutant			
Pollutant			
Alpha, total			
Delete Pollutant			
Pollutant			
PCB IN WATER COLUMN			
Delete Pollutant			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
METALS (OTHER THAN MERCURY)		Thallium, total [as Tl]	
		Delete Pollutant	

Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	
003	35.876369	106.326492	<div style="float: right;"> <div style="border: 1px solid black; padding: 2px; margin-right: 10px;">Lookup Receiving Waters Information</div> <div style="border: 1px solid black; padding: 2px;">Delete Outfall</div> </div> <div style="clear: both;"></div> <small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		002	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
5. Multiple Receiving Waters were returned for your outfall. Please select the receiving water that is associated with your outfall from this list: *			
LOS ALAMOS CANYON (DP CANYON TO UPPER LANL BND)			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
LOS ALAMOS CANYON (DP CANYON TO UPPER LANL BND)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Pollutant			
Aluminum, total (as Al)			
Delete Pollutant			
Pollutant			
Alpha, total			
Delete Pollutant			
Pollutant			
PCB IN WATER COLUMN			

<input type="button" value="Delete Pollutant"/>						
Please select the cause group and pollutant for which the waterbody is impaired:						
Cause Group * <input type="text" value="MERCURY"/>	Pollutant * <input type="text" value="Mercury, total [as Hg]"/>	<input type="button" value="Delete Pollutant"/>				
<input type="button" value="Add Impairment Pollutant Associated with this Waterbody"/>						
3. Has a TMDL been completed for this receiving waterbody? * <input type="radio"/> Yes <input checked="" type="radio"/> No						
Outfalls 4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.						
A. Outfall ID * <input type="text" value="005"/>	+	B. Latitude (Decimal Degrees) * <input type="text" value="35.873908"/>	-	C. Longitude (Decimal Degrees) * <input type="text" value="106.320709"/>	<input type="button" value="Lookup Receiving Waters Information"/>	<input type="button" value="Delete Outfall"/>
(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)						
D. Substantially Identical to Any Outfalls Listed Above? * <input type="radio"/> Yes <input checked="" type="radio"/> No						
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.						
Outfall Section 1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect) * <input type="text" value="SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)"/>						
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? * <input checked="" type="radio"/> Yes <input type="radio"/> No						
4. List the pollutants that are causing the impairment:						
Pollutant <input type="text" value="Aluminum, total [as Al]"/>						
<input type="button" value="Delete Pollutant"/>						
Pollutant <input type="text" value="Copper, total [as Cu]"/>						
<input type="button" value="Delete Pollutant"/>						

Pollutant			
Alpha, total			
Delete Pollutant			
Pollutant			
PCB IN WATER COLUMN			
Delete Pollutant			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
METALS (OTHER THAN MERCURY)		Thallium, total [as Tl]	
		Delete Pollutant	
Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *		B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *
006	+	35.874002	- 106.319825
			Lookup Receiving Waters Information <small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>
			Delete Outfall
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		005	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Pollutant			
Aluminum, total [as Al]			

Delete Pollutant		
Pollutant Copper, total [as Cu]		
Delete Pollutant		
Pollutant Alpha, total		
Delete Pollutant		
Pollutant PCB IN WATER COLUMN		
Delete Pollutant		
Please select the cause group and pollutant for which the waterbody is impaired:		
Cause Group *	Pollutant *	Delete Pollutant
METALS (OTHER THAN MERCURY)	Thallium, total [as Tl]	
Add Impairment Pollutant Associated with this Waterbody		
3. Has a TMDL been completed for this receiving waterbody? *		
<input type="radio"/> Yes <input checked="" type="radio"/> No		
Outfalls		
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.		
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *
009	35.874951	106.319263
Lookup Receiving Waters Information		Delete Outfall
(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)		
D. Substantially Identical to Any Outfalls Listed Above? *		
<input type="radio"/> Yes <input checked="" type="radio"/> No		
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.		
Outfall Section		

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1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *		
SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)		
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *		
<input checked="" type="radio"/> Yes <input type="radio"/> No		
4. List the pollutants that are causing the impairment:		
Pollutant		
Aluminum, total [as Al]		
Delete Pollutant		
Pollutant		
Copper, total [as Cu]		
Delete Pollutant		
Pollutant		
Alpha, total		
Delete Pollutant		
Pollutant		
PCB IN WATER COLUMN		
Delete Pollutant		
Please select the cause group and pollutant for which the waterbody is impaired:		
Cause Group *	Pollutant *	
METALS (OTHER THAN MERCURY)	Thallium, total [as Tl]	Delete Pollutant
Add Impairment Pollutant Associated with this Waterbody		
3. Has a TMDL been completed for this receiving waterbody? *		
<input type="radio"/> Yes <input checked="" type="radio"/> No		
Outfalls		
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.		
A. Outfall ID *		
007		

B. Latitude (Decimal Degrees) *		C. Longitude (Decimal Degrees) *		Lookup Receiving Waters Information <small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>	Delete Outfall
+	35.874095	-	106.319009		
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially Identical to outfall ID *			
<input checked="" type="radio"/> Yes <input type="radio"/> No		009			
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.					
Outfall Section					
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *					
SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)					
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *					
<input checked="" type="radio"/> Yes <input type="radio"/> No					
4. List the pollutants that are causing the impairment:					
Pollutant					
Aluminum, total [as Al]					
Delete Pollutant					
Pollutant					
Copper, total [as Cu]					
Delete Pollutant					
Pollutant					
Alpha, total					
Delete Pollutant					
Pollutant					
PCB IN WATER COLUMN					
Delete Pollutant					
Please select the cause group and pollutant for which the waterbody is impaired:					
Cause Group *		Pollutant *		Delete Pollutant	
METALS (OTHER THAN MERCURY)		Thallium, total [as Tl]			

Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *		B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *
008	+	35.874306	- 106.318891
			Lookup Receiving Waters Information <small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>
			Delete Outfall
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially Identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		009	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Pollutant			
Aluminum, total [as Al]			
Delete Pollutant			
Pollutant			
Copper, total [as Cu]			
Delete Pollutant			
Pollutant			
Alpha, total			
Delete Pollutant			

Pollutant PCB IN WATER COLUMN <input type="button" value="Delete Pollutant"/>			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group * METALS (OTHER THAN MERCURY)	Pollutant * Thallium, total [as Tl]	<input type="button" value="Delete Pollutant"/>	
<input type="button" value="Add Impairment Pollutant Associated with this Waterbody"/>			
3. Has a TMDL been completed for this receiving waterbody? * <input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls 4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID * 010	B. Latitude (Decimal Degrees) * 35.874014	C. Longitude (Decimal Degrees) * 106.318428	<input type="button" value="Lookup Receiving Waters Information"/>
		<input type="button" value="Delete Outfall"/>	
(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)			
D. Substantially Identical to Any Outfalls Listed Above? * <input checked="" type="radio"/> Yes <input type="radio"/> No		E. Substantially Identical to outfall ID * 009	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section 1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect). * SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? * <input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Pollutant Aluminum, total [as Al] <input type="button" value="Delete Pollutant"/>			
Pollutant Copper, total [as Cu]			

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Delete Pollutant			
Pollutant Alpha, total			
Delete Pollutant			
Pollutant PCB IN WATER COLUMN			
Delete Pollutant			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Thallium, total [as Tl]		
Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	Delete Outfall
011	35.875560	106.320764	Lookup Receiving Waters Information
<small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>			
D. Substantially identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		012	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			

Pollutant		
Aluminum, total [as Al]		
Delete Pollutant		
Pollutant		
Copper, total [as Cu]		
Delete Pollutant		
Pollutant		
Alpha, total		
Delete Pollutant		
Pollutant		
PCB IN WATER COLUMN		
Delete Pollutant		
Please select the cause group and pollutant for which the waterbody is impaired:		
Cause Group *	Pollutant *	Delete Pollutant
METALS (OTHER THAN MERCURY)	Thallium, total [as Tl]	
Add Impairment Pollutant Associated with this Waterbody		
3. Has a TMDL been completed for this receiving waterbody? *		
<input type="radio"/> Yes <input checked="" type="radio"/> No		
Outfalls		
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.		
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *
012	35.875506	106.320842
Lookup Receiving Waters Information		Delete Outfall
(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)		
D. Substantially Identical to Any Outfalls Listed Above? *		
<input type="radio"/> Yes <input checked="" type="radio"/> No		
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.		

Outfall Section		
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect). *		
SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)		
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *		
<input checked="" type="radio"/> Yes <input type="radio"/> No		
4. List the pollutants that are causing the impairment:		
Pollutant		
Aluminum, total [as Al]		
Delete Pollutant		
Pollutant		
Copper, total [as Cu]		
Delete Pollutant		
Pollutant		
Alpha, total		
Delete Pollutant		
Pollutant		
PCB IN WATER COLUMN		
Delete Pollutant		
Please select the cause group and pollutant for which the waterbody is impaired:		
Cause Group *	Pollutant *	
METALS (OTHER THAN MERCURY)	Thallium, total [as Tl]	Delete Pollutant
Add Impairment Pollutant Associated with this Waterbody		
3. Has a TMDL been completed for this receiving waterbody? *		
<input type="radio"/> Yes <input checked="" type="radio"/> No		
Outfalls		
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.		

A. Outfall ID *		B. Latitude (Decimal Degrees) *		C. Longitude (Decimal Degrees) *		
004	+	35.871465	-	106.323844	Lookup Receiving Waters Information <small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>	Delete Outfall
D. Substantially Identical to Any Outfalls Listed Above? * <input type="radio"/> Yes <input checked="" type="radio"/> No						
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.						
Outfall Section 1. 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. <small>(You may edit the name of the water of the U.S. that was returned if incorrect) *</small> TWO MILE CANYON (PAJARITO TO HEADWATERS)						
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? * <input checked="" type="radio"/> Yes <input type="radio"/> No						
4. List the pollutants that are causing the impairment: Please select the cause group and pollutant for which the waterbody is impaired:						
Cause Group *		Pollutant *		Delete Pollutant		
METALS (OTHER THAN MERCURY)		Aluminum, total (as Al)				
Please select the cause group and pollutant for which the waterbody is impaired:						
Cause Group *		Pollutant *		Delete Pollutant		
RADIATION		Alpha, total				
Please select the cause group and pollutant for which the waterbody is impaired:						
Cause Group *		Pollutant *		Delete Pollutant		
POLYCHLORINATED BIPHENYLS (PCBS)		Polychlorinated biphenyls (PCBs)				
Add Impairment Pollutant Associated with this Waterbody						
3. Has a TMDL been completed for this receiving waterbody? * <input type="radio"/> Yes <input checked="" type="radio"/> No						
Outfalls 4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.						
A. Outfall ID *		B. Latitude (Decimal Degrees) *		C. Longitude (Decimal Degrees) *		
018	+	35.872781	-	106.317616	Lookup Receiving Waters Information <small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>	Delete Outfall

D. Substantially Identical to Any Outfalls Listed Above? *

☐ Yes ☒ No

If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.

Outfall Section

1. 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.
(You may edit the name of the water of the U.S. that was returned if incorrect.) *

SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)

2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *

☒ Yes ☐ No

4. List the pollutants that are causing the impairment:

Pollutant

Aluminum, total [as Al]

Delete Pollutant

Pollutant

Copper, total [as Cu]

Delete Pollutant

Pollutant

Alpha, total

Delete Pollutant

Pollutant

PCB IN WATER COLUMN

Delete Pollutant

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group *

METALS (OTHER THAN MERCURY)

Pollutant *

Thallium, total [as Tl]

Delete Pollutant

Add Impairment Pollutant Associated with this Waterbody

3. Has a TMDL been completed for this receiving waterbody? *

☐ Yes ☒ No

Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div>Lookup Receiving Waters Information</div> <div>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</div>
014	35.870641	106.316865	Delete Outfall
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially Identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		018	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
MORTANDAD CANYON (WITHIN LANL)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
RADIATION	Alpha, total		
Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			

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Outfalls

4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.

A. Outfall ID * B. Latitude (Decimal Degrees) * C. Longitude (Decimal Degrees) *

013 + 35.870783 - 106.317349 **Lookup Receiving Waters Information** **Delete Outfall**

(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)

D. Substantially Identical to Any Outfalls Listed Above? * E. Substantially identical to outfall ID *

☒ Yes ☐ No 018

If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.

Outfall Section

1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *

MORTANDAD CANYON (WITHIN LANI)

2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *

☒ Yes ☐ No

4. List the pollutants that are causing the impairment:

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant * **Delete Pollutant**

METALS (OTHER THAN MERCURY) Aluminum, total [as Al]

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant * **Delete Pollutant**

METALS (OTHER THAN MERCURY) Copper, total [as Cu]

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant * **Delete Pollutant**

RADIATION Alpha, total

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant * **Delete Pollutant**

POLYCHLORINATED BIPHENYLS (PCBS) Polychlorinated biphenyls (PCBs)

Add Impairment Pollutant Associated with this Waterbody

3. Has a TMDL been completed for this receiving waterbody? *

☐ Yes ☒ No

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Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div>Lookup Receiving Waters Information</div> <div>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</div>
013	35.870783	106.317349	Delete Outfall
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		018	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
MORTANDAD CANYON (WITHIN LANI)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Aluminum, total (as Al)		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Copper, total (as Cu)		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
RADIATION	Alpha, total		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)		
Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			

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Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div>Lookup Receiving Waters Information</div> <div>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</div>
015	35.871403	106.316276	Delete Outfall
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		018	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
MORTANDAD CANYON (WITHIN LANL)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
RADIATION	Alpha, total		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)		
Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			

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Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div>Lookup Receiving Waters Information</div> <div>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</div>
016	35.872553	106.316810	Delete Outfall
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		018	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Thallium, total [as Tl]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
RADIATION	Alpha, total		

Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? * <input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls 4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID * <input type="text" value="017"/>	B. Latitude (Decimal Degrees) * <input type="text" value="35.872752"/>	C. Longitude (Decimal Degrees) * <input type="text" value="106.317329"/>	<input type="button" value="Delete Outfall"/>
D. Substantially Identical to Any Outfalls Listed Above? * <input checked="" type="radio"/> Yes <input type="radio"/> No		E. Substantially Identical to outfall ID * <input type="text" value="018"/>	
<input type="button" value="Lookup Receiving Waters Information"/> <small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>			
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section 1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) * <input type="text" value="SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)"/>			
2. Is the receiving water listed as Impaired on the 303(d) list and in need of a TMDL? * <input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment: Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group * <input type="text" value="METALS (OTHER THAN MERCURY)"/>	Pollutant * <input type="text" value="Aluminum, total [as Al]"/>		<input type="button" value="Delete Pollutant"/>
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group * <input type="text" value="METALS (OTHER THAN MERCURY)"/>	Pollutant * <input type="text" value="Copper, total [as Cu]"/>		<input type="button" value="Delete Pollutant"/>
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group * <input type="text" value="METALS (OTHER THAN MERCURY)"/>	Pollutant * <input type="text" value="Thallium, total [as Tl]"/>		<input type="button" value="Delete Pollutant"/>
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group * <input type="text" value="POLYCHLORINATED BIPHENYLS (PCBS)"/>	Pollutant * <input type="text" value="Polychlorinated biphenyls (PCBs)"/>		<input type="button" value="Delete Pollutant"/>

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Outfalls

4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.

A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	Lookup Receiving Waters Information <small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>	Delete Outfall
013	35.870783	106.317349		

D. Substantially Identical to Any Outfalls Listed Above? * ☒ Yes ☐ No

E. Substantially Identical to outfall ID * 018

If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.

Outfall Section

1. 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.
(You may edit the name of the water of the U.S. that was returned if incorrect.) *

MORTANDAD CANYON (WITHIN LANL)

2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *

☒ Yes ☐ No

4. List the pollutants that are causing the impairment:

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group *	Pollutant *	Delete Pollutant
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]	

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group *	Pollutant *	Delete Pollutant
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]	

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group *	Pollutant *	Delete Pollutant
RADIATION	Alpha, total	

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group *	Pollutant *	Delete Pollutant
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)	

Add Impairment Pollutant Associated with this Waterbody

3. Has a TMDL been completed for this receiving waterbody? *

☐ Yes ☒ No

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Outfalls

4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.

A. Outfall ID * B. Latitude (Decimal Degrees) * C. Longitude (Decimal Degrees) *

(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)

D. Substantially Identical to Any Outfalls Listed Above? * ☒ Yes ☐ No E. Substantially identical to outfall ID *

If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.

Outfall Section

1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *

2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *

☒ Yes ☐ No

4. List the pollutants that are causing the impairment:

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant *

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant *

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant *

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant *

3. Has a TMDL been completed for this receiving waterbody? *

☐ Yes ☒ No

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Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div> <div> <div>016</div> <div>+</div> <div>35.872553</div> <div>-</div> <div>106.316810</div> </div> <div> <div>Lookup Receiving Waters Information</div> <div>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</div> </div> <div> <div>Delete Outfall</div> </div> </div>
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		<div>018</div>	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section 1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) * <div>SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)</div>			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? * <input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment: Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	Delete Pollutant
METALS (OTHER THAN MERCURY)		Aluminum, total [as Al]	
Cause Group *		Pollutant *	Delete Pollutant
METALS (OTHER THAN MERCURY)		Copper, total [as Cu]	
Cause Group *		Pollutant *	Delete Pollutant
METALS (OTHER THAN MERCURY)		Thallium, total [as Tl]	
Cause Group *		Pollutant *	Delete Pollutant
POLYCHLORINATED BIPHENYLS (PCBS)		Polychlorinated biphenyls (PCBs)	
Cause Group *		Pollutant *	Delete Pollutant
RADIATION		Alpha, total	

Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	Lookup Receiving Waters Information <small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>
017	35.872752	106.317329	
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		018	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
METALS (OTHER THAN MERCURY)	Thallium, total [as Tl]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)		

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Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? * <input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls 4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <input type="text" value="017"/> <input type="text" value="+"/> <input type="text" value="35.872752"/> <input type="text" value="-"/> <input type="text" value="106.317329"/> </div> <div style="text-align: center;"> <input type="button" value="Lookup Receiving Waters Information"/> </div> <div style="text-align: center;"> <input type="button" value="Delete Outfall"/> </div> </div> <div style="font-size: small; margin-top: 5px;"> (This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect) </div>
D. Substantially identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		<input type="text" value="018"/>	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section 1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) * <input style="width: 100%;" type="text" value="SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)"/>			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? * <input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment: Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
<input type="text" value="METALS (OTHER THAN MERCURY)"/>		<input type="text" value="Aluminum, total [as Al]"/> <input type="button" value="Delete Pollutant"/>	
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
<input type="text" value="METALS (OTHER THAN MERCURY)"/>		<input type="text" value="Copper, total [as Cu]"/> <input type="button" value="Delete Pollutant"/>	
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
<input type="text" value="METALS (OTHER THAN MERCURY)"/>		<input type="text" value="Thallium, total [as Tl]"/> <input type="button" value="Delete Pollutant"/>	
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
<input type="text" value="POLYCHLORINATED BIPHENYLS (PCBS)"/>		<input type="text" value="Polychlorinated biphenyls (PCBs)"/> <input type="button" value="Delete Pollutant"/>	

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Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
RADIATION	Alpha, total		
Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	Lookup Receiving Waters Information
019	35.872668	106.318428	(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially Identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		018	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)		

Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
METALS (OTHER THAN MERCURY)		Thallium, total [as Tl]	Delete Pollutant
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
RADIATION		Alpha, total	Delete Pollutant
Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *		B. Latitude (Decimal Degrees) *	
051	+	35.830145	-
		C. Longitude (Decimal Degrees) *	
		106.242675	
		Lookup Receiving Waters Information	Delete Outfall
(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)			
D. Substantially Identical to Any Outfalls Listed Above? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
PAJARITO CANYON (IN LANL BELOW ARROYO DE LA DELFE)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
METALS (OTHER THAN MERCURY)		Aluminum, total [as Al]	Delete Pollutant
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
METALS (OTHER THAN MERCURY)		Copper, total [as Cu]	Delete Pollutant

Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div>Lookup Receiving Waters Information</div> <div>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</div>
015	35.871403	106.316276	Delete Outfall
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		018	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
MORTANDAD CANYON (WITHIN LANL)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
RADIATION	Alpha, total		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)		
Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			

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Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div>Lookup Receiving Waters Information</div> <div>Delete Outfall</div>
016	35.872553	106.316810	<div>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</div>
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially Identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		018	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section 1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) * SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
METALS (OTHER THAN MERCURY)	Thallium, total [as Tl]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
RADIATION	Alpha, total		

Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div>Lookup Receiving Waters Information</div> <small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>
013	+ 35.870783	- 106.317349	Delete Outfall
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		018	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
MORTANDAD CANYON (WITHIN LANI)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
RADIATION	Alpha, total		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)		
Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			

Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div>Lookup Receiving Waters Information</div> <small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>
015	35.871403	106.316276	<div>Delete Outfall</div>
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		018	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
MORTANDAD CANYON (WITHIN LANL)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
RADIATION	Alpha, total		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)		
Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			

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Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div>Lookup Receiving Waters Information</div> <div>Delete Outfall</div>
016	35.872553	106.316810	<div>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</div>
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially Identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		018	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Thallium, total [as Tl]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
RADIATION	Alpha, total		

Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? * <input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls 4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <input type="text" value="017"/> <input type="text" value="+"/> <input type="text" value="35.872752"/> <input type="text" value="-"/> <input type="text" value="106.317329"/> </div> <div style="text-align: center;"> <input type="button" value="Lookup Receiving Waters Information"/> </div> <div style="text-align: center;"> <input type="button" value="Delete Outfall"/> </div> </div> <div style="font-size: small; margin-top: 5px;"> (This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect) </div>
D. Substantially identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		<input type="text" value="018"/>	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section 1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) * <input style="width: 100%;" type="text" value="SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)"/>			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? * <input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment: Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
<input type="text" value="METALS (OTHER THAN MERCURY)"/>		<input type="text" value="Aluminum, total [as Al]"/>	
		<input type="button" value="Delete Pollutant"/>	
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
<input type="text" value="METALS (OTHER THAN MERCURY)"/>		<input type="text" value="Copper, total [as Cu]"/>	
		<input type="button" value="Delete Pollutant"/>	
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
<input type="text" value="METALS (OTHER THAN MERCURY)"/>		<input type="text" value="Thallium, total [as Tl]"/>	
		<input type="button" value="Delete Pollutant"/>	
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
<input type="text" value="POLYCHLORINATED BIPHENYLS (PCBS)"/>		<input type="text" value="Polychlorinated biphenyls [PCBs]"/>	
		<input type="button" value="Delete Pollutant"/>	

Outfalls

4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.

A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	Lookup Receiving Waters Information	Delete Outfall
013	35.870783	106.317349	(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)	

D. Substantially Identical to Any Outfalls Listed Above? * ☒ Yes ☐ No

E. Substantially Identical to outfall ID * 018

If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.

Outfall Section

1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *

MORTANDAD CANYON (WITHIN LANL)

2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? * ☒ Yes ☐ No

4. List the pollutants that are causing the impairment:

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group *	Pollutant *	Delete Pollutant
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]	

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group *	Pollutant *	Delete Pollutant
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]	

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group *	Pollutant *	Delete Pollutant
RADIATION	Alpha, total	

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group *	Pollutant *	Delete Pollutant
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)	

Add Impairment Pollutant Associated with this Waterbody

3. Has a TMDL been completed for this receiving waterbody? * ☐ Yes ☒ No

Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div> <div>Lookup Receiving Waters Information</div> <div> <small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small> </div> </div> <div>Delete Outfall</div>
015	+	35.871403	- 106.316276
D. Substantially identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		<input type="text" value="018"/>	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
<input type="text" value="MORTANDAD CANYON (WITHIN LANL)"/>			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
RADIATION	Alpha, total		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		Delete Pollutant
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)		
<div>Add Impairment Pollutant Associated with this Waterbody</div>			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			

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Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div>Lookup Receiving Waters Information</div> <small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>
016	35.872553	106.316810	<div>Delete Outfall</div>
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially Identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		018	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Thallium, total [as Tl]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
RADIATION	Alpha, total		

Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? * <input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls 4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="display: flex; align-items: center;"> <input type="text" value="017"/> + <input type="text" value="35.872752"/> - <input type="text" value="106.317329"/> </div> <div style="text-align: right;"> <input type="button" value="Lookup Receiving Waters Information"/> <input type="button" value="Delete Outfall"/> </div> </div> <div style="font-size: small; margin-top: 5px;"> (This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect) </div>
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		<input type="text" value="018"/>	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section 1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) * <input style="width: 100%;" type="text" value="SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)"/>			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? * <input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment: Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
<input type="text" value="METALS (OTHER THAN MERCURY)"/>		<input type="text" value="Aluminum, total [as Al]"/>	
		<input type="button" value="Delete Pollutant"/>	
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
<input type="text" value="METALS (OTHER THAN MERCURY)"/>		<input type="text" value="Copper, total [as Cu]"/>	
		<input type="button" value="Delete Pollutant"/>	
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
<input type="text" value="METALS (OTHER THAN MERCURY)"/>		<input type="text" value="Thallium, total [as Tl]"/>	
		<input type="button" value="Delete Pollutant"/>	
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
<input type="text" value="POLYCHLORINATED BIPHENYLS (PCBS)"/>		<input type="text" value="Polychlorinated biphenyls (PCBs)"/>	
		<input type="button" value="Delete Pollutant"/>	

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Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? * <input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls 4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="display: flex; align-items: center;"> <input type="text" value="017"/> + <input type="text" value="35.872752"/> - <input type="text" value="106.317329"/> </div> <div style="text-align: right;"> <input type="button" value="Lookup Receiving Waters Information"/> <input type="button" value="Delete Outfall"/> </div> </div> <div style="font-size: small; margin-top: 5px;"> (This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect) </div>
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		<input type="text" value="018"/>	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section 1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) * <input style="width: 100%;" type="text" value="SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)"/>			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? * <input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment: Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Thallium, total [as Tl]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls (PCBs)		

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Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant *

3. Has a TMDL been completed for this receiving waterbody? *

☐ Yes ☒ No

Outfalls

4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.

A. Outfall ID * B. Latitude (Decimal Degrees) * C. Longitude (Decimal Degrees) *

(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)

D. Substantially Identical to Any Outfalls Listed Above? * ☒ Yes ☐ No E. Substantially identical to outfall ID *

If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.

Outfall Section

1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *

2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *

☒ Yes ☐ No

4. List the pollutants that are causing the impairment:

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant *

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant *

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant *

Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
METALS (OTHER THAN MERCURY)		Thallium, total [as Tl]	Delete Pollutant
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
RADIATION		Alpha, total	Delete Pollutant
Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	
051	35.830145	106.242675	
			Lookup Receiving Waters Information
			Delete Outfall
(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)			
D. Substantially Identical to Any Outfalls Listed Above? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *			
PAJARITO CANYON (IN LANL BELOW ARROYO DE LA DELFE)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
METALS (OTHER THAN MERCURY)		Aluminum, total [as Al]	Delete Pollutant
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *		Pollutant *	
METALS (OTHER THAN MERCURY)		Copper, total [as Cu]	Delete Pollutant

Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? * <input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls 4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="display: flex; align-items: center;"> <input type="text" value="017"/> + <input type="text" value="35.872752"/> - <input type="text" value="106.317329"/> </div> <div style="text-align: right;"> <input type="button" value="Lookup Receiving Waters Information"/> <input type="button" value="Delete Outfall"/> </div> </div> <div style="font-size: small; margin-top: 5px;"> (This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect) </div>
D. Substantially Identical to Any Outfalls Listed Above? *		E. Substantially identical to outfall ID *	
<input checked="" type="radio"/> Yes <input type="radio"/> No		<input type="text" value="018"/>	
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section 1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) * <input style="width: 100%;" type="text" value="SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)"/>			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? * <input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment: Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
METALS (OTHER THAN MERCURY)	Thallium, total [as Tl]		
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *	Delete Pollutant	
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls [PCBs]		

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Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant *

3. Has a TMDL been completed for this receiving waterbody? *

☐ Yes ☒ No

Outfalls

4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.

A. Outfall ID * B. Latitude (Decimal Degrees) * C. Longitude (Decimal Degrees) *

(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)

D. Substantially Identical to Any Outfalls Listed Above? * ☒ Yes ☐ No E. Substantially Identical to outfall ID *

If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.

Outfall Section

1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *

2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *

☒ Yes ☐ No

4. List the pollutants that are causing the impairment:

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant *

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant *

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * Pollutant *

Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		
METALS (OTHER THAN MERCURY)	Thallium, total [as Tl]	Delete Pollutant	
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		
RADIATION	Alpha, total	Delete Pollutant	
Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls			
4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID *	B. Latitude (Decimal Degrees) *	C. Longitude (Decimal Degrees) *	
051	35.830145	106.242675	Lookup Receiving Waters Information Delete Outfall
<small>(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)</small>			
D. Substantially Identical to Any Outfalls Listed Above? *			
<input type="radio"/> Yes <input checked="" type="radio"/> No			
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section			
1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect). *			
PAJARITO CANYON (IN LANL BELOW ARROYO DE LA DELFE)			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *			
<input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment:			
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		
METALS (OTHER THAN MERCURY)	Aluminum, total [as Al]	Delete Pollutant	
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group *	Pollutant *		
METALS (OTHER THAN MERCURY)	Copper, total [as Cu]	Delete Pollutant	

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * POLYCHLORINATED BIPHENYLS (PCBS) Pollutant * Polychlorinated biphenyls (PCBs) Delete Pollutant

Add Impairment Pollutant Associated with this Waterbody

3. Has a TMDL been completed for this receiving waterbody? *
☐ Yes ☒ No

Outfalls

4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.

A. Outfall ID * 072 B. Latitude (Decimal Degrees) * 35.832885 C. Longitude (Decimal Degrees) * 106.239443

Lookup Receiving Waters Information Delete Outfall

(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)

D. Substantially Identical to Any Outfalls Listed Above? *
☐ Yes ☒ No

If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.

Outfall Section

1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) *
 CANADA DEL BUEY (WITHIN LANL)

2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? *
☒ Yes ☐ No

4. List the pollutants that are causing the impairment:

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * METALS (OTHER THAN MERCURY) Pollutant * Aluminum, total (as Al) Delete Pollutant

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * POLYCHLORINATED BIPHENYLS (PCBS) Pollutant * Polychlorinated biphenyls (PCBs) Delete Pollutant

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * RADIATION Pollutant * Alpha, total Delete Pollutant

Add Impairment Pollutant Associated with this Waterbody			
3. Has a TMDL been completed for this receiving waterbody? * <input type="radio"/> Yes <input checked="" type="radio"/> No			
Outfalls 4. List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002) or a 4-digit ID. Also provide the latitude and longitude in decimal degrees for each outfall.			
A. Outfall ID * <input type="text" value="020"/>	+	B. Latitude (Decimal Degrees) * <input type="text" value="35.872251"/>	-
C. Longitude (Decimal Degrees) * <input type="text" value="106.316273"/>		<input type="button" value="Lookup Receiving Waters Information"/>	
		<input type="button" value="Delete Outfall"/>	
(This button will prepopulate the receiving water information associated with your outfall on your form. You may edit the information that is returned if you believe it is incorrect)			
D. Substantially Identical to Any Outfalls Listed Above? * <input type="radio"/> Yes <input checked="" type="radio"/> No			
If for any reason the Lookup Receiving Water Information button does not prepopulate your form with receiving waters information, you must manually enter the information on your form.			
Outfall Section 1. 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. (You may edit the name of the water of the U.S. that was returned if incorrect.) * <input type="text" value="SANDIA CANYON (SIGMA CANYON TO NPDES OUTFALL 001)"/>			
2. Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? * <input checked="" type="radio"/> Yes <input type="radio"/> No			
4. List the pollutants that are causing the impairment: Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group * <input type="text" value="METALS (OTHER THAN MERCURY)"/>		Pollutant * <input type="text" value="Aluminum, total [as Al]"/>	<input type="button" value="Delete Pollutant"/>
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group * <input type="text" value="METALS (OTHER THAN MERCURY)"/>		Pollutant * <input type="text" value="Copper, total [as Cu]"/>	<input type="button" value="Delete Pollutant"/>
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group * <input type="text" value="METALS (OTHER THAN MERCURY)"/>		Pollutant * <input type="text" value="Thallium, total [as Tl]"/>	<input type="button" value="Delete Pollutant"/>
Please select the cause group and pollutant for which the waterbody is impaired:			
Cause Group * <input type="text" value="POLYCHLORINATED BIPHENYLS (PCBS)"/>		Pollutant * <input type="text" value="Polychlorinated biphenyls (PCBs)"/>	<input type="button" value="Delete Pollutant"/>

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group *	Pollutant *	
RADIATION	Alpha, total	Delete Pollutant

Add Impairment Pollutant Associated with this Waterbody

3. Has a TMDL been completed for this receiving waterbody? *

☐ Yes ☒ No

Add Another Outfall

Provide the following information about your outfall latitude longitude.

5. Latitude/Longitude Data Source * 6. Horizontal Reference Datum

GPS NAD83

7. Does your facility discharge into a Municipal Separate Storm Sewer System (MS4)? *

☐ Yes ☒ No

8. Do 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) (See Appendix L)? *

☐ Yes ☒ No

D: Stormwater Pollution Prevention Plan (SWPPP) Information

SWPPP Contact Information

1. First Name * 2. Middle Initial 3. Last Name * 4. Professional Title *

Holly [] Wheeler Environmental Professional

5. Phone (10-digits, No dashes) * 6. Extension 7. E-Mail *

5056671312 [] hbenson@lanl.gov

8. 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 *

epr.lanl.gov

☐ Option 2: Provide the following information from your SWPPP.

E: 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? *

Criterion D – A separate ESA section 7 consultation has been completed

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). *

Direct consultation with the U.S. Fish and Wildlife Service and corresponding development and implementation of a facility-specific Habitat Management Plan.

You must attach copies of any letters or other communications with the U.S. Fish and Wildlife Service or National Marine Fisheries Service on the attachments screen after you click "Submit Now"

F: Historic Preservation

1. If your facility is not located in Indian country lands, is your facility located on a property of religious or cultural significance to an Indian tribe? *

☒ Yes ☐ No

1a. If yes, provide the name of the Indian tribe associated with the property *

San Ildefonso Pueblo

2. Using the instructions in Appendix F of the MSGP, under which historic properties preservation criterion listed in Part 1.1.4.7 are you eligible for coverage under this permit? *

Criterion B - Subsurface stormwater controls will not affect historic properties

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)

Certifier E-Mail *

ADORRIES@LANL.GOV

Form Action *

Approve



Environment Safety & Health

PO Box 1663, MS K491

Los Alamos, New Mexico 87545

(505) 667-4218/Fax (505) 665-3811

Date: MAR 22 2016

Symbol: ADESH-16-045

LA-UR: 16-21721

Locates Action No.: N/A

Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2015 MSGP Reports
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

To Whom It May Concern:

Subject: Transmittal of the National Pollutant Discharge Elimination System (NPDES) Notice of Intent (NOI) For Stormwater Discharges Associated with Industrial Activity under the Multi-Sector General Permit (MSGP) Tracking No. NMR053195

The purpose of this letter is to transmit a complete/correct NOI for stormwater discharges associated with industrial activity under the MSGP for Los Alamos National Laboratory (LANL) (Enclosure 1) on behalf of Los Alamos National Security LLC. LANS operates LANL for the Department of Energy. Per Section G of the attached NOI, three concurrence letters from the United States Department of Interior, Fish and Wildlife Service are provided in Enclosure 2. While submitting a NOI for coverage under the new 2015 MSGP, LANS experienced significant problems with EPA's Net NPDES eReporting tool, which resulted in the initial submission of a NOI with incomplete outfall attribute data and incorrect information. The details of these issues were provided in a letter sent to Mr. Bret Larsen of EPA Region 6 on October 29, 2015 (ENV-DO-15-0309) (Enclosure 3).

The initial NOI was submitted in the Net eReporting tool on 9/02/2015, which resulted in a follow-up e-mail on 9/03/2015 from NeT@epa.gov stating the NOI requesting coverage for Los Alamos National Laboratory under EPA's 2015 MSGP had been certified and submitted to EPA for review, and assigned NPDES ID NMR053195. Please note, this tracking number has been inserted in Section B of Enclosure 1 to prevent confusion or assignment of an additional tracking number. Authorization to discharge under the 2015 MSGP was sent to LANS on 10/03/2015.

Repeated attempts to update the NOI via the "Change NOI" form have resulted in the same system problems without successful submittal of all required information via NeT. As such, an e-mail request for waiver pursuant to Part 7.1 of the 2015 MSGP was sent to Ms. Nasim Jahan on 2/05/2016. On 2/09/2016 Ms. Jahan responded by indicating "LANL can submit their paper copy."

LANL has 14 industrial sites covering eight (8) sectors, with 74 outfalls (26 monitored outfalls and 48 associated substantially identical outfalls) discharging to five (5) assessment units on the Clean Water Act 303(d) list (impaired waters without an EPA-approved or established TMDL pursuant to Part 6.2.4.1 of the 2015 MSGP). In addition, due to extended frozen conditions in the winter and the semi-arid climate, LANS implements an alternate monitoring period of four (4) two-month monitoring quarters for benchmark values as identified below, in accordance with Part 6.1.6 of the 2015 MSGP. This does not coincide with the four (4) three month monitoring quarters for benchmark values currently in the NetDMR.

April 1 through May 31

June 1 through July 31

August 1 through September 30

October 1 through November 30

To facilitate complete and accurate information in the NeT reporting system, LANS has provided an additional table (Enclosure 4) containing sector-specific information per MSGP site within the 36 square mile facility and listed each site's associated outfalls. The premise for providing this information is to determine whether the NeT tool can prepopulate the electronic Discharge Monitoring Report (DMR) form based on this information without causing inaccuracies or rejected data (non-fillable forms due to unresolvable hard errors). In addition, LANS is concerned that incomplete or incorrect NOI information will perpetuate a recurring prohibitive "domino effect" on subsequent electronic DMR filing and "Change NOI" forms.

LANS respectfully requests consideration of waivers for electronic submittal of MSGP DMRs using the NetDMR system until it is determined whether the attached NOI can be submitted by EPA's Subcontractor into the NeT tool. Once this occurs, LANS can determine how information is populating the NetDMR system and whether it will accept applicable data without causing prohibitive hard errors.

Any additional direction or guidance you may have would be appreciated. Please contact Terrill Lemke of Environmental Protection and Compliance, Compliance Programs (EPC-CP) at (505) 665-2397 if you have any questions regarding this NOI.

Sincerely,



Michael T. Brandt, DrPH, CIH
Associate Director
Environment, Safety & Health
Los Alamos National Security, LLC
Los Alamos National Laboratory

MTB:TWL:HLW/lm

- Enclosure: 1. Notice of Intent (NOI) For Stormwater Discharges Associated With Industrial Activity Under the NPDES Multi-Sector General Permit
2. Concurrence letters from United States Department of Interior, Fish and Wildlife Service

3. Multi-Sector General Permit (MSGP) Notice of Intent (NOI) Reporting Pursuant to Part B.12.H
4. Industrial Sites and Outfalls by Sector

Cy: Nasim Jahan, USEPA/Region 6, Dallas, TX, (E-File)
Bruce Yurdin, NMED/SWQB, Santa Fe, NM, (E-File)
Jordan Arnsward, NA-LA, (E-File)
Craig S. Leasure, PADOPS, (E-File)
William Mairson, PADOPS, (E-File)
Michael T. Brandt, ADESH, (E-File)
Raeanna Sharp-Geiger, ADESH, (E-File)
John P. McCann, EPC-DO, (E-File)
Terrill W. Lemke, EPC-CP, (E-File)
Holly L. Wheeler, EPC-CP, (E-File)
Timothy A. Dolan, LC-ESH, (E-File)
lasomailbox@nnsa.doe.gov, (E-File)
locatesteam@lanl.gov, (E-File)
epc-correspondence@lanl.gov

ENCLOSURE 1

**Notice of Intent (NOI) For Stormwater Discharges
Associated With Industrial Activity Under the NPDES
Multi-Sector General Permit**

ADESH-16-045

LA-UR-16-21721

Date: MAR 22 2016



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:

N a s i m J a h a n

Date approval obtained:

0 2 / 0 9 / 2 0 1 6

* 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/pollution/npdes/stormwater/Stormwater-eNOI-System-for-EPA-MultiSector-General-Permit.cfm>

B. Permit Information

NPDES ID (EPA Use Only):

N M R 0 5 3 1 9 5

1. Master Permit Number: N M R 0 5 0 0 0 0

(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:

N M R 0 5 G B 2 1

C. Facility Operator Information

1. Operator Information:

Operator Name:

L o s A l a m o s N a t i o n a l S e c u r i t y L L C

Mailing Address:

Street:

P O B o x 1 6 6 3

City:

L o s A l a m o s

State: N M

ZIP Code:

8 7 5 4 5 -

County or Similar Government Subdivision:

L o s A l a m o s

Phone:

5 0 5 - 6 6 5 - 2 3 9 7 Ext.

E-mail:

t l e m k e @ l a n l . g o v

2. Operator Point of Contact Information:

First Name, Middle Initial, Last Name:

T e r r i l l W L e m k e

Title:

E n v i r o n m e n t a l M a n a g e r

3. NOI Preparer Information (Complete if NOI was prepared by someone other than the certifier):

First Name, Middle Initial, Last Name: H o l l y

L W h e e l e r

Organization:

L o s A l a m o s N a t i o n a l S e c u r i t y L L C

Phone:

5 0 5 - 6 6 7 - 1 3 1 2 Ext.

E-mail:

h b e n s o n @ l a n l . g o v

D. Facility Information

1. Facility Name: L o s A l a m o s N a t i o n a l L a b o r a t o r y

2. Facility Address:

Street/Location: P O B o x 1 6 6 3

City: L o s A l a m o s State: N M ZIP Code: 8 7 5 4 5

County or Similar Government Subdivision: L o s A l a m o s

3. Latitude/Longitude for the facility:

Latitude: 3 5 8 7 2 7 7° N (decimal degrees) Longitude: 1 0 6 3 2 1 2 7° 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?

☒ 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. Estimated area of industrial activity at your facility exposed to stormwater: 131.36 (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: 3 4 4 9 OR Primary Activity Code:

Sector: A A Subsector: A A 1

Identify the applicable sector(s) and subsector(s) of any co-located industrial activity for which you are requesting permit coverage:

Sector: P Subsector: P 1 Sector: K Subsector: K 1 Sector: A Subsector: A 4 Sector: D Subsector: D 1

Sector: O Subsector: O 1 Sector: F Subsector: F 4 Sector: N Subsector: N 2 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 checked="" 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	002	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted Polychlorinated Biphenyls (PCBs) Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.875797			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.327580			
Outfall ID	004	Two Mile Canyon (Pajarito to headwaters)	Aluminum, total Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.871431			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.323832			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	005	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.873919			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.320746			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	006	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.874011			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.319858			

If substantially identical to other outfall, list identical outfall ID: 005

Outfall ID	009	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.874843			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.319412			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	007	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.874014			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.319203			

If substantially identical to other outfall, list identical outfall ID: 009

Outfall ID	008	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.874617			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.318925			
If substantially identical to other outfall, list identical outfall ID: 009				
Outfall ID	010	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.875402			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.320301			
If substantially identical to other outfall, list identical outfall ID: 009				
Outfall ID	012	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.875532			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.320884			
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID	011	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.875563			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.320744			
If substantially identical to other outfall, list identical outfall ID: 012				

Outfall ID	018	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.872834			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.317653			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	013	Mortandad Canyon (Within LANL)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.870797			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.317867			

If substantially identical to other outfall, list identical outfall ID: 018

Outfall ID	014	Mortandad Canyon (Within LANL)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.870890			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.317393			

If substantially identical to other outfall, list identical outfall ID: 018

Outfall ID	015	Mortandad Canyon (Within LANL)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.871389			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.316397			

If substantially identical to other outfall, list identical outfall ID: 018

Outfall ID	016	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.872447			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.316721			

If substantially identical to other outfall, list identical outfall ID: 018

Outfall ID	017	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.872599			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.317066			

If substantially identical to other outfall, list identical outfall ID: 018

Outfall ID	019	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.872682			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.318467			

If substantially identical to other outfall, list identical outfall ID: 018

Outfall ID	020	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.872240			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.316340			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	022	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.872661			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.313691			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	021	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.872514			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.313562			

If substantially identical to other outfall, list identical outfall ID: 022

Outfall ID	023	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.873193			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.313116			

If substantially identical to other outfall, list identical outfall ID: 022

Outfall ID	024	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.873046			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.315069			

If substantially identical to other outfall, list identical outfall ID: 022

Outfall ID	025	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.872928			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.315400			
If substantially identical to other outfall, list identical outfall ID: 022				
Outfall ID	026	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.872114			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.313105			
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID	027	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.872401			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.313391			
If substantially identical to other outfall, list identical outfall ID: 026				
Outfall ID	028	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.872505			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.313542			
If substantially identical to other outfall, list identical outfall ID: 026				

Outfall ID	029	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.873969			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.313281			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	031	Mortandad Canyon (within LANL)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.869227			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.305685			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	030	Mortandad Canyon (within LANL)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.869325			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.306926			

If substantially identical to other outfall, list identical outfall ID: 031

Outfall ID	032	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.870741			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.306812			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	033	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.870712			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.306443			

If substantially identical to other outfall, list identical outfall ID: 032

Outfall ID	034	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.870603			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.306055			

If substantially identical to other outfall, list identical outfall ID: 032

Outfall ID	035	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.870474			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.305432			

If substantially identical to other outfall, list identical outfall ID: 032

Outfall ID	036	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.867825			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.293388			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	037	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.867859			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.292992			

If substantially identical to other outfall, list identical outfall ID: 036

Outfall ID	039	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.867826			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.291726			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	038	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.867855			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.292211			

If substantially identical to other outfall, list identical outfall ID: 039

Outfall ID	040	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.867839			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.291955			

If substantially identical to other outfall, list identical outfall ID: 039

Outfall ID	042	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.867047			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.289163			
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID	041	Mortandad Canyon (within LANL)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.866377			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.291397			
If substantially identical to other outfall, list identical outfall ID: 042				
Outfall ID	043	Mortandad Canyon (within LANL)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.866084			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.290165			
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID	047	Canada del Buey (within LANL)	Aluminum, total Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.844895			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.264513			
If substantially identical to other outfall, list identical outfall ID: _____				

Outfall ID	044	Canada del Buey (within LANL)	Aluminum, total Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.845868			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.265279			
If substantially identical to other outfall, list identical outfall ID: 047				
Outfall ID	045	Canada del Buey (within LANL)	Aluminum, total Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.845586			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.265214			
If substantially identical to other outfall, list identical outfall ID: 047				
Outfall ID	046	Canada del Buey (within LANL)	Aluminum, total Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.845200			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.264844			
If substantially identical to other outfall, list identical outfall ID: 047				
Outfall ID	048	Canada del Buey (within LANL)	Aluminum, total Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.844590			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.265044			
If substantially identical to other outfall, list identical outfall ID: 047				

Outfall ID	049	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.837228			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.254840			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	050	Canada del Buey (within LANL)	Aluminum, total Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.835746			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.250832			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	051	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.830143			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.242662			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	052	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.831852			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.242928			

If substantially identical to other outfall, list identical outfall ID: 051 _____

Outfall ID	053	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.829232			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.236793			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	065	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.829028			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.236029			

If substantially identical to other outfall, list identical outfall ID: 053

Outfall ID	066	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.830185			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.236107			

If substantially identical to other outfall, list identical outfall ID: 053

Outfall ID	069	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.830285			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.234518			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	054	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.829036			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.235125			
If substantially identical to other outfall, list identical outfall ID: 069				
Outfall ID	055	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.829173			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.235121			
If substantially identical to other outfall, list identical outfall ID: 069				
Outfall ID	056	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.829310			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.236107			
If substantially identical to other outfall, list identical outfall ID: 069				
Outfall ID	057	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.829440			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.235117			
If substantially identical to other outfall, list identical outfall ID: 069				

Outfall ID	058	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.829573			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.235112			
If substantially identical to other outfall, list identical outfall ID: <u>069</u>				
Outfall ID	059	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.829711			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.235108			
If substantially identical to other outfall, list identical outfall ID: <u>069</u>				
Outfall ID	060	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.830340			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.234802			
If substantially identical to other outfall, list identical outfall ID: <u>069</u>				
Outfall ID	061	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.830343			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.234766			
If substantially identical to other outfall, list identical outfall ID: <u>069</u>				

Outfall ID	062	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.830344			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.234725			

If substantially identical to other outfall, list identical outfall ID: 069

Outfall ID	063	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.830342			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.234692			

If substantially identical to other outfall, list identical outfall ID: 069

Outfall ID	064	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.830340			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.234656			

If substantially identical to other outfall, list identical outfall ID: 069

Outfall ID	067	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.829856			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.235110			

If substantially identical to other outfall, list identical outfall ID: 069

Outfall ID	068	Pajarito Canyon (within LANL below Arroyo de la Delfe)	Aluminum, total PCBs	TMDL Name and ID: N/A
Latitude	35.830051			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.235103			

If substantially identical to other outfall, list identical outfall ID: 069

Outfall ID	072	Canada del Buey (within LANL)	Aluminum, total Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.832885			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.239444			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	070	Canada del Buey (within LANL)	Aluminum, total Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.832404			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.240510			

If substantially identical to other outfall, list identical outfall ID: 072

Outfall ID	071	Canada del Buey (within LANL)	Aluminum, total Gross Alpha, adjusted PCBs	TMDL Name and ID: N/A
Latitude	35.832701			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.240994			

If substantially identical to other outfall, list identical outfall ID: 072

Outfall ID	073	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.874819			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.324283			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	074	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.875034			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.327328			

If substantially identical to other outfall, list identical outfall ID: 073

Outfall ID	075	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Aluminum, total Copper, dissolved Gross Alpha, adjusted PCBs Thallium, dissolved	TMDL Name and ID: N/A
Latitude	35.871154			Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.312940			

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: _____

4. Provide the following information about your outfall latitude longitude:

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: N/A

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)?
57 (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: H o l l i y L W h e e l e r

Professional Title: E n v i r o n m e n t a l P r o f e s s i o n a l

Phone: 505 - 667 - 1312 Ext.

E-mail: h b e n s o n @ l a n l . g o v

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: eprr.lanl.gov

☐ **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):

Direct consultation with the U.S. Fish and Wildlife Service and corresponding development and implementation of a facility-specific Habitat Management Plan.

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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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

1. If your facility is not located on Indian country lands, is your facility located on a property of religious or cultural significance to an Indian tribe?

☒ YES ☐ NO

If yes, provide the name of the Indian tribe associated with the property: San Ildefonso Pueblo

2. Using the instructions in Appendix F of the MSGP, under which historic properties preservation criterion listed in Part 1.1.4.6 are you eligible for coverage under this permit (only check 1 box)?

☐ A ☒ B ☐ C ☐ D

I. 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: J o h n P M c C a n n

Title: D i v i s i o n L e a d e r

Signature:



Date: 03/22/2016

E-mail:

j m c c a n n @ i a n i . g o v

**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 Form 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/nodes/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/nodes/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 (vii); 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 Form 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 questions on the NOI form regarding historic preservation.

Instructions for Completing EPA Form 3510-6

**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 Form 3510-6 (09/08)

Form Approved OMB No. 2040-0004

Section I. Certification

Certification statement and signature (see Section 8.11 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/pollution/npdes/stormwater/Stormwater-eNOI-System-for-EPA-MultiSector-General-Permit.cfm>

ENCLOSURE 2

**Concurrence Letters From the United States Department of
Interior, Fish and Wildlife Service**

ADESH-16-045

LA-UR-16-21721

Date: MAR 22 2016



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

February 12, 1999

Cons. #2-22-98-I-336
Cons. #2-22-95-I-108

David A. Gurule, Acting Area Manager
Department of Energy
Albuquerque Operations Office
Los Alamos Area Office
Los Alamos, New Mexico 87545

Dear Mr. Gurule:

This responds to your letter dated August 6, 1998, requesting our review and concurrence with the Threatened and Endangered Species Habitat Management Plan (HMP) for Los Alamos National Laboratory (LANL). The HMP was prepared by the LANL Ecology Group for the Department of Energy (DOE) as part of the Dual-Axis Radiographic Hydrodynamics Test Facility (DAHRT) Mitigation Action Plan. The U.S. Fish and Wildlife Service (Service) has worked closely with LANL in the development of the HMP. As a result of discussions and meetings following the August 6, 1998, submittal, additional information/clarification was provided via letters, updated Biological Evaluations/HMPs, and e-mail messages, dated September 8, October 20, November 25, and December 9, 1998, and January 4, January 22, and January 29, 1999. The purpose of the HMP is to provide for the protection of threatened and endangered species and their habitats on LANL. The HMP consists of three components that must be used together to assure proper management of the threatened and endangered species: an Overview Document, Site Plans, and Monitoring Plans. It was determined that if all the restrictions and protective measures outlined in the HMP are strictly followed, the implementation of this HMP may affect, but is not likely to adversely affect the Mexican spotted owl (owl), peregrine falcon (falcon), bald eagle (eagle), and southwestern willow flycatcher (flycatcher). The Biological Evaluation (BE) also considered potential impacts on the black-footed ferret, arctic peregrine falcon, and whooping crane. It was determined that there would be no effect on these species because of a lack of habitat.

Property at LANL varies from remote isolation to heavily developed and/or industrialized. The Service agrees, as stated in the Overview document, that a number of activities at LANL have the potential to adversely impact threatened and endangered species. Many of the industrial processes used at LANL have involved hazardous and radioactive materials. These materials as well as remediation of potential release sites may disturb

or reduce population viability of threatened and endangered species. In addition, other potential sources of disturbance or habitat alterations are possible as a result of the residential and commercial development in the LANL area. While the HMP identifies potential sources of adverse effects, this consultation does not necessarily cover all of those impacts. The Service does not anticipate that DOE will be able to plan all of its operations at LANL in accordance with this plan. The direct effects of most actions can be minimized through implementation of the HMP; however, a more thorough assessment is necessary to adequately evaluate the indirect and cumulative impacts of all actions that are funded, authorized, and permitted by DOE, as well as potential impacts from interrelated and interdependent actions. It was agreed (by Service, DOE, and LANL personnel) that consultation concerning ongoing LANL operations would be handled separately from the HMP, under the consultation on the Site-Wide EIS.

The Site Plans identify the particular areas of LANL where operations might impact known occupied or potential habitat for the flycatcher, eagle, falcon, and owl. Suitable habitat for these species, along with protective buffer areas surrounding their habitat, have been designated as Areas of Environmental Interest (AEIs). For the flycatcher, one AEI was established based on an observation of a migrant male flycatcher in 1997. The AEI is located in the Pajarito wetland area and includes the best available riparian habitat. For eagles, one AEI has been identified for wintering habitat that exists along the Rio Grande on the eastern edge of LANL. It is based on the locations of known and potential roost sites. For the falcon, four AEIs have been identified. They consist of the habitat previously identified under the 1985 interagency agreement. These areas are centered on deep canyons on the eastern side of LANL or on adjacent lands. LANL has agreed to implement the recommended management guidelines, which utilize four management zones (A through D) to protect nesting peregrine falcons from disturbance. For the owl, six AEIs have been identified, but only one of these sites is known to be occupied. These AEIs are based on and located in canyons that have been defined as suitable nest/roost habitat.

The AEI management section of each Site Plan provides guidelines for LANL operations to reduce or eliminate threats to each species. The primary threats on LANL property are (1) impacts on habitat quality from LANL operations and (2) disturbance of nesting or roosting birds. The site plans provide information on their location and guidelines for their management. The AEI Site Plans consist of a species description, descriptions of the AEIs for the species, descriptions of current impacts in the AEIs, management plans that describe allowable activities within core and buffer areas under the guidelines of the sites plan and protective measures. Activities discussed in the site plans include day to day activities, such as access into an AEI, as well as long-term projects, such as levels of habitat alteration in the buffer area of an AEI. Restrictions will be implemented on activities that could cause disturbance (people, vehicles and machinery, aircraft, light production, and noise) within occupied AEIs. The location of a potential disturbance activity within the AEI, the occupancy status of the AEI, and the type of activity all affect whether or not an activity is allowable. Habitat alterations are always restricted in core areas, but a limited amount of future development is allowed in currently undeveloped DOE-controlled buffer areas under the guidelines of this site plan as long

as it does not alter habitat in the undeveloped AEI (including light and noise guidelines). The purpose of buffer areas is to protect core areas from undue disturbance or habitat alteration or habitat degradation. Each AEI is specific to the situation or circumstances of the site it covers. According to the HMP, development beyond the cap established for each AEI, or greater than 2 hectares in size, including the developed-area border, requires independent review for ESA compliance.

Varying amounts of development and/or ongoing activities exist in the cores and buffers of each AEI. These developments may include residential, commercial, and light industrial areas, as well as roads and utility corridors. Existing/ongoing activities may include periodic scientific surveys, power line maintenance, recreational use, residential development, ER Program activities, and possible use of a firing site. Potential disturbance may be associated with automobile and truck traffic, construction activities, a live-fire range, explosives testing, and aircraft traffic at the County airport. 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. If a proposed action within a developed area does not meet site plan guidelines, it must be individually reviewed for ESA compliance.

Some activities such as utility corridor maintenance, fuels management, and a limited amount of development are allowed in each AEI (as described in the HMP). The potential impacts of these activities are considered to be insignificant or discountable because they will occur in habitat that has been previously disturbed or is of poor quality due to its size or proximity to already developed areas. It is our understanding (based on the January 22, 1999, e-mail response from Terry Foxx) that the fuels management activities within the owl AEIs will only consist of ongoing and proposed fire protection activities around existing facilities (e.g. thinning around buildings) or those activities that are already covered under the Dome Fire Emergency BA. The other fire management activities mentioned in the HMP will go through the ESH-ID process and further consultation with the Service when a fire management plan is completed in the future.

In general, activities that detrimentally alter habitat in an AEI or would cause unacceptable disturbance to the species inhabiting the AEI are not allowed under the guidelines of a Site Plan. The Site Plans are designed to minimize impacts to threatened and endangered species and their habitat. The protective measures and restrictions outlined in the Site Plans were developed using the best available data, in cooperation with Service biologists.

The U.S. Fish and Wildlife Service concurs with DOE's determination that implementation of LANL's HMP may affect, but is not likely to adversely affect the Mexican spotted owl, American peregrine falcon, bald eagle, and southwestern willow flycatcher based on the protective measures described in the BA and HMP. If all the restrictions and protective measures outlined in the HMP are strictly followed, potential impacts on owls, falcons, eagles, and flycatchers are expected to be insignificant or

David A. Gurule, Acting Area Manager

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discountable for the following reasons: 1) appropriate seasonal restrictions will be implemented to avoid disturbance to potentially breeding flycatchers, peregrines, and owls and wintering eagles; 2) no nest or roost habitat for any listed species will be altered; 3) the total amount of potential foraging habitat that could be impacted within each species home ranges is expected to be insignificant compared to the amount of available foraging habitat throughout the area; 4) monitoring plans have been developed as an integral part of the HMP; and 5) a mechanism for incorporating necessary technical and regulatory changes and updating the HMP has been included (page 32 of the Overview Document).

In future communications regarding this project, please refer to Consultation #2-22-98-I-336. If we can be of further assistance, please contact Carol Torrez of my staff at (505) 346-2525, ext. 115.

Sincerely,



Jennifer Fowler-Propst
Field Supervisor

cc:

→ Teralene Foxx, Project Manager, Ecology Group, Los Alamos National Laboratory,
P.O. Box 1663, Mail Stop M887, Los Alamos, New Mexico 87545
Elizabeth Withers, U.S. Department of Energy, Los Alamos Area Office, 35th Street, Los
Alamos, New Mexico
Field Supervisor, Ecological Services, U.S. Fish and Wildlife Service, Phoenix,
Arizona



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.

Geoffrey L. Beausoleil, Acting Manager

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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



United States Department of the Interior



FISH AND WILDLIFE SERVICE

New Mexico Ecological Services Field Office
2105 Osuna Road NE
Albuquerque, New Mexico 87113
Telephone 505-346-2525 Fax 505-346-2542
www.fws.gov/southwest/es/newmexico/

August 6, 2015

Cons. # 02ENNM00-2015-I-0538

Kimberly Davis Lebak, Manager
Department of Energy
National Nuclear Security Administration
Los Alamos Field Office
Los Alamos, New Mexico 87544

Dear Ms. Lebak:

This responds to your July 9, 2015, cover letter and biological assessment (BA) requesting informal consultation for the addition of the Western distinct population segment of the yellow-billed cuckoo (*Coccyzus americanus occidentalis*) (cuckoo) and the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) (jumping mouse) to the Los Alamos National Laboratory Habitat Management Plan, Los Alamos, New Mexico. As documented in your BA, which is hereby incorporated by reference, we find that your proposed action will have insignificant and discountable effects to the cuckoo and the jumping mouse. Therefore, the Service concurs with your determination of "may affect, is not likely to adversely affect" for the cuckoo and the jumping mouse.

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.

Kimberly Davis Lebak, Manager

2

Thank you for your concern for endangered species and New Mexico's wildlife habitats. If you have any questions, please contact Eric Hein of my staff at the letterhead address or at (505) 761-4735.

Sincerely,

ERIC
HEIN

Digitally signed by Eric Hein
DN: cn=Eric Hein, o=New Mexico Department of Game and Fish, email=eric.hein@dmr.state.nm.us, c=US

for Wally Murphy
Field Supervisor

cc:

Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico

ENCLOSURE 3

**Multi-Sector General Permit (MSGP) Notice of Intent
(NOI) Reporting Pursuant to Part B.12.H**

ADESH-16-045

LA-UR-16-21721

Date: MAR 22 2016



***Environmental Protection Division
Environmental Compliance Programs (ENV-CP)***
PO Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-0666

Date: OCT 29 2015
Symbol: ENV-DO-15-0309
LA-UR: 15-28383
Locates Action No.: N/A

Mr. Brent Larsen
Water Quality Protection Division (6WQ)
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Dear Mr. Larsen:

Subject: National Pollutant Discharge Elimination System (NPDES) Permit Tracking No. NMR053195, Multi-Sector General Permit (MSGP) Notice of Intent (NOI) Reporting Pursuant to Part B.12.H.

In submitting a NOI for coverage under the new NPDES Multi-Sector General Permit, Los Alamos National Security (LANS) experienced significant problems with EPA's NeT NPDES eReporting Tool which resulted in certification of the NOI on September 3 and initial submission of a NOI with incomplete outfall attribute data and incorrect information. During this time LANS staff contacted EPA's NOI Processing Center for support and was given the recommendation to contact Region 6 personnel for further guidance. Per this direction, on September 1, 2015, Terrill Lemke left you a voicemail summarizing the issues and potential impacts of the difficulties experienced with the new electronic reporting system. For additional clarification, the following is a summary of the timeline of events associated with the NOI submission.

- Monday, August 31, 2015
 - Initiated NOI submission using the NeT NPDES eReporting Tool.

Mr. Brent Larsen
ENV-DO-15-0309

- 2 -

- As data was entered into each data field on the NOI form, the Tool was very slow in processing the data and allowing entry into the next field. This created a significant waiting time.
- Upon reaching the fields on the NOI form where outfall attribute data was entered the Tool began to randomly crash, repeatedly deleting all unsaved data.
- Tuesday, September 1, 2015
 - Tool continued to be very slow and randomly crash, repeatedly deleting all unsaved data.
 - For each outfall, when listing the constituents associated with impaired waters, the Tool's auto population feature initially displayed incorrect data which required additional editing and then eventually stopped functioning and caused the Tool to crash.
 - Much of the outfall attribute data had to be reentered multiple times before it was possible to successfully save it to the system.
 - After each save or Tool crash the eReporting Tool would close the NOI form. The time required for the Tool to repeatedly reopen the form made data entry very time consuming.
 - LANS staff contacted the EPA NOI Processing Center on the afternoon of Sept 1 for technical support:
 - NOI Processing Center staff stated that they had been "flooded" with calls over the past week on Tool problems.
 - LANS staff expressed their concern about the length of time being required to enter data and the potential inability to complete the NOI form by the Sept 2 deadline. No solution was available.
 - LANS staff explained the difficulty with entering outfall information for 73 outfalls and NOI Processing Center staff stated that they had received numerous calls on problems with entering outfall data and that some permittees couldn't even enter 20 outfalls.
 - NOI Processing Center staff recommended contacting Regional personnel to notify them of the situation and to seek additional guidance.
 - The eReporting Tool went down at approximately 3:30 pm MDT and remained down until after 9 pm MDT. This eliminated the opportunity to input data during normal business hours.
- Wednesday, September 2, 2015
 - Continued decrease in the performance of the eReporting Tool.
 - Increase in the time for the Tool to process information after entry of each item of data.
 - Increased frequency in the Tool crashing.
 - For each outfall, when listing the constituents associated with impaired waters, the form had to be saved after entry of each individual constituent. Entry of more than one constituent without saving would cause the Tool to crash.

Mr. Brent Larsen
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- With the decreased performance of the eReporting Tool LANS staff contacted the EPA NOI Processing Center for direction and Processing Center staff stated the following:
 - They were aware of the problems with the Tool but could provide no solutions or technical direction.
 - They had been reporting daily to EPA on the problems and EPA was definitely aware of the issues.
 - When asked about taking the Tool down at 3:30 MDT on Sept. 1, staff stated that they thought the programmers may have taken the system down to assess the problems.
 - Stated again that they had received many calls about technical issues with the Tool.
 - The more data that was entered the slower the Tool would get.
 - When asked again about the possibility that LANS may not be able to get all information into the NOI, staff stated that LANS would be able to access the submitted NOI to modify/add data after the 30 day waiting period.
- eReporting Tool went down again at 3:30 pm MDT and did not come back up until after 10 pm MDT, again eliminating the opportunity to input data during normal business hours.
- The LANS NOI with all information except some remaining outfall attribute data was submitted by the Preparer at 10:50 pm MDT.
 - The LANS NOI certification signatory was prepared to certify the NOI at this time but didn't get notification that the NOI was ready for certification until 9:37 am MDT on Sept. 3, almost 11 hours later.
 - The NOI was certified on Sept 3, 2015.

Additionally, the NeT NPDES eReporting Tool did not provide dissolved Thallium as a constituent option, but only allowed the selection of total Thallium as an impaired water pollutant under a "Cause Group" when "Metals (other than Mercury)" was selected from the drop down menu. This resulted in LANS having to enter total Thallium as an impaired water pollutant in error for the following outfalls: 002, 005, 006, 007, 008, 009, 010, 011, 012, 016, 017, 018, 019, and 020. LANS appreciates any assistance you may have relative to the total Thallium vs. dissolved Thallium issue. During a subsequent quality assurance evaluation, LANS staff also determined that total Copper was erroneously entered as an impaired water pollutant for outfall 051 and needs to be deleted from the NOI.

LANS is committed to maintaining compliance with the MSGP requirements. Per Section B.12.H of the MSGP, the LANS NOI will be modified to include the remaining outfall attribute data that could not be included on the initial submission and to delete Copper as an impaired water pollutant for outfall 051. LANS coverage under the 2015 MSGP became effective on October 3, 2015, and with the NOI now accessible, actions to update the NOI have been initiated.

Mr. Brent Larsen
ENV-DO-15-0309

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Any additional direction or guidance you may have would be appreciated. Please contact Terrill W. Lemke :
(505) 665-2397 of the Environmental Compliance Programs (ENV-CP) if you have any questions.

Sincerely,



Anthony R. Grieggs
Group Leader
Environmental Compliance Programs (ENV-CP)
Los Alamos National Security, LLC

ARG:MTS:TWL:HLW/lm

Cy: Nasim Jahan, USEPA/Region 6, Dallas, TX, (E-File)
Bruce Yurdin, NMED/SWQB, Santa Fe, NM, (E-File)
Gene E. Turner, LASO-NS-LP, (E-File)
Jordan Arnsward, LASO-NS-PI, (E-File)
Kirsten Laskey, EM-LA, (E-File)
Craig Leasure, PADOPS, (E-File)
Amy E. De Palma, PADOPS, (E-File)
Michael T. Brandt, ADESH, (E-File)
Raeanna Sharp-Geiger, ADESH, (E-File)
Alison M. Dorries, ENV-DO, (E-File)
Michael T. Saladen, ENV-CP, (E-File)
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ENCLOSURE 4

Industrial Sites and Outfalls by Sector

ADESH-16-045

LA-UR-16-21721

Date:

MAR 22 2016

Industrial Sites and Outfalls by Sector

Sector	Industrial Site	Monitored Outfalls	Substantially Identical Outfalls
A	TA-3-38 Carpenter Shop	073	074
AA	TA-3-38 Metals Fab Shop	002	N/A
AA	TA-3-39 & 102 Metal Shop	004	N/A
AA, F	TA-3-66 Sigma Complex	018	013 014 015 016 017 019
AA, F	TA-3-66 Sigma Complex	020	N/A
D	TA-60 Asphalt Batch Plant	043	N/A
K	TA-54 Area G	051	052
K	TA-54 Area G	072	070 071
K	TA-54 Area G	053	065 066
K	TA-54 Area G	069	059 058 057 056 055 054 067 068 060 061 062 063 064
K	TA-54 Area L	050	N/A
K	TA-54 RANT	047	048 046 045 044
N	TA-60 MRF	029	N/A

Sector	Industrial Site	Monitored Outfalls	Substantially Identical Outfalls
O	TA-3-22 Power & Steam Plant	005	006
O	TA-3-22 Power & Steam Plant	009	007 008 010
O	TA-3-22 Power & Steam Plant	012	011
P	TA-54 MFW	049	N/A
P	TA-60 Roads and Grounds	031	030
P	TA-60 Roads and Grounds	039	038 040
P	TA-60 Roads and Grounds	036	037
P	TA-60 Roads and Grounds	032	033 034 035
P	TA-60 Roads and Grounds	042	041
P	TA-60-1 Heavy Equipment Yard	022	021 023 024 025
P	TA-60-2 Warehouse	026	027 028
P	TA-60-2 Warehouse	075	N/A

N/A = Not Applicable

Attachment N

Training

MSGP Corrective Actions

Environmental Protection & Compliance – Compliance Programs (EPC-CP)



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Agenda

- Definition of Corrective Action
- What triggers a corrective action
- Examples of issues requiring corrective actions
- Timeframes to address corrective actions
- 45 Day Extension
- Corrective action process
- Results of initial inspection
- Suggestions
- Expectations and questions
- Request for other topics

Corrective Action

Definition: “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;
- (3) remedy a permit violation.

What Triggers A Corrective Action?

- Unauthorized release or discharge
- Discharge that violated a numeric effluent limit
- Control measures that are not stringent enough to ensure stormwater discharges meet Water Quality Standards.
 - These are the threshold values in your SWPPPs
- Visual assessment that shows evidence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam)
- Failure to meet any permit condition or those specified in the site specific SWPPP



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Examples of Issues Requiring Corrective Action



Examples of Issues Requiring Corrective Action (continued)



Timeframes to address new corrective actions

- Shall Immediately take action upon identification of an issue
 - Immediately is the same day a condition is found
 - If found after 3:00 pm, action must be taken the next work day
- If follow-up action is needed – before the next storm event or within 14 calendar days
- If finalization of CA is not feasible within 14 days the following is required
 - Documentation of why it is not feasible to close the CA within this timeframe
 - A formal schedule for completion of the action A.S.A.P. but no longer than 45 days after discovery

45 Day Extension

- If a CA is expected to exceed the 45 day timeframe (as identified above) the DEP shall provide ENV-CP the following information
 - Rationale for an extension (e.g., a defensible position that does not put LANS at risk)
 - Provide a realistic completion date
 - Take the minimum additional time necessary to complete the corrective action.
- Where a corrective action results in a change to any control measure or procedure the SWPPP must be modified within 14 calendar days of the day the CA was closed.

Corrective Action Process

- Identification of an issue either during routine operations or during an inspection
 - Notify the Deployed Environmental Professional
 - Take immediate action
 - Record the issue and corrective action
 - Enter the issue into the MSGP Corrective Action Report (CAR) Database
 - Propose a completion date
 - System notifies FOD, DSESH Manager, and ENV-CP of new CA
 - Follow-up and completion of corrective action
 - Perform work and record completed activities and date of completion in the database
 - Database automatically sends e-mail notifications to key personnel every 30 days until corrective actions are closed (process may change/compress in the future)

Corrective Action Process (continued)

- Follow-up and completion of corrective action (continued)
 - If CA is expected to exceed 14 days, enter a schedule for completion in the database
 - At about day 30, ENV-CP will be contacting the DEP for the following information:
 - Rationale for a 45 day extension
 - Realistic completion date taking the minimum amount of time necessary
 - Letter will be sent to Region 6 EPA **prior** to the 45th day.
 - ENV-CP will track progress according to the schedule provided in the 45 day extension letter
 - If timeframes in the letter are exceeded, it is a permit non-compliance.



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Results of initial inspection

- Started with 40 corrective actions with potential to exceed 45 day timeframe
- Corrective action initiated well into the 45-day period (not started immediately)
- Three CA's reported to Region 6 EPA with rationale and completion dates.
 - Took numerous phone calls and discussions up the management chain to the AD level to accomplish this
 - Not efficient use of resources
 - Must strive for proactivity, not reactivity
- One was closed within identified timeframe
- One has exceeded the completion date reported to EPA
- One must be addressed by this Friday
- EPA will consider the appropriateness and promptness of corrective action in determining enforcement response to permit violations



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Suggestions for Improvements?

- How does the institution speed up the corrective action process?
 - Improve the FSR system?
 - Flag compliance driven work
 - Allow compliance driven work to move through system without cost code or automatically be assigned a specific cost code
 - Use Maintenance Connection to push out work order to DEPs with deadline and notification to managers
 - What are the barriers you face in taking immediate action and/or completing work within 14 days?
 - How do we improve this? Ideas?



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Expectations

- Be timely and diligent in implementing 2015 MSGP requirements at your facilities
 - *Plan ahead for budget & resources*
- Look for opportunities to streamline and improve processes
- Ask for help



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Questions?

Requests for Other Topics?

Thank You



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MSGP Training Roster - 2016

Description: Annual MSGP Training for TA-54, Areas L, G, and RANT

Users

User ID (Z#)	User Name	Completion Date	Status
080070	Crawford, Arthur	5/31/2016 09:15 AM MT	Completed
080094	Ortiz, Floyd Filimon	5/17/2016 09:32 AM MT	Completed
086572	Petersen, Robyn A.	5/16/2016 07:49 AM MT	Completed
087684	Vigil, Jackie J	5/16/2016 10:39 AM MT	Completed
087971	Sanchez, Franklin A	5/24/2016 12:55 PM MT	Completed
088660	Gonzales, Richard F	5/16/2016 09:39 AM MT	Completed
088731	Maes, Robert P	8/16/2016 04:19 PM MT	Completed
088766	Gallegos, Tim D	5/16/2016 08:30 AM MT	Completed
088891	Mares, Samuel L	8/11/2016 01:54 PM MT	Completed
090619	Salazar, Willie P	5/16/2016 02:12 PM MT	Completed
090666	Lebrun, Donald Bruce	5/17/2016 06:08 AM MT	Completed
091898	Lucero, Bianca M	5/16/2016 12:14 PM MT	Completed
092205	Rios, Robert E	5/17/2016 02:05 PM MT	Completed
092558	Fresquez, Eugene Bernard	5/31/2016 02:54 PM MT	Completed
094329	Honeycutt, Larry B	5/16/2016 06:07 AM MT	Completed
096549	Lujan, Leonard J	6/30/2016 09:43 AM MT	Completed
097220	Lovato, Leonard Richard	5/31/2016 04:06 PM MT	Completed
097265	Gardner, Mark A	5/16/2016 07:53 AM MT	Completed
097888	Padilla, Raul E	5/19/2016 02:46 PM MT	Completed
098326	Leyba, Anthony R	5/31/2016 01:53 PM MT	Completed
099404	Chacon, Ivan	5/16/2016 10:53 AM MT	Completed
100497	Pacheco, Edward R	5/16/2016 07:20 AM MT	Completed
100524	Zamora, Rudy Ray	5/17/2016 08:17 AM MT	Completed

100844	Stokes, Robert Cleveland	5/17/2016 06:15 AM MT	Completed
102051	Gonzales, Joseph Margarito	7/8/2016 03:20 PM MT	Completed
102448	Moya, Fred Pat	5/16/2016 06:27 AM MT	Completed
103234	Archuleta, Orlando R	5/17/2016 10:46 AM MT	Completed
104781	Lopez, Fred	5/16/2016 08:37 AM MT	Completed
104781	Lopez, Fred	5/16/2016 08:41 AM MT	Completed
104956	Funk, David John	6/24/2016 12:19 PM MT	Completed
105065	Trujillo, Jose Eddie A	5/23/2016 07:07 AM MT	Completed
105609	Huerta, Ronald C	5/16/2016 08:27 AM MT	Completed
106047	Stevens, Patrice Ann	5/15/2016 09:13 AM MT	Completed
106311	Carter, Steven Dale	5/16/2016 08:16 AM MT	Completed
107061	Fernandez, Eric E	5/17/2016 02:32 PM MT	Completed
108039	Ortega, Jose D	5/16/2016 06:19 AM MT	Completed
108243	Banar, Alethea K	5/17/2016 12:49 PM MT	Completed
108419	Gonzales, William G	10/7/2016 04:19 PM MT	Completed
108424	Jaramillo, Donald D	5/17/2016 09:24 AM MT	Completed
109039	Ferran, Scott Garrett	5/16/2016 10:17 AM MT	Completed
109663	Apodaca, Paul E	5/23/2016 01:32 PM MT	Completed
110259	Calderon, Peter M	5/14/2016 06:44 AM MT	Completed
110501	Martinez, Rick	5/16/2016 01:56 PM MT	Completed
110616	Diaz, Jeff M	6/27/2016 06:51 AM MT	Completed
110686	Vigil, David Kenneth	5/17/2016 08:23 AM MT	Completed
111343	Powell, Mark E	5/18/2016 08:22 AM MT	Completed
111489	Stanton, James Kevin	5/23/2016 10:35 AM MT	Completed
111490	Lovato, Sherrye L	5/16/2016 08:29 AM MT	Completed
111877	Coronado, Melissa A	5/16/2016 06:21 AM MT	Completed
112031	Garcia y Balkey, Joyce B	5/23/2016 03:22 PM MT	Completed
112056	Newberry, Paul N	6/8/2016 06:15 AM MT	Completed
112196	Minton-Hughes, Julia Elizabeth	5/17/2016 10:37 AM MT	Completed
112265	Duran, Dennis A	5/24/2016 10:28 AM MT	Completed
112366	Lujan, Joan Julia	5/16/2016 04:01 PM MT	Completed
112383	Schumann, Kathie Ann	5/17/2016 07:15 AM MT	Completed
112456	Whitney, Gary Ellsworth	5/16/2016 09:40 AM MT	Completed

	Gonzales, Frank	5/16/2016 06:40 AM MT	Completed
112609	Rhodes, Valerie A	6/2/2016 09:58 AM MT	Completed
112907	Cordova, Willie J	5/16/2016 06:05 AM MT	Completed
112909	Rivera, Alexander E	6/9/2016 10:01 AM MT	Completed
113241	Sturgeon, Richard Wayne	5/16/2016 09:20 AM MT	Completed
113689	Keller, David Charles	5/16/2016 04:17 PM MT	Completed
113865	Fresquez, Louis Lawrence	5/16/2016 11:53 AM MT	Completed
113937	Lalonde, David M	5/16/2016 09:06 AM MT	Completed
114188	Cordova, Eloy D	5/16/2016 06:09 AM MT	Completed
114849	Helm, Gail Marie	5/19/2016 09:07 AM MT	Completed
114931	Downing, Scott R	5/23/2016 02:12 PM MT	Completed
115102	Robinson, Rhonda Jo	5/16/2016 08:13 AM MT	Completed
115108	Reed, Mary A	5/16/2016 07:37 AM MT	Completed
115582	Anast, Kurt Roy	5/16/2016 11:43 AM MT	Completed
115646	Baker, Larry P	5/19/2016 11:01 AM MT	Completed
115862	Fuehne, David Patrick	6/5/2016 06:39 PM MT	Completed
116274	French, Sean B	10/21/2016 11:32 AM MT	Completed
116277	Soderberg, Charles L	5/16/2016 11:00 AM MT	Completed
116404	Gonzales, Juan Andy	5/16/2016 02:42 PM MT	Completed
116598	Lopez, Joshua L	5/16/2016 09:11 AM MT	Completed
117232	Dixon, David Paul	6/21/2016 11:33 AM MT	Completed
117333	Gallegos, Lucas E	5/16/2016 09:09 AM MT	Completed
117494	Bustos, Roland M	5/16/2016 09:19 AM MT	Completed
118202	Vigil, John William	8/1/2016 02:03 PM MT	Completed
119137	Vigil, Jose Emit	5/16/2016 10:48 AM MT	Completed
119196	Martinez, Paul Amos	5/16/2016 10:14 AM MT	Completed
119459	Mojica, Tommy	5/31/2016 10:09 AM MT	Completed
119642	Trujillo, Robert Andrew	10/7/2016 02:21 PM MT	Completed
120202	Bishop, Tony L	5/16/2016 06:57 AM MT	Completed
120634	Romero, Adrian Tito	5/16/2016 08:44 AM MT	Completed
121389	Harris, Mark Stephen	5/16/2016 06:50 AM MT	Completed
121997	Jalbert, Louis Eugene	6/20/2016 11:08 AM MT	Completed
121998	Garcia, Ronnie A	5/17/2016 07:01 AM MT	Completed

	Herrera, Aaron James	5/27/2016 11:02 AM MT	Completed
122088	Sparks, Jason Keith	5/17/2016 01:11 PM MT	Completed
125695	Guadagnoli, John F	5/16/2016 12:48 PM MT	Completed
128795	Moseley, Jessica L	7/21/2016 01:14 PM MT	Completed
130356	Griffis, Robert L	5/16/2016 10:12 AM MT	Completed
131464	Archuleta, Bernardo	5/16/2016 10:19 AM MT	Completed
140460	Bernabe, Ben F	5/25/2016 07:52 AM MT	Completed
140841	Lucero, Randy Phil	5/16/2016 06:52 PM MT	Completed
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149235	Martinez, Gilbert David	5/24/2016 03:20 PM MT	Completed
151358	O'Grady, James P	6/6/2016 01:06 PM MT	Completed
153627	Salazar, Joseph Andrew	5/16/2016 08:50 AM MT	Completed
153677	Chavez, Daniel J	5/16/2016 09:40 AM MT	Completed
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163082	Vigil, Christopher J	6/30/2016 10:15 AM MT	Completed
163470	Gonzales, Gabriel Silas	5/31/2016 12:08 PM MT	Completed
165927	Carter, Mitchell Lynn	6/7/2016 08:44 AM MT	Completed
166162	Galle, Lane R	6/14/2016 08:41 AM MT	Completed
166407	Apodaca, Arthur C	5/16/2016 10:39 AM MT	Completed
167165	Weyerman, Curtis W	7/25/2016 07:58 AM MT	Completed
167339	Garcia, Joseph A.	6/20/2016 02:53 PM MT	Completed
167507	Wedgeworth, Bruce S	5/19/2016 10:57 AM MT	Completed
167744	Fernandez, Genevieve S	5/16/2016 10:12 AM MT	Completed
168429	Medina, Billy J	7/14/2016 01:39 PM MT	Completed
168688	Shepard, Mark D.	5/31/2016 04:23 PM MT	Completed
169004	Gonzales, Paul	5/16/2016 08:38 AM MT	Completed
169840	Garcia, Juan Clemente	5/23/2016 11:05 AM MT	Completed
170281	Ortiz, Jeremy N.	5/19/2016 09:19 AM MT	Completed
170284	Mondragon, Gilbert S	5/17/2016 11:59 AM MT	Completed
170382	Case, Kenneth C	5/17/2016 01:57 PM MT	Completed
171508	Courville, Kenneth Charles	11/18/2016 10:33 AM MT	Completed
172310	Martinez, Christine A	6/10/2016 09:30 AM MT	Completed
172338	Hands, Lee William	10/3/2016 02:55 PM MT	Completed

	Sandoval, Kathryn L	6/23/2016 10:57 AM MT	Completed
174446	Martinez, Onesimo A	5/16/2016 07:01 AM MT	Completed
174810	Lopez, Bernadette M	5/16/2016 12:54 PM MT	Completed
174824	Lobato, Ted Christopher	5/16/2016 07:41 AM MT	Completed
174963	Anaya, Fabian L	5/18/2016 12:21 PM MT	Completed
174977	Aguirre, Ernestine Vera	5/16/2016 09:59 AM MT	Completed
177949	Madore, John Douglas	5/20/2016 11:47 AM MT	Completed
179942	Smith, Louis Lynn	5/16/2016 07:33 AM MT	Completed
181831	Roybal, Daniel Reyes	6/27/2016 09:33 AM MT	Completed
181951	Jaramillo, Melvin R	5/16/2016 06:54 AM MT	Completed
182759	Salazar, Denise Robin	5/17/2016 06:07 AM MT	Completed
183021	Martinez, Aaron N	8/8/2016 08:29 AM MT	Completed
183574	Parker, Rex Allen	5/17/2016 01:13 PM MT	Completed
183627	Gallegos, Kristin L	11/10/2016 03:13 PM MT	Completed
183690	Sandoval, Leonard Donaiz	5/16/2016 11:02 AM MT	Completed
183693	Quintana, Philip Anthony	5/16/2016 10:55 AM MT	Completed
184322	Montoya, Robert E	5/16/2016 07:26 AM MT	Completed
185247	Plaue, Jonathan W	5/16/2016 03:34 PM MT	Completed
185553	Martinez, Monica R	5/16/2016 09:09 AM MT	Completed
186509	Abeyta, Rudy E	5/26/2016 10:52 AM MT	Completed
187034	Roybal, Randy	5/16/2016 10:46 AM MT	Completed
187066	Romero, Jacqueline	5/19/2016 06:47 AM MT	Completed
187253	Lopez, Ruxanne	5/16/2016 09:38 AM MT	Completed
187599	Trujillo, Joseph James	5/16/2016 09:05 AM MT	Completed
187818	Sanchez, Norman A	5/16/2016 08:49 AM MT	Completed
188081	Salazar, Jonathan P	10/6/2016 08:49 AM MT	Completed
188298	Mctaggart, Kevin K	7/5/2016 11:30 AM MT	Completed
188889	Guillen, Charles C	5/17/2016 08:05 AM MT	Completed
189673	Aguilar, James Mitchell	5/23/2016 08:32 AM MT	Completed
190303	Bustos, Jessica Geraldine	5/16/2016 12:37 PM MT	Completed
190557	Quintana, John Matthew	5/16/2016 06:20 AM MT	Completed
190845	Duran, Matthew S	5/16/2016 08:10 AM MT	Completed
191233	Valencia-Beckman, Vivian P	5/16/2016 09:07 AM MT	Completed

	Montoya, Leon	5/16/2016 11:10 AM MT	Completed
192249	Griego, Anthony Robert	5/16/2016 11:30 AM MT	Completed
193276	Aderhold, Randy V	7/12/2016 02:25 PM MT	Completed
194014	Maes, Christopher R	6/9/2016 09:10 AM MT	Completed
194209	Jones, Christopher Shane	5/23/2016 02:00 PM MT	Completed
194580	Lackas, Lance E	8/9/2016 11:48 AM MT	Completed
196140	Cordova, Kristopher Ray	6/8/2016 04:12 PM MT	Completed
196970	Bullock, Christine Anne	5/18/2016 08:20 AM MT	Completed
197114	Andersen, Brenda	5/17/2016 02:41 PM MT	Completed
197515	Sowers, Michael H	5/19/2016 07:23 AM MT	Completed
197972	Osborn, Michael Scott	5/16/2016 06:43 AM MT	Completed
198348	Bynum, William Randy	10/11/2016 10:27 AM MT	Completed
200088	Cameron, William Wiley	5/17/2016 07:51 AM MT	Completed
200882	DiSalle, Camillo R	5/17/2016 07:32 AM MT	Completed
200890	Aragon, Jose D	5/16/2016 07:38 AM MT	Completed
200966	Rogers, Sam A	5/16/2016 06:50 AM MT	Completed
202102	Martínez, Earl James	5/23/2016 07:55 AM MT	Completed
203034	Taylor, Frank Joseph	6/3/2016 03:01 PM MT	Completed
204897	Hoback, Nicholas L	6/23/2016 01:57 PM MT	Completed
205438	Weaver, Mark Alan	5/16/2016 11:21 AM MT	Completed
205838	Martin, Paul William	5/19/2016 04:21 PM MT	Completed
206097	Carman, Christopher Jon	5/24/2016 08:14 AM MT	Completed
207858	Goldberg, Mitchell S	5/25/2016 06:34 AM MT	Completed
207965	Armijo, Alfred A	5/17/2016 08:36 AM MT	Completed
209703	Martin, Jeffrey B	6/21/2016 07:33 AM MT	Completed
210039	Disalle, Salvatore	6/6/2016 09:32 AM MT	Completed
211078	Malone, Charles P	5/16/2016 06:05 AM MT	Completed
211098	Earls, Bruce Adam	5/20/2016 06:53 AM MT	Completed
211334	Vish, Francis Michael	5/16/2016 11:00 AM MT	Completed
211334	Vish, Francis Michael	6/22/2016 01:33 PM MT	Completed
211935	Fleischacker, Randy Joe	5/18/2016 08:21 AM MT	Completed
211952	McClean, Bret Douglas	7/21/2016 07:35 AM MT	Completed
212070	DeSotel, Ronald Robert	5/16/2016 07:27 AM MT	Completed

	Rodriguez, Darlene S	5/23/2016 03:56 PM MT	Completed
214006	Griffiths, Richard J	5/31/2016 09:07 AM MT	Completed
214009	Padilla, Ralph Ray	5/16/2016 09:54 AM MT	Completed
215042	Cangelosi, Tracy Eva	5/16/2016 10:32 AM MT	Completed
215987	DeWees-Lee, Karen Irene	5/16/2016 03:56 PM MT	Completed
216146	Trujillo, Russell T	6/13/2016 08:17 AM MT	Completed
216298	Bena, Clare E	5/17/2016 01:56 PM MT	Completed
216835	Semon, Robert Joseph	5/18/2016 11:29 AM MT	Completed
217156	Salazar, Erica D	5/16/2016 08:22 AM MT	Completed
219035	Lattin, Rebecca Renee	10/20/2016 02:50 PM MT	Completed
219538	Fernandez, Jose Robert	5/17/2016 03:23 PM MT	Completed
219908	Maestas, Waylon Patrick	11/1/2016 09:15 AM MT	Completed
219923	Lopez, Mark Anthony	5/16/2016 08:31 AM MT	Completed
220276	Vialpando, Rudy D.	5/16/2016 09:16 AM MT	Completed
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