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Stormwater Pollution Prevention Plan

TA-60 Material Recycling Facility

Los Alamos National Laboratory

A requirement of the
NPDES MULTISECTOR GENERAL PEMIT
NMR03195 (LANS)
for Stormwater Discharges Associated with Industrial Activities

Prepared by:
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SECTION 1: FACILITY DESCRIPTION AND CONTACT INFORMATION

1.1 Contact Information/Responsible Parties.

Facility Operator(s):
Name: Los Alamos National Security, LLC (LANS)
Environmental Protection Division
ENV-CP (Environmental Compliance Programs)
Address: P.O. Box 1663 MS K490
City, State, Zip Code: Los Alamos, N.M. 87545
Telephone Number: (505) 667-4190

Facility Owner(s):
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SWPPP Contact Name: Leonard F. Sandoval
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1.2 Stormwater Pollution Prevention Team

The Stormwater Pollution Prevention Team (PPT) for this SWPPP is applicable to the operation of the MRF located at TA-60 at Los Alamos National Laboratory, Los Alamos County, New Mexico. The TA-60 MRF is part of the Utilities and Institutional (UI) Facilities Operations Division at Los Alamos National Laboratory, which has established a PPT whose members are responsible for assisting the facility manager in developing and revising the facility's SWPPP as well as maintaining control measures and taking corrective actions when required. All PPT members will have access to either a hard copy or an electronic version of this SWPPP.

Designation of Pollution Prevention Teams

The Stormwater PPT for the TA-60 MRF consists of operations and management personnel from the facility, MSGP stormwater personnel from ENV-CP, and Deployed Environmental Professionals. The

ENV-CP representative is responsible for Laboratory compliance under the National Pollutant Discharge Elimination System (NPDES) permit regulations. The team members are selected on the basis of their familiarity with the activities at the facility and the potential impacts of those activities on stormwater runoff.

The specific duties of individual team members of the PPT are listed below:

- Pollution Prevention Team Leader: The Pollution Prevention Team Leader is identified in Appendix A of this SWPPP. He or she is responsible for revising and updating the SWPPP as required under Section 8 of this SWPPP. The Team Leader or designated representative will assist ENV-CP in performing the annual Comprehensive Site Inspection described in Section 5.2 of this SWPPP. The Team Leader or designated representative will also ensure that the appropriate facility and other LANS personnel receive the training specified in Section 3.8 of this SWPPP.

- Team Members: Other members of the team are responsible for the implementation of this SWPPP and the required periodic inspections, as described in Section 5 of this SWPPP. In the event of a spill or release, a team member will ensure it is cleaned up and incorporate documentation of the spill and cleanup process into The Spill Tracking Table located in Appendix J of this SWPPP. Team members will also be selected to assist/represent the Team Leader in performing routine inspections.

- ENV-CP Technical Advisor: Supports the facility and provides guidance associated with implementation of the compliance requirements identified in the 2015 MSGP. The ENV-CP Technical Advisor also acts as the institutional point of contact for all interactions with the regulatory authority (EPA) and supervises personnel implementing monitoring requirements for the facility.

- Deployed Environmental Professional: Responsible for conducting the routine facility inspections and entering corrective actions into the ENV-CP NPDES MSGP Corrective Action Report database. The DEP is also responsible for tracking and updating the status of corrective actions that cannot be implemented immediately.

- All Members: All PPT members are responsible for being familiar with and implementing this SWPPP and for compliance with the 2015 MSGP. PPT Members are also responsible for attending meetings that will be scheduled as needed to discuss revisions of the SWPPP, inspection findings, status of corrective actions and any other topics pertinent to the management of the SWPPP.

Staff Names	Individual Responsibilities
Phil Romero	Pollution Prevention Team Leader
Holly Wheeler	MSGP SWPPP Compliance Project Lead
Leonard F. Sandoval	MSGP SWPPP Inspector
Jerry Gallegos	TA-60 MRF Supervisor/PPT Member

1.3 Site Description

Technical Area (TA) 60 Material Recycling Facility (MRF) is located off of Eniwetok Drive along the western edge of Sandia Canyon in Los Alamos County, New Mexico. The MRF covers an area of approximately 2 acres. North of the MRF is the Qwest Communications equipment storage lot, and to the south, the TA-60 Heavy Equipment Shop and vehicle storage area. To the east of the MRF is a steep slope into Sandia Canyon, where drainage from the MRF is distributed into an outfall to the canyon.

The activities at this site may be classified under Sector N: Scrap Recycling and Waste Recycling Facilities. The primary operation of the TA-60 MRF is for consolidation, staging, and shipment of source separated recyclable materials (metals, paper, cardboard etc) from LANL to off-site recycling facilities. The MRF dome was historically used to segregate solid waste from recycling materials and potential hazardous waste. However, this activity no longer occurs at the facility. The Dome is currently being used for storage of the paper dumpsters in the west half of the dome and used by Roads & Grounds crews for storage of snow removal four wheelers.

1.4 General Location Map

The general location map for this facility can be found in Attachment A.

1.5 Site Map

The site map for this facility can be found in Attachment B.

SECTION 2: POTENTIAL POLLUTANT SOURCES

2.1 Potential Pollutants Associated with Industrial Activity.

Industrial Activity	Associated Pollutants
Recycling material staging and storage	Metal contaminated water, paper debris, and liquid draining from soda cans
Recycling container/roll-off handling and transport	Motor and transmission oils, antifreeze, fuels, grease, battery acid

2.2 Spills and Leaks

Areas of Site Where Potential Spills/Leaks Could Occur

Location	Discharge Points
Recyclable metals roll-off bin staging and loading/unloading area at the far east end of the facility	Single ENV-CP monitoring outfall 60-MRF-1 ID# 029 east of MRF fence-gage station E122.35
Transformer 60-0188 located SE of covered Dome with 205 gallons of Non- PCB mineral oil and covered under an existing SPCC Plan	Single ENV-CP monitoring outfall 60-MRF-1 ID# 029 east of MRF fence-gage station E122.35

Description of Past Spills/Leaks

Date	Description	Discharge Points
May 2015	A roll-off bin for recycling was delivered to the MRF and as result of recent rain collected water and leaked approximately 100 gallons of rainwater that had a visible sheen. The rainwater leak was contained onsite and did not discharge to monitoring outfall 60-MRF-1 ID# 029.	Single ENV-CP monitoring outfall 60-MRF-1 ID# 029 east of MRF fence-gage station E122.35

2.3 Unauthorized Non-stormwater Discharges Documentation

Description of this facility's unauthorized non-stormwater discharge evaluation:

- Date of evaluation: 7-29-2015
- Description of the evaluation criteria used: A complete MRF site inspection was performed on 7-29-2015. Observation criteria included any evidence of active or inactive non-stormwater discharges.
- List of the drainage points that were directly observed during the evaluation: Single ENV-CP monitoring outfall 60-MRF-1 ID# 029 east of MRF fence- gage station E122.35
- 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. None because no unauthorized non-stormwater discharges were identified.

2.4 Salt Storage

No salt storage piles used for deicing or other commercial or industrial purposes are located at the TA-60 Material Recycling Facility.

2.5 Sampling Data Summary

Analytical data from benchmark quarterly monitoring from 2009 through 2014 resulted in benchmark exceedances for aluminum, copper, iron, lead, zinc, TSS, and COD.

- All aluminum, iron, and lead concentrations are solely attributed to natural background.
- Results for copper, while above benchmark and background levels, have shown a steady decline in concentrations due to numerous improvements in BMPs and site operations, and in 2011 copper concentrations were solely attributed to natural background levels.
- Results for zinc have been above benchmark levels, but consistently below natural background levels except for one spike in zinc concentrations in one sample in 2011. Investigation and corrective actions were taken to reduce this from happening in the future.

COD and TSS concentrations have consistently been above benchmark levels. During the 2012 and 2013 sampling seasons evaluation of the analytical data from four quarterly benchmark monitoring storm water samples indicated that the average results exceeded the benchmark value for COD and TSS during storm events on 8/20/2012, 7/25/2013, 7/26/2013, and 8/5/2013.

Evaluation of the analytical data from four quarterly benchmark mentoring samples indicates the average results also exceeded the benchmark value for COD and TSS from storm events on 11/21/2013, 5/23/2014, 6/7/2014 and 8/1/2014.

COD and TSS concentrations also exceeded benchmark values during the first quarter of the 2015 monitoring year from a storm event on 4/18/2015.

The impaired water pollutant Thallium was determined not to be present in a discharge sample collected on 5/4/2015. Therefore, annual monitoring for Thallium will be discontinued per Section 6.2.4.2 of the MSGP.

The facility has performed numerous corrective actions in an effort to minimize future exceedances including: diverting stormwater run-on away from the MRF industrial activities (2005), installation of a stormwater retention pond with catch basin insert filters (2005), installation of asphalt millings on two thirds of the lot (2010), angular rock and terra tubes were installed at the receiving end of the retention pond as BMP for sediment control (2014), and in (2015) a major effort is underway to install covers on all of the metal for recycle bins.

SECTION 3: STORMWATER CONTROL MEASURES

3.1 Non-numeric Technology-based Effluent Limits (BPT/BAT/BCT)

3.1.1 Minimize Exposure

Control measures at the facility are designed to minimize the potential for spills, releases, exposure of materials, or any other events that could adversely affect the quality of water and sediment that may be transported out of the area by stormwater runoff.

To minimize exposure of industrial activities to precipitation events, the MRF utilizes covers for recyclable material containers and roll-off bins that are typically stored at the east end of the site. Metal canopies located in the central portion of the site (north and south side), and a fabric tension dome on the west end of the site are utilized to store recyclable materials, small amounts of waste, and protect equipment during inclement weather. Also, pallets and secondary containment pallets may be used throughout the site (including inside canopies or the Dome) to prevent materials from coming into contact with runoff or accumulated precipitation.

3.1.2 Good Housekeeping

Operations personnel at the MRF perform weekly inspections/rounds at the facility which are focused toward keeping the site clean, spill prevention and detection, and identification of potential compliance issues. If a spill is witnessed it is remediated in accordance with this procedure and notifications are made in accordance with P 322-3 “Manual for Communicating, Investigating, and Reporting Abnormal Events”. Per Part 2.1.2.2 of the 2015 MSGP the following actions need to be implemented to ensure good housekeeping:

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

- "Keep all dumpster lids closed when not in use. For dumpster and roll off boxes that do not have lids and could leak, ensure that discharges have a control (e.g., secondary containment). 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.

3.1.3 Maintenance

At the MRF facility, preventive maintenance is performed on all heavy equipment on a six-month schedule. Also, operators perform a pre-operation inspection on equipment prior to use. These inspections would identify any maintenance issues or leaks that need to be remedied. MRF personnel perform weekly facility rounds at the facility. These rounds would identify any facility maintenance issues associated with the structural BMPs on site. Also, the inspections of the facility by the Stormwater PPT identifies corrective measures necessary for maintaining the structural stormwater controls in proper operating condition. If control measures are in need of routine maintenance, it must be conducted immediately in order to minimize pollutant discharges. If a control measure is found to need repair or replacement, all reasonable steps to prevent or minimize the discharge of pollutants must immediately occur 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. Temporary BMPs will be installed to serve as backup controls while a control measure is offline. 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 of the 2015 MSGP 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, the site will take the minimum additional time necessary to complete the maintenance, provided that the EPA Regional Office is notified of the intention to exceed 45 days, and documentation of the rational is contained in this SWPPP. Note: "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 material that may be discharged in a storm event (e.g., through sweeping, vacuuming) or making arrangement (i.e., scheduling) for a new best management practice to be installed at a later date. If a control measure was never installed, was installed incorrectly or not in accordance with Part 2 and/or 8 of the 2015 MSGP, or is not being properly operated or maintained site personnel must conduct corrective action as specified in Part 4 of the 2015 MSGP. The retention pond will be cleaned when the depth of sediment and or debris reached two-thirds (2/3) of the depth of the pond and keeping the debris surface at least six inches below the outlet pipe. According to the manufacturing specifications the functional longevity of terra tubes is 1 to 2 years and at the MRF they will be replaced as soon as they deteriorate to the point where they no longer function properly. The catch basin insert filters at the retention pond are replaced once a year and the frequency depends on the amount of runoff, pollutant loading, and interference of debris, i.e. leaves, vegetation, trash etc.

3.1.4 Spill Prevention and Response

The application of good housekeeping procedures and regular visual inspections minimize the probability of a spill or release. Also, LANL's institutional procedures P 409 *Waste Management* and P 101-14 *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. 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. Standard procedures for 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 ENV-CP personnel depending on the material spilled. Larger spills or spills of unknown substances require that ENV-CP personnel be contacted to respond to the spill, securing the spill area and contacting LANL's Emergency Management Division.

The Security and Emergency Operations (SEO), Emergency Response Group (SEO-1) has been appointed by the Laboratory Director as the organization responsible for emergency management at the Laboratory. The SEO and SEO-1 group will be notified if a spill cannot be easily controlled with the materials on hand, threatens to escape the facility or enter the environment, needs additional resources, involves an unidentified hazard, involves injuries to personnel, requires fire protection, is beyond the training and skill levels of operational or facility personnel regarding the use of spill control equipment, or personnel are not confident in their ability to carry out spill response activities. The SEO and SEO-1 group can be reached at 667-6211 during regular business hours as well as after hours. If a fire or explosion occurs, 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 Emergency Management Office will notify the individuals or organizations responsible for the completion of spill reports or the fulfillment of regulatory reporting requirements.

At LANL, the completion of a spill report may be required in the event of a spill. This determination will be made by the Emergency Ops Office or ENV-CP in accordance with Laboratory and U.S. Department of Energy (DOE) policies, and federal and state regulatory reporting requirements. In addition to fulfilling reporting requirements, spill reports assist user Groups and Laboratory management in assessing the cause of a spill and in executing corrective action.

Two types of spill reporting are required at the Laboratory: internal spill record keeping and external agency notification. Copies of internal spill reports will be kept on file with ENV-CP, the responsible organization, and also in the Spill Records section of the SWPPP. External agency notification (as determined by ENV-CP personnel) may consist of verbal or written notification to the National Response Center, EPA Region VI, or the New Mexico Environment Department.

3.1.5 Erosion and Sediment Controls

At the northeast corner of the TA-60 MRF stormwater flows into a concrete retention pond through metal grates, debris mesh, and petroleum filters before it discharges into a 24 inch CMP culvert onto a concrete flume upstream of the MSGP sampler. The east end of the facility is covered with compacted asphalt millings and at the northeast corner there's a retention pond with a locked drain valve. Along and adjacent to the receiving end of the concrete retention pond there's a section of angular rock and terra tubes. East of the covered Dome and along the north perimeter fence line there's a small sediment trap made of angular rock. Between covered structures 60-0251 and 60-0217 and adjacent to the perimeter fence line there is a small section of angular rock. There is also a berm that runs along and adjacent to sections of the north, east, and south perimeter fence lines.

3.1.6 Management of Runoff

At the west entrance to the TA-60 MRF Eco-Blocs and a grated trench drain divert run-on from stormwater runoff into a drainage swale along the south boundary of the facility. Run-on from stormwater runoff from

the adjacent roadway to the west is also diverted into another drainage swale along the north boundary of the facility. Runoff is also managed by a 24 inch CMP culvert that discharges from the retention pond onto a concrete flume to the MSGP sampler. The concrete retention basin at the northeast corner of the MRF also has a drain valve that is locked. Along and adjacent to the receiving end of the concrete retention pond there's also angular rock. East of the covered Dome and along the north perimeter fence line there's also a small sediment trap made of angular rock. There's also a berm along and adjacent to sections of the north, east, and south perimeter fence lines.

3.1.7 Salt Storage Piles or Piles Containing Salt

No salt storage piles used for deicing or other commercial or industrial purposes are located at the TA-60 Material Recycling Facility.

3.1.8 Dust Generation and Vehicle Tracking of Industrial Materials

The east end of the MRF facility, which is primarily used for roll-off bin storage, is the only area that is not covered by asphalt, concrete or structures. This area of the facility has asphalt millings to reduce erosion and sediment transport and to facilitate loading and unloading operations. Once loaded, the vehicles must travel across the MRF site (to the West) which is covered in asphalt. Between the millings and the asphalt lot, there is little potential for either dust generation or tracking of sediment.

3.2 Sector-Specific Non-Numeric Effluent Limits

- Inbound Recycling Material Control: The MRF and LANL utilize the institution's recycling web site (http://int.lanl.gov/environment/p2/recycle/index/shtml) to educate and inform LANL personnel about acceptable recycling items for shipment to the MRF. Drivers responsible for pickup of recycled material inspect their shipment prior to transport and will look for non-recyclable items, chemicals or hazardous wastes and bins containing liquids. If these items are present the shipment will be rejected until the generator can remediate the unacceptable condition.
- Outdoor Storage: The MRF minimizes exposure of recyclables to precipitation and runoff by storing as many materials as practical under metal canopies or in the tension fabric Dome.
- Indoor Storage: Recyclable materials are stored inside a Dome and several metal canopies. MRF personnel perform weekly rounds where housekeeping issues are identified and promptly remediated.
- Vehicle and Equipment Maintenance and Refueling: Vehicle/heavy equipment maintenance is provided by LANL's Maintenance and Site Services (MSS) Division at the TA-60 Heavy Equipment Yard and not done at the MRF. Refueling of vehicle/heavy equipment is also not performed at the MRF.

3.3 Numeric Effluent Limitations Based on Effluent Limitations Guidelines

The TA-60 MRF is a Sector N facility and is not subject to any Effluent Limitation Guidelines.

3.4 Water Quality-based Effluent Limitations and Water Quality Standards

MRF discharges to an impaired water and is therefore subject to Water Quality Standards. In addition, Sector N has Benchmark monitoring requirements subject to Part 9.6.2.1 2015 MSGP. The impaired water constituents for "Sandia Canyon (Sigma Canyon to NPDES outfall 001), Assessment unit NM-90000.A_047, are PCBs, Total Aluminum, Total Copper, Dissolved Thallium and Adjusted Gross Alpha.

SECTION 4: SCHEDULES AND PROCEDURES

4.1 Good Housekeeping

Operations personnel at the MRF perform weekly inspections/rounds at the facility which are focused toward keeping the site clean, spill prevention and detection, and identification of potential compliance issues. If a spill is witnessed it is remediated in accordance with this procedure and notifications are made in accordance with P 322-3 "Manual for Communicating, Investigating, and Reporting Abnormal Events". Maintenance of the containment structures and stormwater conveyances is essential to good housekeeping. The stormwater controls are cleaned as necessary to prevent clogging and promote proper operation.

4.2 Maintenance

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 of the 2015 MSGP 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, the site will take the minimum additional time necessary to complete the maintenance, provided that the EPA Regional Office is notified of the intention to exceed 45 days, and documentation of the rational is contained in this SWPPP. Note: "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 material that may be discharged in a storm event (e.g., through sweeping, vacuuming) or making arrangement (i.e., scheduling) for a new best management practice to be installed at a later date. If a control measure was never installed, was installed incorrectly or not in accordance with Part 2 and/or 8 of the 2015 MSGP, or is not being properly operated or maintained site personnel must conduct corrective action as specified in Part 4 of the 2015 MSGP. The retention pond will be cleaned when the depth of sediment and or debris reached two-thirds (2/3) of the depth of the pond and keeping the debris surface at least six inches below the outlet pipe. According to the manufacturing specifications the functional longevity of terra tubes is 1 to 2 years and at the MRF they will be replaced as soon as they deteriorate to the point where they no longer function properly. The catch basin insert filters at the retention pond are replaced once a year and the frequency depends on the amount of runoff, pollutant loading, and interference of debris, i.e. leaves, vegetation, trash etc.

4.3 Spill Prevention and Response Procedures

The application of good housekeeping procedures and regular visual inspections minimize the probability of a spill or release. Also, LANL's institutional procedures P 409 *Waste Management* and P 101-14 *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. 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. A spill kit is located inside office space 60-311. 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. Standard procedures for 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 ENV-CP personnel depending on the material spilled. Larger spills or spills of unknown substances require that ENV-CP personnel be contacted to respond to the spill, securing the spill area and contacting LANL's Emergency Management Division. All unauthorized spills and releases are entered into the ENV-CP MSGP Corrective Action Reporting database.

The Security and Emergency Operations (SEO), Emergency Response Group (SEO-1) has been appointed by the Laboratory Director as the organization responsible for emergency management at the Laboratory. The SEO and SEO-1 group will be notified if a spill cannot be easily controlled with the materials on hand, threatens to escape the facility or enter the environment, needs additional resources, involves an unidentified hazard, involves injuries to personnel, requires fire protection, is beyond the training and skill levels of operational or facility personnel regarding the use of spill control equipment, or personnel are not confident in their ability to carry out spill response activities. The SEO and SEO-1 group can be reached at 667-6211 during regular business hours as well as after hours. If a fire or explosion occurs, 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 Emergency Management Office will notify the individuals or organizations responsible for the completion of spill reports or the fulfillment of regulatory reporting requirements.

At LANL, the completion of a spill report may be required in the event of a spill. This determination will be made by the Emergency Ops Office or ENV-CP in accordance with Laboratory and U.S. Department of Energy (DOE) policies, and federal and state regulatory reporting requirements. In addition to fulfilling reporting requirements, spill reports assist user Groups and Laboratory management in assessing the cause of a spill and in executing corrective action.

Two types of spill reporting are required at the Laboratory: internal spill record keeping and external agency notification. Copies of internal spill reports will be kept on file with ENV-CP, the responsible organization, and also in the Spill Records section of the SWPPP. External agency notification (as determined by ENV-CP personnel) may consist of verbal or written notification to the National Response Center, EPA Region VI, or the New Mexico Environment Department.

4.4 Erosion and Sediment Control

At the northeast corner of the TA-60 MRF affixed to a concrete retention pond there are grated filters with debris mesh and petroleum filters. From the retention pond a 24 inch CMP culvert discharges to a concrete flume upstream of the MSGP sampler. The east end of the facility is covered with compacted asphalt millings and at the northeast corner there's a retention pond with a locked drain valve. Along to the

receiving end of the concrete retention pond there's also angular rock. East of the covered Dome and along the north perimeter fence line there's a small sediment trap made of angular rock. No polymers and /or other chemical treatments are used for erosion and sediment control. The retention pond up gradient from out 60-MRF-1 ID # 029 acts to dissipate flow velocities before stormwater runoff is discharged from the site. Asphalt millings installed on the east end of the facility, up gradient from the discharge location, acts to minimize erosion and reduce offsite sediment migration.

4.5 Employee Training

The primary object of the training program is to ensure employees who work in areas where industrial material or activities are exposed to stormwater or who are responsible for implementing activities necessary to meet the conditions of this permit, including all members of the stormwater pollution prevention team understand the requirements of the 2015 MSGP 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), who are responsible for the storage and handling of chemicals and materials that could become contaminants in stormwater discharges, who are responsible for conducting and documenting monitoring and inspections, and who are also responsible for implementing and documenting corrective actions at Roads and Grounds as well as Stormwater PPT members receive annual stormwater pollution prevention training. If formalized, this training is recorded in LANL's U-Train database.

The training incorporates at a minimum, the following topics:

- An overview of what is in the SWPPP;
- Spill response procedures, good housekeeping, maintenance requirements, and material management practices;
- The location of all controls on the site required by this permit, and how they are to be maintained;
- The proper procedures to follow with respect to the permit's pollution prevention requirements; and
- When and how to conduct inspections, record applicable findings, and take corrective actions (only applies to persons responsible for conducting inspections).

4.6 Inspections and Assessments

4.6.1 Routine Facility Inspections

Routine inspections are conducted and documented monthly. The third month of the quarter (March, June, September, December) will be considered as the quarterly routine inspection. The inspections are performed by a qualified member of the Stormwater PPT (typically a Deployed Environmental Professional or ENV-CP Compliance Project Lead).

One routine inspection is conducted during an active stormwater discharge, if possible. Routine inspections evaluate the following, at a minimum:

- Areas where industrial material or activities are exposed to stormwater;
- Areas where potential pollutant sources are identified;
- Discharge points; and

- Examine and look for leaks or spills, offsite tracking, trash residue, or other industrial materials that may have or could come in contact with stormwater.
- A required control measure was never installed, was installed incorrectly, or not being properly operated or maintained.
- Whenever a visual assessment shows evidence of stormwater pollution (e.g. color, odor, floating solids, suspended solids, foam).
- Construction or a change in design, operation, or maintenance at the facility significantly changes the nature of pollutants discharged in stormwater from the facility, or significantly increases the quantity of pollutants discharged.

Specific areas of the facility to be inspected include: entire fenced portion of MRF facility including roll-off container storage areas on the east end, structural BMPs at east end of facility, stormwater run-on control BMPs at the west entrance to the facility, and the BMPs and stormwater monitoring station located northeast of the MRF fence line.

The Stormwater PPT member performing the inspection documents the inspection and notes potential stormwater pollution problems that were encountered on the routine facility inspection form. Any required corrective actions identified during the inspection are addressed in accordance with ENV-CP-QP-022, *MSGP Stormwater Corrective Actions*. All identified corrective actions found as a result of routine facility inspections must comply with Part 4 of the 2015 MSGP. Corrective actions are recorded and documented in the ENV-CP MSGP CAR database.

Facility personnel or the Deployed Environmental Professional may also perform daily, weekly, or other periodic facility surveys in between monthly routine inspections to further ensure compliance with the SWPPP.

When any of the following conditions occur or are detected during an inspection, monitoring or other means, the Pollution Prevention Team must review and revise the SWPPP, as appropriate.

- An unauthorized release or discharge (e.g., spill leak, or discharge of non-stormwater not authorized by the 2015 MSGP or another NPDES permit to a water of the U.S. occurs at your facility.
- Your control measures are not stringent enough for the discharge to meet applicable water quality standards or the non-numeric effluent limits in the 23015 MSGP.
- A required control measure was never installed, was installed incorrectly, or not in accordance with Parts 2 and/or 8 of the 2015 MSGP 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, and foam).

4.6.2 Quarterly Visual Assessment of Stormwater Discharges

The quarterly visual assessments are conducted at outfall 60-MRF-1 ID# 029 by a qualified member of the Storm water PPT (Deployed Environmental Professional or ENV-CP). Visual assessments will:

- use a clean clear glass or plastic sample container in a well lite area;
- sample collected as soon as practicable after the first 30 minutes of a discharge if not possible to collect within the first 30 minutes following a storm event;
- snowmelt samples must be collected during a period of measurable discharge from the site;
- be conducted at least 72 hours since the last storm event;
- 72 hour storm interval does apply if you document that less than a 72 hour interval is representative for local storm events during the sampling period;
- document 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 in a particular quarter;
- Perform one quarterly assessment during snow melt discharge.

Collection of quarterly visual assessments occurs on the following schedule for each calendar year in accordance with ENV-RCRA QP-064, *MSGP Storm Water Visual Inspections*:

- April 1 – May 31
- June 1 – July 31
- August 1 – September 30
- October 1 – November 30

The visual assessment will inspect for the following water quality characteristics: color, odor, clarity, floating solids, settled solids, suspended solids foam, oil sheen, and other obvious indicators of stormwater pollution.

The Stormwater PPT member performing the visual assessment will document potential stormwater pollution problems that were observed during the assessment on the Quarterly Visual Assessment form.

4.7 Monitoring

4.7.1 Stormwater Monitoring

Analytical monitoring comprised of quarterly benchmark and impaired waters monitoring is performed on stormwater discharges from the site. Monitoring events occur during storm events that result in as actual discharge from the site and that follow the preceding measurable storm event by at least 72 hours (3 days). From runoff from snowmelt, the monitoring is performed at a time when a measurable discharge from the site occurs.

Monitoring is conducted according to test procedures approved under 40 CFR Part 136. Runoff samples are collected by taking a minimum of one grab sample from a discharge, collected within the first 30 minutes of 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 is collected as soon as practicable after the first 30 minutes and documentation is kept with the SWPPP explaining why it was not possible to take samples within the first 30 minutes. Any corrective actions required as a result of a quarterly visual assessment must be performed consistent with Part 4 of the 2015 MSGP.

Samples are retrieved in accordance with inspecting Storm Water Runoff Samplers and Retrieving Samples for the MSGP, ENV-RCRA-QP-047. Stormwater samples are processed in accordance with Processing MSGP Storm Water Samples, ENV-CP-QP-048. All stormwater monitoring is conducted in accordance with the Quality Assurance Project Plan Program, ENV-CP-QAPP-MSGP and the current year MSGP Field Implementation Plan.

4.7.2 Monitoring Schedule

Monitoring will begin in October 2015. Benchmark monitoring continues on a quarterly basis at least once in each of the following 2-month intervals:

- April 1 – May 31;
- June 1 – July 31;
- August 1 – September 30; and
- October 1 – November 30.

Impaired waters monitoring is performed on an annual basis with a sample collected in the period between April 1 and November 30.

LANL is located in a high elevation, semi-arid climate where the majority of rainfall occurs during a period between July and September. Freezing conditions that would prevent runoff from occurring for extended periods may also occur during the winter months. For these conditions if benchmark monitoring cannot be performed on the quarterly schedule above, monitoring events will be distributed during seasons when precipitation occurs, or when snowmelt results in a measurable discharge from the site. If adverse weather conditions prevent the collection of samples according to the relevant monitoring schedule, a substitute sample will be collected during the next qualifying storm event or as soon as practical.

4.7.3 Substantially Identical Outfalls

There is currently only one outfall at the facility: 60-MRF-1 ID# 029, which is representative of all stormwater runoff associated with the facility in regard to monitoring data. Monitoring occurs at automated gage station E122.35. Discharge from the facility is east to Sandia Canyon (impaired waters), which is a tributary of the Rio Grande located approximately 5 miles east of the facility.

4.7.4 Summary of Monitoring Requirements (Sandia Canyon)

Monitoring Type	Location	Parameters		Numeric Limitations	Schedule
Benchmark	Refer to SWPPP Map	Total Suspended Solids	100 mg/L	None	Quarterly
		Chemical Oxygen Demand (COD)	120 mg/L		
		Aluminum (T)	0.75 mg/L		
		Copper (T)	0.014 mg/L		

		Zinc (T)	0.12 mg/L		
		Iron (T)	1.0 mg/L		
		Lead	0.082 mg/L		
Impaired Waters	Refer to SWPPP Map	Aluminum	530 mg/L	None	Annual
		Gross Alpha, adjusted	15 pCi/L		
		Copper	5 mg/L		
		Thallium, dissolved	0.47 mg/L		
		PCB in Water Column	0.014 mg/L		

Procedures:

- ENV-CP-QP-045, *Installing, Setting up, and Operating ISCO Samplers for the MSGP:* http://int.lanl.gov/training/env-courses/55962/env-cp-qp-045.pdf
- ENV-CP-QP-048, *Processing MSGP Stormwater Samples:* http://int.lanl.gov/training/env-courses/56595/env-cp-qp-048.pdf
- ENV-RCRA-QP-047, *Inspecting Stormwater Runoff Samplers and Retrieving Samples for the MSGP:* http://int.lanl.gov/training/env-courses/56594/env-rcra-qp-047.pdf
- ENV-CP-QAPP-MSGP, *Quality Assurance Project Plan for the Stormwater MSGP:* http://int.lanl.gov/training/env-courses/43337/env-cp-qapp-msgp.pdf

4.7.5 Summary of Monitoring Requirements

Pollutants under impaired waters monitoring and quarterly benchmark monitoring constituents are identified in the most recent version of the Quarterly Assurances Project Plan for the Storm Water Multi-Sector General Permit for Industrial Activities Program. All analyses and/or field parameters are identified in the most recent version of the Field Implementation Plan. These plans were written and are updated by ENV-CP. Specific monitoring information contained in the SAP includes the following:

- Analytical constituent(s) per outfall,
- Frequency of analysis (annual or quarterly),
- Matrix type (snow melt or rainfall),
- Sample type (grab),
- Preservation'
- Container type,

- Unfiltered,
- Holding times,
- Detection Limits,
- Volume, and
- Analytical method.

Numeric control values for comparison with analytical results are provided by ENV-CP stormwater compliance personnel. The results of these are documented in the MSGP Annual Reports.

4.7.6 Monitoring Results

If the average of 4 monitoring values for any parameter exceeds benchmark, or if prior to completion of 4 quarterly samples, an exceedance of the 4 quarter average is mathematically certain, the Pollution prevention Team and ENV-CP personnel will:

- Review the selection, design, installation, and implementation of control measures to determine if modifications are necessary to meet natural background of benchmark effluent limits,
- Implement the necessary modifications, and
- Continue quarterly monitoring until 4 additional quarters of monitoring have been completed for which the average does not exceed the benchmark.

If the average of the 4 monitoring values for any parameter does not exceed the benchmark, or natural background levels, monitoring for that particular parameter will no longer be performed.

4.7.7 Recordkeeping

For each monitoring event, except snowmelt monitoring, the following information is recorded and maintained through field data sheets, LANL database systems, and Discharge Monitoring Records:

- The date, exact place, and time of sampling or measurements;
- The date and duration (in hours) of the rainfall event;
- Rainfall total (in inches) for that rainfall event;
- Time (in days) since the previous measureable storm event;
- The individual (s) who performed the sampling or measurements;
- The date (s) analyses were performed;
- The individual (s) who performed the analyses;
- The analytical techniques or methods used; and
- The results of such analyses.

For snowmelt monitoring, all information except rainfall event durations, totals, and time since previous event is included. Additionally, all records of monitoring information, including all calibration and

maintenance records are maintained for a minimum period of at least three years from the date the permit expires.

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

5.1 Documentation Regarding Endangered Species.

The Los Alamos National Laboratory (LANL) 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 can not 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.

5.2 Documentation Regarding Historic Properties

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

- 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 Asphalt Batch Plant
- TA-60-1 Heavy Equipment Yard
- TA-60 Material Recycle Facility
- TA-60 Roads and Grounds
- TA-60-2 Warehouse
- TA-54 Area L
- TA-54 Area G
- TA-54 Maintenance Facility West
- TA-54 RANT

SECTION 7: SWPPP CERTIFICATION

TA-60 Material Recycling Facility
STORMWATER POLLUTION PREVENTION PLANT
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."

Signature: _____ Digitally signed by Andrew Erickson, 141880 DN: cn=Andrew Erickson, 141880, o=Los Alamos National Laboratory, ou=Facility Operations Director Utility and Institutional Facilities, email=erickson@lanl.gov, c=US Date: 2015.09.01 14:43:36 -06'00' Date: _____

Andrew W. Erickson

Facility Operations Director
Utilities and Institutional Facilities, UIF

SECTION 8: SWPPP MODIFICATIONS

The SWPPP will be modified by the PPT and reviewed by the ENV-CP Technical Advisor(s) whenever necessary to address any of the triggering conditions for corrective actions listed in Section 3.1.3 of this SWPPP to ensure that they do not reoccur; or to reflect changes implemented when a review following the triggering conditions listed in Section 3.1.3 of this SWPPP indicates that changes to control measures are necessary to meet the effluent limits described in this SWPPP. Changes to this SWPPP document must be made in accordance with the corrective action deadlines defined in Section 3.1.3 and must be signed and dated in accordance with the signatory requirements listed in Appendix B Subsection 11 (Signatory Requirements) of the 2015 MSGP. SWPPP updates are required within 14 calendar days of completing corrective actions. A record of amendments to the SWPPP will be tracked in the amendment log located in this SWPPP.

SWPPP ATTACHMENTS

Attach the following documentation to the SWPPP:

Attachment A – General Location Map

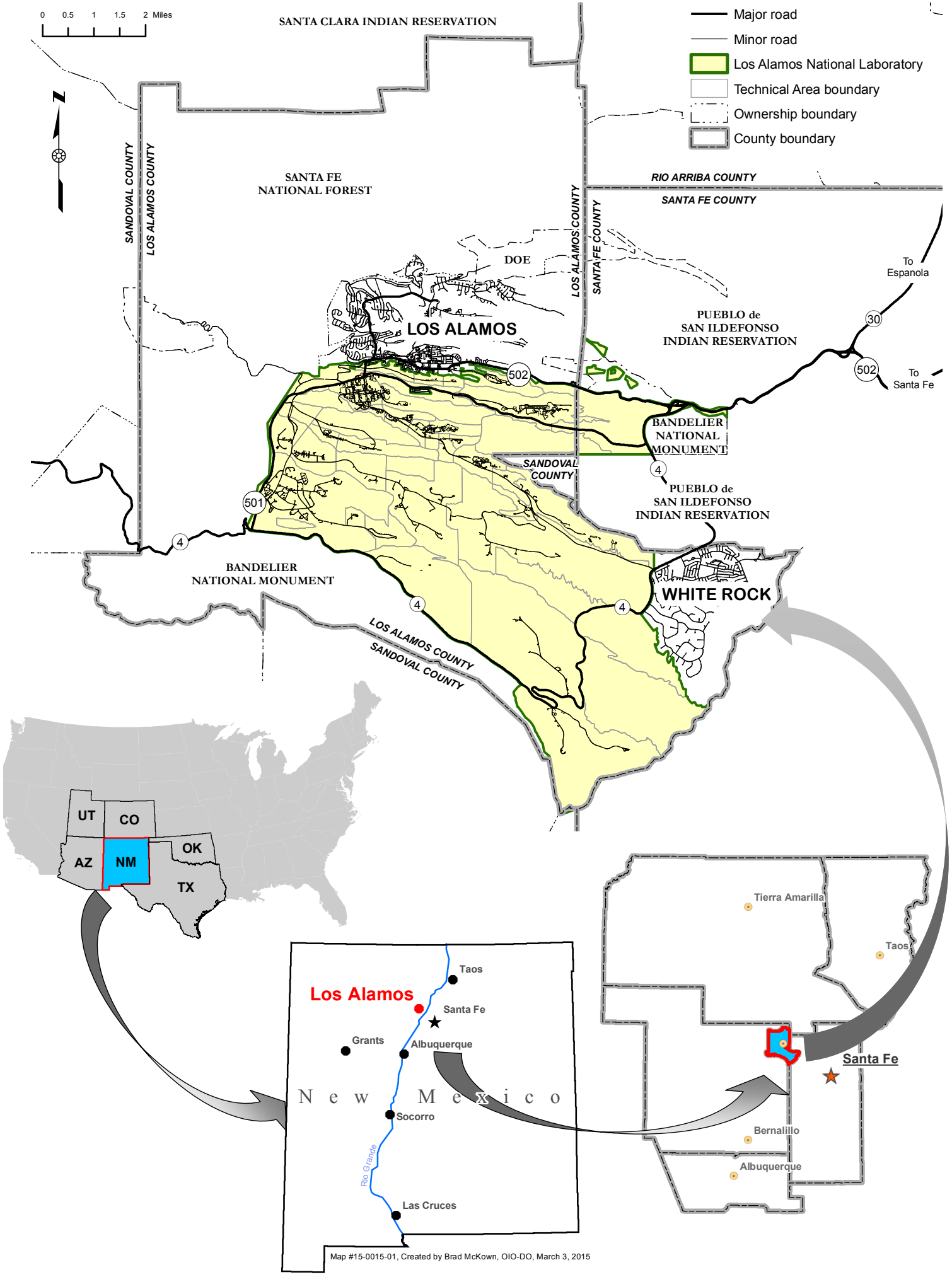
Include a copy of your general location map in Attachment A.

Attachment B – Site Map

Include a copy of your site map(s) in Attachment B.

Attachment C –2015 MSGP

Note: it is helpful to keep a printed-out copy of the 2015 MSGP so that it is accessible to you for easy reference. However, you do not need to formally incorporate the entire 2015 MSGP into your SWPPP. As an alternative, you can include a reference to the permit and where it is kept at the site.


0 0.5 1 1.5 2 Miles
Major road
Minor road
Los Alamos National Laboratory
Technical Area boundary
Ownership boundary
County boundary
SANTA CLARA INDIAN RESERVATION
SANTA FE NATIONAL FOREST
SANDOVAL COUNTY
LOS ALAMOS COUNTY
RIO ARRIBA COUNTY
SANTA FE COUNTY
DOE
LOS ALAMOS
PUEBLO de SAN ILDEFONSO INDIAN RESERVATION
To Espanola
To Santa Fe
BANDELIER NATIONAL MONUMENT
WHITE ROCK
502
501
4
30
UT
CO
AZ
NM
OK
TX
Taos
Los Alamos
Santa Fe
Grants
Albuquerque
New Mexico
Socorro
Rio Grande
Las Cruces
Tierra Amarilla
Bernalillo
Map #15-0015-01, Created by Brad McKown, OIO-DO, March 3, 2015

Outfall w/Sampler
60-MRF-1 ID# 029

TO SANDIA CANYON
(IMPAIRED WATER)

Water Quality Flume

Grated Concrete Basin
Valve and 4-Filter Drain

Spill kit location

ASPHALT MILLINGS

ASPHALT

Covered Dome

Oil-Filled Transfromer

60-0311

MANIAC

Parking lot

Trench Drain

TO SANDIA CANYON
(IMPAIRED WATER)
Does not discharge to
Tier 2, 2.5, or 3 waters

RUNOFF FROM HE SHOP
TO SANDIA CANYON
(IMPIARED WATER)

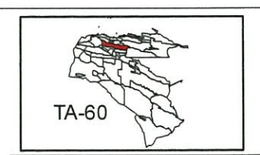
RUNOFF FROM HE SHOP

LEGEND

- Asphalt Berm
- Existing Fence
- Drainage Flow
- CULVERT
- Terra Tubes
- Gabions
- Swale
- Covered Canopies
- Run On Point
- Angular Rock
- Structures
- ECO Blocks

LA-UR-15-26793

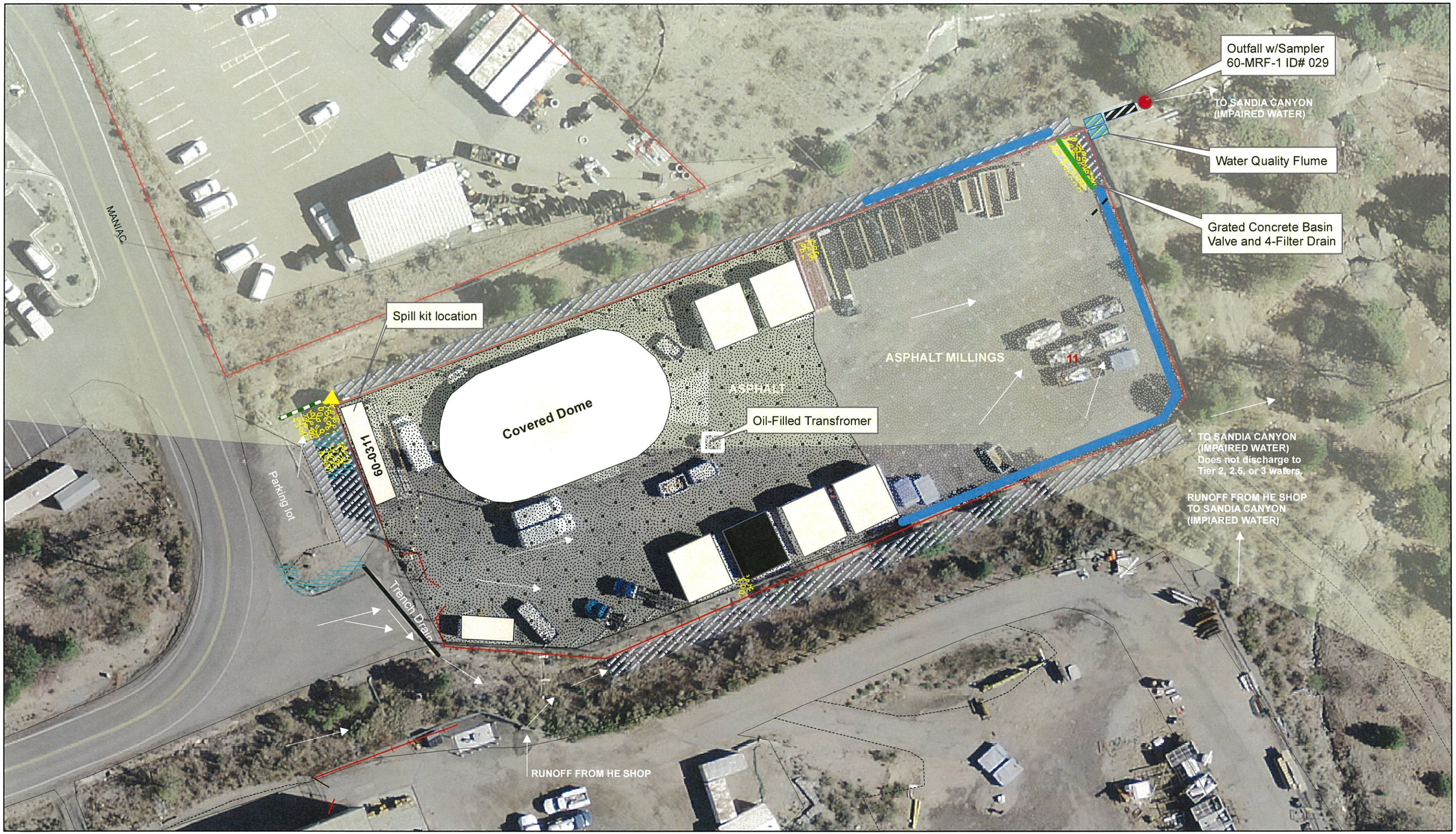
TECHNICAL AREA (TA) 60
MATERIAL RECYCLING FACILITY
STORM WATER POLLUTION PREVENTION SITE PLAN
2 ACRES 90% IMPERVIOUS



UTILITIES AND INSTITUTIONAL FACILITIES

U12024 rev.1

Classification: U | Reviewer: Harold Salazar | Date: 8-26-2015

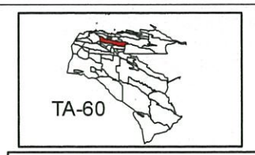


LEGEND

- Asphalt Berm
- Existing Fence
- Drainage Flow
- Culvert
- Terra Tubes
- Gabions
- Swale
- Covered Canopies
- Run On Point
- Angular Rock
- Structures
- ECO Blocks

Developed Buffer
Mexican Spotted
Owl Habitat

TECHNICAL AREA (TA) 60
MATERIAL RECYCLING FACILITY
STORM WATER POLLUTION PREVENTION SITE PLAN
2 ACRES 90% IMPERVIOUS



UTILITIES AND INSTITUTIONAL FACILITIES

U12024 rev.1

Classification: U | Reviewer: Harold Salazar | Date: 8-26-2015

LA-UR-15-26793

2015 Multi-Sector General Permit

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

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

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

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

Signed and issued this 4th day of June, 2015

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

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

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

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

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

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

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1. Coverage Under this Permit.

1.1 Eligibility.

1.1.1 Facilities Covered.

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

1.1.2 Allowable Stormwater Discharges.

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

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

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

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

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

Table 1-1. Stormwater-Specific Effluent Limitations Guidelines

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

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

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

1.1.3 Allowable Non-Stormwater Discharges.

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

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

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

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

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

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

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

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

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

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

1.1.4 Limitations on Coverage.

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

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

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

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

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

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

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

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

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

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

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

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

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

i. A biological opinion that concludes that the action in question (taking into account the effects of your facility's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat;

ii. A biological opinion that concludes that the action is likely to jeopardize listed species or to result in the destruction or adverse modification of critical habitat, and any recommended reasonable and prudent alternatives or reasonable and prudent measures are being implemented; or

iii. Written concurrence from the applicable Service(s) with a finding that the facility's discharges and discharge-related activities are not likely to adversely affect listed species or critical habitat.

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

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

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

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

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

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

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

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

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

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

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

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

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

a. Prevent all exposure to stormwater of the pollutant(s) for which the waterbody is impaired, and retain documentation of procedures taken to prevent exposure onsite with your SWPPP;

b. Prior to submitting your NOI, provide to the appropriate EPA Regional Office technical information or other documentation to support your claim that the pollutant(s) for which the waterbody is impaired is not present at your site, and retain such documentation with your SWPPP; or

c. Prior to submitting your NOI, provide information to the appropriate EPA Regional Office, either data or other technical documentation, to support a conclusion that the discharge is expected to meet applicable water quality standards (i.e., that pollutants of concern will not be discharged at levels that will cause or contribute to an exceedance of a water quality standard), and retain such information with your SWPPP. The information to be submitted must be sufficient to demonstrate:

   i. For discharges to waters without an EPA-approved or established total maximum daily load (TMDL), that the discharge of the pollutant for which the water is impaired will meet water quality standards at the point of discharge to the waterbody; or

   ii. For discharges to waters with an applicable EPA-approved or established TMD), that there are, in accordance with 40 CFR 122.4(i), sufficient remaining wasteload allocations in the TMDL to allow your discharge and that existing dischargers to the waterbody are subject to compliance schedules designed to bring the waterbody into attainment with water quality standards (e.g., a reserve allocation for future growth).

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

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

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

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

For discharges that enter a separate storm sewer system[2] 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 system[2] prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system.

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

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

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

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

1.2 Authorization Under this Permit.

1.2.1 How to Obtain Authorization.

To obtain authorization under this permit, you must:

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

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

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

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

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

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

Category	NOI Submission Deadline	Discharge Authorization Date[1, 2]
Operators of industrial activities that were authorized for coverage under the 2008 MSGP.	No later than September 2, 2015 unless EPA notifies you that your deadline is extended.[3]	30 days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization has been denied or delayed. *Note: You must review and update your SWPPP to ensure that this permit's requirements are addressed prior to submitting your NOI.* 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.

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

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

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

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

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

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

1.2.3 Coverage Under Alternative Permits.

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

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

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

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

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

1.3 Terminating Coverage.

1.3.1 Submitting a Notice of Termination (NOT).

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

1.3.2 How to Submit Your NOT.

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

1.3.3 When to Submit Your NOT.

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

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

1.4 Conditional Exclusion for No Exposure.

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

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

1.5 Permit Compliance.

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

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

1.6 Severability.

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

2. Control Measures and Effluent Limits.

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

2.1 Control Measures.

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

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

2.1.1 Control Measure Selection and Design Considerations.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

the purpose in your SWPPP. There are many resources available to help you select appropriate BMPs for erosion and sediment control, including EPA's Stormwater Discharges from Construction Activities website at: http://water.epa.gov/polwaste/npdes/stormwater/EPA-Construction-General-Permit.cfm.

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

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

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

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

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

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

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

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

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

2.1.3 Numeric Effluent Limitations Based on Effluent Limitations Guidelines.

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

Table 2-1. Applicable Effluent Limitations Guidelines

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

2.2 Water Quality-Based Effluent Limitations.

2.2.1 Water Quality Standards.

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

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

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

2.2.2 Discharges to Water Quality-Impaired Waters.

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

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

Note: For discharges that enter a separate storm sewer system[3] 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 Discharger to an Impaired Water without an EPA-Approved or Established TMDL. If you discharge to an impaired water without an EPA-approved or established TMDL, you are still required to comply with Part 2.2.1, and you must comply with the monitoring requirements of Part 6.2.4.1. Note that the impaired waters monitoring requirements of Part 6.2.4.1 also apply where EPA determines that your discharge is not controlled as necessary to meet applicable water quality

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

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

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

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

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

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

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

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

3. Inspections.

3.1 Routine Facility Inspections.

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

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

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

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

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

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

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

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

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

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

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

3.1.2 Routine Facility Inspection Documentation.

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

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

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

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

3.2 Quarterly Visual Assessment of Stormwater Discharges.

3.2.1 Quarterly Visual Assessment Procedures.

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

The visual assessment must be made:

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

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

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

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

3.2.2 Quarterly Visual Assessment Documentation.

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

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

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

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

3.2.3 Exceptions to Quarterly Visual Assessments.

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

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

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

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

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

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

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

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

4. Corrective Actions.

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

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

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

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

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

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

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

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

4.3 Corrective Actions and Deadlines.

4.3.1 Immediate Actions.

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

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

4.3.2 Subsequent Actions.

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

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

4.4 Corrective Action Documentation.

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

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

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

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

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

4.5 Effect of Corrective Action.

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

4.6 Substantially Identical Outfalls.

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

5. Stormwater Pollution Prevention Plan (SWPPP).

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

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

5.1 Person(s) Responsible for SWPPP Preparation.

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

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

5.2 Contents of Your SWPPP.

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

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

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

5.2.1 Stormwater Pollution Prevention Team.

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

5.2.2 Site Description.

Your SWPPP must include the following:

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

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

5.2.3 Summary of Potential Pollutant Sources.

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

For each area identified, the description must include:

5.2.3.1 ***Activities in the Area.*** A list of the industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams).

5.2.3.2 ***Pollutants.*** A list of the pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, cleaning solvents) associated with each identified activity, which could be exposed to rainfall or snowmelt and could be discharged from your facility. The pollutant list must include all significant materials that have been handled, treated, stored or disposed, and that have been exposed to stormwater in the three years prior to the date you prepare or amend your SWPPP.

5.2.3.3 ***Spills and Leaks.*** You must document where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfall(s) that would be affected by such spills and leaks. You must document all significant spills and leaks of oil or toxic or hazardous substances that actually occurred at exposed areas, or that drained to a stormwater conveyance, in the three years prior to the date you prepare or amend your SWPPP.

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

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

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

Documentation of your evaluation must include:

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

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

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

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

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

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

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

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

5.2.5 Schedules and Procedures.

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

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

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

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

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

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

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

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

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

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

For each type of monitoring, your SWPPP must document:

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

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

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

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

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

5.2.6 Documentation to Support Eligibility Considerations Under Other Federal Laws.

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

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

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

5.3 Required SWPPP Modifications.

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

5.4 SWPPP Availability.

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

5.4.1 SWPPP Posting on the Internet.

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

5.4.2 SWPPP Information Provided on NOI Form.

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

5.5 Additional Documentation Requirements.

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

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

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

6. Monitoring.

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

6.1 Monitoring Procedures.

6.1.1 Monitored Outfalls.

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

6.1.2 Commingled Discharges.

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

6.1.3 Measurable Storm Events.

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

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

6.1.4 Sample Type.

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

6.1.5 Adverse Weather Conditions.

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

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

6.1.6 Climates with Irregular Stormwater Runoff.

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

6.1.7 Monitoring Periods.

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

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

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

6.1.8 Monitoring for Allowable Non-Stormwater Discharges.

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

6.1.9 Monitoring Reports

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

6.2 Required Monitoring.

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

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

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

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

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

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

6.2.1 Benchmark Monitoring.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

6.2.2 Effluent Limitations Monitoring.

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

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

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

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

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

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

6.2.3 State or Tribal Monitoring Provisions.

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

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

6.2.4 Discharges to Impaired Waters Monitoring.

Note: For the purposes of this permit, your project is considered to discharge to an impaired water if the first water of the U.S. to which you discharge is identified by a state, tribe, or EPA pursuant to section 303(d) of the CWA as not meeting an applicable water quality standard, or has been removed from the 303(d) list either because the impairments are addressed by an EPA-approved or established TMDL or is covered by pollution control requirements that meet the requirements of 40 CFR 130.7(b)(1). For discharges that enter a separate storm sewer system[4] prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system.

6.2.4.1 Permittees Required to Monitor Discharges to Impaired Waters.

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

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

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

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

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

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

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

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

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

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

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

6.2.5 Additional Monitoring Required by EPA.

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

7. Reporting and Recordkeeping.

7.1 Electronic Reporting Requirement.

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

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

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

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

7.2 Submitting Information to EPA.

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

Information required to be submitted to EPA via NeT:

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

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

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

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

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

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

7.3 Additional SWPPP Information Required in Your NOI.

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

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

7.4 Reporting Monitoring Data to EPA.

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

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

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

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

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

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

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

7.5 Annual Report.

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

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

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

7.6 Exceedance Report for Numeric Effluent Limitations.

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

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

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

7.7 Additional Reporting.

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

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

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

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

7.8 Recordkeeping.

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

7.9 Addresses for Reports.

7.9.1 EPA Addresses.

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

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

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

For Puerto Rico and the Virgin Islands

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

For New Jersey and New York:

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

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

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

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

(Coverage not available under this permit.)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

7.9.2 State and Tribal Addresses.

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

Part 8 – Sector-Specific Requirements for Industrial Activity

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

Subpart A – Sector A – Timber Products.

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

8.A.1 Covered Stormwater Discharges.

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

8.A.2 Limitations on Coverage.

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

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

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

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

8.A.4 Additional SWPPP Requirements.

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

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

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

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

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

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

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

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

Table 8.A-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector A1. General Sawmills and Planing Mills (SIC 2421)	Chemical Oxygen Demand (COD)	120.0 mg/L
	Total Suspended Solids (TSS)	100 mg/L
	Total Zinc (freshwater)[2] Total Zinc (saltwater)[1]	Hardness Dependent 0.09 mg/L
Subsector A2. Wood Preserving (SIC 2491)	Total Arsenic (freshwater) 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

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

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

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

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

Table 8.A-2[1]

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

[1] Monitor annually.

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

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart B – Sector B – Paper and Allied Products.

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

8.B.1 Covered Stormwater Discharges.

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

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

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

Table 8.B-1.

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

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart C – Sector C – Chemical and Allied Products Manufacturing, and Refining.

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

8.C.1 Covered Stormwater Discharges.

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

8.C.2 Limitations on Coverage.

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

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

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

Table 8.C-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Subsector C1. Agricultural Chemicals (SIC 2873-2879)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Lead (freshwater)[2] Total Lead (saltwater)[1]	Hardness Dependent 0.21 mg/L
	Total Iron	1.0 mg/L
	Total Zinc (freshwater)[2] Total Zinc (saltwater)[1]	Hardness Dependent 0.09 mg/L
	Phosphorus	2.0 mg/L
Subsector C2. Industrial Inorganic Chemicals (SIC 2812-2819)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
Subsector C3. Soaps, Detergents, Cosmetics, and Perfumes (SIC 2841-2844)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Zinc (freshwater)[2] Total Zinc (saltwater)[1]	Hardness Dependent 0.09 mg/L
Subsector C4. Plastics, Synthetics, and Resins (SIC 2821-2824)	Total Zinc (freshwater)[2] Total Zinc (saltwater)[1]	Hardness Dependent 0.09 mg/L

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

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

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

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

[1] Monitor annually.

Part 8 – Sector-Specific Requirements for Industrial Activity

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

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

8.D.1 Covered Stormwater Discharges.

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

8.D.2 Limitations on Coverage.

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

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

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

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

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

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

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

Table 8.D-1.

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

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

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

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

[1]Monitor annually.

Part 8 – Sector-Specific Requirements for Industrial Activity

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

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

8.E.1 Covered Stormwater Discharges.

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

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

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

8.E.3 Additional SWPPP Requirements.

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

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

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

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

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

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

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

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

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

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart F – Sector F – Primary Metals.

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

8.F.1 Covered Stormwater Discharges.

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

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

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

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

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

8.F.3 Additional SWPPP Requirements.

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

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

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

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

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

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

Table 8.F-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector F1. Steel Works, Blast Furnaces, and Rolling and Finishing Mills (SIC 3312-3317)	Total Aluminum	0.75 mg/L
	Total Zinc (freshwater)[2] Total Zinc (saltwater)[1]	Hardness Dependent 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] Total Copper (saltwater)[1]	Hardness Dependent 0.0048 mg/L
	Total Iron	1.0 mg/L
	Total Zinc (freshwater)[2] Total Zinc (saltwater)[1]	Hardness Dependent 0.09 mg/L
Subsector F3. Rolling, Drawing, and Extruding of Nonferrous Metals (SIC 3351-3357)	Total Copper (freshwater)[2] Total Copper (saltwater)[1]	Hardness Dependent 0.0048 mg/L
	Total Zinc (freshwater)[2] Total Zinc (saltwater)[1]	Hardness Dependent 0.09 mg/L
Subsector F4. Nonferrous Foundries (SIC 3363-3369)	Total Copper (freshwater)[2] Total Copper (saltwater)[1]	Hardness Dependent 0.0048 mg/L
	Total Zinc (freshwater)[2] Total Zinc (saltwater)[1]	Hardness Dependent 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)	**Zinc** (mg/L)
0-24.99 mg/L	0.0038	0.04
25-49.99 mg/L	0.0056	0.05
50-74.99 mg/L	0.0090	0.08
75-99.99 mg/L	0.0123	0.11
100-124.99 mg/L	0.0156	0.13
125-149.99 mg/L	0.0189	0.16
150-174.99 mg/L	0.0221	0.18
175-199.99 mg/L	0.0253	0.20
200-224.99 mg/L	0.0285	0.23
225-249.99 mg/L	0.0316	0.25
250+ mg/L	0.0332	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart G – Sector G – Metal Mining.

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

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

8.G.1 Covered Stormwater Discharges.

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

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

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

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

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

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

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

8.G.2 Limitations on Coverage.

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

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

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

8.G.3 Definitions.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

8.G.4.1.3 ***Perimeter controls.*** You must:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1. Provide a 50-foot undisturbed natural buffer between construction activities and the water of the U.S.; or

2. Provide an undisturbed natural buffer that is less than 50 feet supplemented by additional erosion and sediment controls, which in combination, achieve a sediment load reduction that is equivalent to a 50-foot undisturbed natural buffer; or

3. If it is infeasible to provide an undisturbed natural buffer of any size, implement erosion and sediment controls that achieve a sediment load reduction that is equivalent to a 50-foot undisturbed natural buffer.

There are exceptions when buffer requirements do not apply:

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

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

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

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

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

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

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

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

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

You must also meet the following requirements for dewatering activities:

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

- Clean or replace the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.

- Treatment chemical restrictions: If you use polymers, flocculants or other chemicals to treat dewatering water, you must comply with the requirements in Parts 8.G.4.1.8.

8.G.4.2.10 ***Pollution prevention requirements.***

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

8.G.4.2.11 ***Site Stabilization requirements for the construction of staging areas for structures and access roads as defined in 8.G.3.2(b)*** (i.e., not applicable to earth-disturbing activities performed for purposes of mine site preparation as defined in 8.G.3.2(a)). You must comply with the following stabilization requirements, except where the intended function of the site accounts for such disturbed earth (e.g., the area of construction will become actively mined, or the controls implemented at the active mining area effectively control the disturbance):

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

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

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

Exceptions:

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

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

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

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

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

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

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

8.G.4.4.1 Inspection frequency

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

Note:

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

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

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

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

8.G.4.4.2 *Reductions in inspection frequency.*

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

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

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

- Areas where stormwater flows;
- Points of discharge.

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

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

If a discharge is occurring, check:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

8.G.8 Monitoring and Reporting Requirements. (See also Part 6)
Note: There are no Part 8.G.8 monitoring and reporting or impaired waters monitoring requirements for inactive and unstaffed sites.

8.G.8.1 ***Benchmark Monitoring for Active Copper Ore Mining and Dressing Facilities***.
Table 8.G-1 identifies benchmarks that apply to active copper ore mining and dressing facilities. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.G-1

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

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

Table 8.G-2.		
Subsector (Discharges may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Subsector G2. Iron Ores; Copper Ores; Lead and Zinc Ores; Gold and Silver Ores; Ferroalloy Ores, Except Vanadium; and Miscellaneous Metal Ores (SIC Codes 1011, 1021, 1031, 1041, 1044, 1061, 1081, 1094, 1099) (Note: when analyzing hardness for a suite of metals, it is more cost effective to add analysis of calcium and magnesium, and have hardness calculated than to require hardness analysis separately)	Total Suspended Solids (TSS)	100 mg/L
	Turbidity	50 NTU
	pH	6.0-9.0 s.u.
	Hardness (as $CaCO_3$; calc. from Ca, Mg)[2]	no benchmark value
	Total Antimony	0.64 mg/L
	Total Arsenic (freshwater) Total Arsenic (saltwater)[1]	0.15 mg/L 0.069 mg/L
	Total Beryllium	0.13 mg/L
	Total Cadmium (freshwater)[2] Total Cadmium (saltwater)[1]	Hardness Dependent 0.04 mg/L
	Total Copper (freshwater)[2] Total Copper (saltwater)[1]	Hardness Dependent 0.0048 mg/L
	Total Iron	1.0 mg/L
	Total Lead (freshwater)[2] Total Lead (saltwater)[1]	Hardness Dependent 0.21 mg/L
	Total Mercury (freshwater) Total Mercury (saltwater)[1]	0.0014 mg/L 0.0018 mg/L
	Total Nickel (freshwater)[2] Total Nickel (saltwater)[1]	Hardness Dependent 0.074 mg/L
	Total Selenium (freshwater) Total Selenium (saltwater)[1]	0.005 mg/L 0.29 mg/L
	Total Silver (freshwater)[2] Total Silver (saltwater)[1]	Hardness Dependent 0.0019 mg/L
	Total Zinc (freshwater)[2] Total Zinc (saltwater)[1]	Hardness Dependent 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

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

Table 8.G-3. Additional Monitoring Requirements for Discharges from Waste Rock and Overburden Piles

Supplemental Requirements			
Type of Ore Mined	**Pollutants of Concern**		
	Total Suspended Solids (TSS)	**pH**	**Metals, Total**
Tungsten Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Nickel Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Aluminum Ore	X	X	Iron
Mercury Ore	X	X	Nickel (H)
Iron Ore	X	X	Iron (Dissolved)
Platinum Ore			Cadmium (H), Copper (H), Mercury, Lead (H), Zinc (H)
Titanium Ore	X	X	Iron, Nickel (H), Zinc (H)
Vanadium Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Molybdenum	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Mercury, Zinc (H)
Uranium, Radium, and Vanadium Ore	X	X	Chemical Oxygen Demand, Arsenic, Radium (Dissolved and Total), Uranium, Zinc (H)

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

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

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

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

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

Table 8.G-4. Applicability of the Multi-Sector General Permit to Stormwater Runoff From Active Mining and Dressing Sites, Temporarily Inactive Sites, and Sites Undergoing Reclamation

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

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

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

8.G.9. Termination of Permit Coverage

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

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

Part 8 – Sector-Specific Requirements for Industrial Activity

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

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

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

8.H.1 Covered Stormwater Discharges.

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

8.H.2 Limitations on Coverage.

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

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

8.H.3 Definitions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

8.H.4.1.3 ***Perimeter controls.*** You must:

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

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

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

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

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

- Minimize erosion of stockpiles from stormwater and wind via temporary cover, if feasible.

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

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

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

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

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

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

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

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

- *Temporary stabilization of disturbed areas.* Stabilization measures must be initiated immediately in portions of the site where earth-disturbing activities performed for purposes of mine site preparation (as defined in 8.H.3.2(a)) have temporarily ceased, but in no case more than 14 days after such activities have temporarily ceased. In arid, semi-arid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after earth-disturbing activities performed for purposes of mine site preparation has temporarily ceased, temporary vegetative

stabilization measures must be initiated as soon as practicable. Until temporary vegetative stabilization is achieved, interim measures such as erosion control blankets with an appropriate seed base and tackifiers must be employed. In areas of the site where earth-disturbing activities performed for purposes of mine site preparation have permanently ceased prior to active mining, temporary stabilization measures must be implemented to minimize mobilization of sediment or other pollutants until active mining activities commence.

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

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

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

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

- Design, install and maintain effective erosion and sediment controls to minimize the discharge of pollutants from construction activities. Account for the following factors in designing your erosion and sediment controls:
  - The expected amount, frequency, intensity and duration of precipitation;
  - The nature of stormwater runoff and run-on at the site, including factors such as impervious surfaces, slopes and site drainage features;
  - The range of soil particle sizes expected to be present on the site.
- Direct discharges from your stormwater controls to vegetated areas of your site to increase sediment removal and maximize stormwater infiltration, including any natural buffers, unless infeasible. Use velocity dissipation devices if necessary to prevent erosion when directing stormwater to vegetated areas.
- If any stormwater flow becomes or will be channelized at your site, you must design erosion and sediment controls to control both peak flowrates and total stormwater volume to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points.
- If you install stormwater conveyance channels, they must be designed to avoid unstabilized areas on the site and to reduce erosion, unless infeasible. In addition, you must minimize erosion of channels and their embankments, outlets, adjacent streambanks, slopes, and downstream

waters during discharge conditions through the use of erosion controls and velocity dissipation devices within and along the length of any constructed stormwater conveyance channel, and at any outlet to provide a non-erosive flow velocity.

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

1. Provide a 50-foot undisturbed natural buffer between construction activities and the water of the U.S.; or

2. Provide an undisturbed natural buffer that is less than 50 feet supplemented by additional erosion and sediment controls, which in combination, achieve a sediment load reduction that is equivalent to a 50-foot undisturbed natural buffer; or

3. If it is infeasible to provide an undisturbed natural buffer of any size, implement erosion and sediment controls that achieve a sediment load reduction that is equivalent to a 50-foot undisturbed natural buffer.

There are exceptions when buffer requirements do not apply:

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

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

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

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

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

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

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

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

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

You must also meet the following requirements for dewatering activities:

- Discharge requirements:
  - No discharging visible floating solids or foam;
  - Remove oil, grease and other pollutants from dewatering water via an oil-water separator or suitable filtration device (such as a cartridge filter);
  - Utilize vegetated upland areas of the site, to the extent feasible, to infiltrate dewatering water before discharge. In no case shall waters of the U.S. be considered part of the treatment area;
  - Implement velocity dissipation devices at all points where dewatering water is discharged;
  - Haul backwash water away for disposal or return it to the beginning of the treatment process; and
  - Clean or replace the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.
- Treatment chemical restrictions: If you use polymers, flocculants or other chemicals to treat dewatering water, you must comply with the requirements in Parts 8.H.4.1.8.

8.H.4.2.10 ***Pollution prevention requirements.***

- *Prohibited discharges* (this non-exhaustive list of prohibited non-stormwater discharges is included here as a reminder that only the only allowable non-stormwater discharges are those enumerated in Part 1.1.3):
  - Wastewater from washout of concrete;
  - Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials;
  - Fuels, oils, or other pollutants used for operation and maintenance of vehicles or equipment;

  - Soaps, solvents, or detergents used in vehicle or equipment washing;
  - Toxic or hazardous substances from a spill or other release.
- *Design and location requirements:* Minimize the discharge of pollutants from pollutant sources by:
  - Minimizing exposure;
  - Using secondary containment, spill kits, or other equivalent measures;
  - Locating pollution sources away from surface waters, storm sewer inlets, and drainageways;
  - Cleaning up spills immediately (do not clean by hosing area down).
- *Pollution prevention requirements for wash waters:* Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
- *Pollution prevention requirements for the storage, handling, and disposal of construction products, materials, and wastes:* Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to stormwater. Minimization of exposure is not required in cases where the exposure to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

8.H.4.2.11 ***Site Stabilization requirements for the construction of staging areas for structures and access roads as defined in 8.H.3.2(b)*** *(i.e., not applicable to earth-disturbing activities performed for purposes of mine site preparation as defined in 8.H.3.2(a))*. You must comply with the following stabilization requirements, except where the intended function of the site accounts for such disturbed earth (e.g., the area of construction will become actively mined, or the controls implemented at the active mining area effectively control the disturbance):

- By no later than the end of the next work day after construction work in an area has stopped permanently or temporarily ("temporarily" means the land will be idle for a period of 14 days or more but earth-disturbing activities will resume in the future), immediately initiate stabilization measures;
- If using vegetative measures, by no later than 14 days after initiating stabilization:
  - Seed or plant the area, and provide temporary cover to protect the planted area;
  - Once established, vegetation must be uniform, perennial (if final stabilization), and cover at least 70% of stabilized area based on density of native vegetation.
- If using non-vegetative stabilization, by no later than 14 days after initiating stabilization:
  - Install or apply all non-vegetative measures;
  - Cover all areas of exposed soil.

  Note: For the purposes of this permit, EPA will consider any of the following types of activities to constitute the initiation of stabilization: 1. Prepping the soil for vegetative or non-vegetative stabilization; 2. Applying mulch or other non-vegetative product to the exposed area; 3. Seeding or planting

the exposed area; 4. Starting any of the activities in # 1 – 3 on a portion of the area to be stabilized, but not on the entire area; and 5. Finalizing arrangements to have stabilization product fully installed in compliance with the applicable deadline for completing stabilization.

Exceptions:

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

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

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

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

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

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

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

8.H.4.4.1 ***Inspection Frequency***

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

Note:

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

Note: To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any

day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that.

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

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

8.H.4.4.2 ***Reductions in Inspection Frequency***

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

8.H.4.4.3 ***Areas to be Inspected***. You must at a minimum inspect the following areas:

- Disturbed areas;
- Stormwater controls and pollution prevention measures;
- Locations where stabilization measures have been implemented;
- Material, waste, borrow, or equipment storage and maintenance areas;
- Areas where stormwater flows;
- Points of discharge.

8.H.4.4.4 ***What to Check for During Inspections.*** At a minimum you must check:

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

If a discharge is occurring:

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

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

- Inspection date;
- Name and title of inspector(s);
- Summary of inspection findings;
- Rainfall amount that triggered the inspection (if applicable);
- If it was unsafe to inspect a portion of the site, include documentation of the reason and the location(s);

- Each inspection report must be signed;
- Keep a current copy of all reports at the site or at an easily accessible location.

8.H.4.5 ***Cessation of Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.*** The requirements in 8.H.4 no longer apply for any earth-disturbing activities conducted prior to active mining activities as defined in 8.H.3.2(a) or 8.H.3.2(b) where:

1. Earth-disturbing activities have ceased; and
2. Stabilization has been met consistent with Part 8.H.4.1.9 or 8.H.4.2.11 (not required for areas where active mining activities will occur).

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

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

8.H.5.1 ***Good Housekeeping Measures.*** (See also Part 2.1.2.2) As part of your good housekeeping program, in order to minimize discharges of pollutants in stormwater, implement control measures such as the following, where determined to be feasible (list not inclusive): using sweepers and covered storage; watering haul roads to minimize dust generation; and conserving vegetation to minimize erosion. For mines subject to dust control requirements under state or county air quality permits, provided the requirements are equivalent, compliance with such air permit dust requirements shall constitute compliance with the dust control effluent limit in Part 2.1.2.10.

8.H.5.2 ***Preventive Maintenance.*** (See also Part 2.1.2.3) Perform inspections or other equivalent measures of storage tanks and pressure lines of fuels, lubricants, hydraulic fluid, and slurry to prevent leaks due to deterioration or faulty connections.

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

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

8.H.6.1 ***Other Applicable Regulations.*** Most active coal mining-related areas (SIC Codes 1221-1241) are subject to sediment and erosion control regulations of the U.S. Office of Surface Mining (OSM) that enforces the Surface Mining Control and Reclamation Act (SMCRA). OSM has granted authority to most coal-producing states to implement SMCRA through State SMCRA regulations. All SMCRA requirements regarding control of stormwater-related pollutant discharges must be addressed and then documented with the SWPPP (directly or by reference).

8.H.6.2 ***Site Map.*** (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: haul and access roads; railroad spurs, sliding, and internal hauling lines; conveyor belts, chutes, and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; inactive mines and related areas; acidic spoil, refuse, or unreclaimed disturbed areas; and liquid storage tanks containing pollutants such as caustics, hydraulic fluids, and lubricants.

8.H.6.3 ***Potential Pollutant Sources.*** (See also Part 5.2.3) Document in your SWPPP the following sources and activities that have potential pollutants associated with them: truck traffic on haul roads and resulting generation of sediment subject to runoff and dust generation; fuel or other liquid storage; pressure lines containing slurry, hydraulic fluid, or other potential harmful liquids; and loading or temporary storage of acidic refuse or spoil.

8.H.6.4 If you are in compliance with dust control requirements under state or county air quality permits, you must include (or summarize, as necessary) what the state or county air quality permit dust control requirements are and how you've achieved compliance with them.

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

8.H.7.1 ***Inspections of Active Mining-Related Areas.*** (See also Part 3) Except for earth-disturbing activities conducted prior to active mining activities as defined in Part 8.H.3.2(a) and 8.H.3.2(b), which are subject to Part 8.H.4.4, perform routine inspections of active mining areas covered by this permit, corresponding with the inspections as performed by SMCRA inspectors, of all mining-related areas required by SMCRA. Also maintain the records of the SMCRA authority representative. See Part 8.H.8.1 for inspection requirements for inactive and unstaffed sties.

8.H.7.2 ***Sediment and Erosion Control.*** (See also Part 2.1.2.5) As indicated in Part 8.H.6.1, SMCRA requirements regarding sediment and erosion control measures must be complied with for those areas subject to SMCRA authority, including inspection requirements.

8.H.7.3 ***Routine Site Inspections.*** (See also Part 3.1) Your inspection program must include inspections for pollutants entering the drainage system from activities located on or near coal mining-related areas. Among the areas to be inspected are haul and access roads; railroad spurs, sliding, and internal hauling lines; conveyor belts, chutes, and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; and inactive mines and related areas.

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

Table 8.H-1 identifies benchmarks that apply to the specific subsectors of Sector H. These benchmarks apply to both your primary industrial activity and any co-located industrial activities. Note: There are no Part 8.H. 8 monitoring and reporting or impaired waters monitoring requirements for inactive and unstaffed sites.

Table 8.H-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector H1. Coal Mines and Related Areas (SIC 1221-1241)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Total Suspended Solids (TSS)	100 mg/L

8.H.8.1 ***Inactive and Unstaffed Sites – Conditional Exemption from No Exposure Requirement for Routine Inspections, Quarterly Visual Assessments, and Benchmark and Impaired Waters Monitoring.*** As a Sector H facility, if you are seeking to exercise a waiver from either the quarterly visual assessment or the benchmark and/or impaired waters monitoring requirements for inactive and unstaffed sites (including temporarily inactive sites), you are conditionally exempt from the requirement to certify that "there are no industrial materials or activities exposed to stormwater" in Parts 3.2.3, 6.2.1.3, and 6.2.4.2. Additionally, if you are seeking to reduce your required routine inspection frequency, as is allowed under Part 3.1.1, you are also conditionally exempt from the requirement to certify that "there are no industrial materials or activities exposed to stormwater." These conditional exemptions are based on the following requirements:

- If circumstances change and your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the applicable benchmark monitoring requirements as if you were in your first year of permit coverage, and the quarterly visual assessment requirements; and
- EPA retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to cause or contribute to an instream excursion above an applicable water quality standard, including designated uses.

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

8.H.9 Termination of Permit Coverage

8.H.9.1 ***Termination of Permit Coverage for Sites Reclaimed After December 17, 1990***. A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in Part 8.H.3.5.

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

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart I – Sector I – Oil and Gas Extraction.

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

8.I.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.I.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.I.2 Limitations on Coverage.

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

8.I.3.1 ***Vegetative Controls.*** Implement vegetative practices designed to preserve existing vegetation, where attainable, and revegetate open areas as soon as practicable after grade drilling. Implement appropriate vegetative practices, such as the following (list not exclusive): temporary or permanent seeding, mulching, sod stabilization, vegetative buffer strips, and tree protection practices. Begin implementing appropriate vegetative practices on all disturbed areas within 14 days following the last activity in that area.

8.I.4 Additional SWPPP Requirements.

8.I.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.I.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.I.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.I.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.I.4.3.2 ***Vegetative Controls.*** Document vegetative practices used consistent with Part 8.I.3.1 in the SWPPP.

8.I.5 Additional Inspection Requirements.

All erosion and sediment controls must be inspected either: 1) every 7 days; or 2) once every 14 calendar days and within 24 hours of a storm event of 0.25 inches or greater.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart J – Sector J – Non-Metallic Mineral Mining and Dressing.

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

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

8.J.1 Covered Stormwater Discharges.

The requirements in Subpart J apply to stormwater discharges associated with industrial activity from Active and Inactive Non-Metallic Mineral Mining and Dressing facilities as identified by the SIC Codes specified under Sector J in Table D-1 of Appendix D of the permit.

8.J.1.1 ***Covered Discharges from Inactive Facilities.*** All stormwater discharges.

8.J.1.2 ***Covered Discharges from Active and Temporarily Inactive Facilities***. All stormwater discharges, except for most stormwater discharges subject to the existing effluent limitation guideline at 40 CFR Part 436. Mine dewatering discharges composed entirely of stormwater or uncontaminated ground water seepage from: construction sand and gravel, industrial sand, and crushed stone mining facilities.

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

8.J.1.4 ***Covered Discharges from Sites Undergoing Reclamation.*** All stormwater discharges.

8.J.2 Limitations on Coverage.

Most stormwater discharges subject to an existing effluent limitation guideline at 40 CFR Part 436 are not authorized by this permit. The exceptions to this limitation, which are covered by this permit, are mine dewatering discharges composed entirely of stormwater or uncontaminated ground water seepage from construction sand and gravel, industrial sand, and crushed stone mining facilities.

8.J.3 Definitions.

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

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

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

a. activities performed for purposes of mine site preparation, including: cutting new rights of way (except when related to access road construction); providing access to a

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

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

8.J.3.3 ***Active mining activities*** – Activities related to the extraction, removal or recovery, and benefication of n*on-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 *n*on-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 *n*on-metallic mineral mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable state or federal agency.

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

Stormwater discharges from earth-disturbing activities conducted prior to active mining activities (defined in Part 8.J.3.2) are covered under this permit. For such earth-disturbing activities, you must comply with all applicable requirements in Parts 1-9 of the MSGP except for

the technology-based effluent limits in Part 8.J.5 and Part 2.1.2, the inspection requirements in Part 8.J.7 and Part 3, and the monitoring requirements in Part 8.J.8 and Part 6.

Authorized discharges from areas where earth-disturbing activities have ceased and stabilization as specified in Part 8.J.4.19 or 8.J.4.2.11, where appropriate, has been completed (stabilization is not required for areas where active mining activities will occur), are no longer subject to the Part 8.J.4 requirements. At such time, authorized discharges become subject to all other applicable requirements in the MSGP, including the effluent limits in Parts 2.1.2 and 8.J.5, the inspection requirements in Parts 3 and 8.J.7, and the monitoring requirements in Parts 6 and 8.J.8.

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

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

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

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

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

8.J.4.1.3 Perimeter controls. You must:

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

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

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

Note: EPA recognizes that some fine grains may remain visible on the surfaces of off-site streets, other paved areas, and sidewalks even after you have

implemented sediment removal practices. Such "staining" is not a violation of Part 8.J.4.1.4.

8.J.4.1.5 ***Soil or sediment stockpiles.*** You must:

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

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

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

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

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

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

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

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

- *Temporary stabilization of disturbed areas.* Stabilization measures must be initiated immediately in portions of the site where earth-disturbing activities performed for purposes of mine site preparation (as defined in

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

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

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

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

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

- Design, install and maintain effective erosion and sediment controls to minimize the discharge of pollutants from construction activities. Account for the following factors in designing your erosion and sediment controls:
  - The expected amount, frequency, intensity and duration of precipitation;
  - The nature of stormwater runoff and run-on at the site, including factors such as impervious surfaces, slopes and site drainage features;
  - The range of soil particle sizes expected to be present on the site.
- Direct discharges from your stormwater controls to vegetated areas of your site to increase sediment removal and maximize stormwater infiltration, including any natural buffers, unless infeasible. Use velocity dissipation devices if necessary to prevent erosion when directing stormwater to vegetated areas.

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

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

1. Provide a 50-foot undisturbed natural buffer between construction activities and the water of the U.S.; or

2. Provide an undisturbed natural buffer that is less than 50 feet supplemented by additional erosion and sediment controls, which in combination, achieve a sediment load reduction that is equivalent to a 50-foot undisturbed natural buffer; or

3. If it is infeasible to provide an undisturbed natural buffer of any size, implement erosion and sediment controls that achieve a sediment load reduction that is equivalent to a 50-foot undisturbed natural buffer.

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

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

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

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

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

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

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

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

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

You must also meet the following requirements for dewatering activities:

- *Discharge requirements:*
  - No discharging visible floating solids or foam;
  - Remove oil, grease and other pollutants from dewatering water via an oil-water separator or suitable filtration device (such as a cartridge filter);
  - Utilize vegetated upland areas of the site, to the extent feasible, to infiltrate dewatering water before discharge. In no case shall waters of the U.S. be considered part of the treatment area;
  - Implement velocity dissipation devices at all points where dewatering water is discharged;
  - Haul backwash water away for disposal or return it to the beginning of the treatment process; and
  - Clean or replace the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.
- Treatment chemical restrictions: If you use polymers, flocculants or other chemicals to treat dewatering water, you must comply with the requirements in Parts 8.J.4.1.8.

8.J.4.2.10 Pollution prevention requirements.

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

8.J.4.2.11 Site Stabilization requirements for the construction of staging areas for structures and access roads as defined in 8.J.3.2(b) *(i.e., not applicable to earth-disturbing activities performed for purposes of mine site preparation as defined in 8.J.3.2(a))*. You must comply with the following stabilization requirements, except where the intended function of the site accounts for such disturbed earth (e.g., the area of construction will become actively mined, or the controls implemented at the active mining area effectively control the disturbance):

- By no later than the end of the next work day after construction work in an area has stopped permanently or temporarily ("temporarily" means the land will be idle for a period of 14 days or more but earth-disturbing activities will resume in the future), immediately initiate stabilization measures;
- If using vegetative measures, by no later than 14 days after initiating stabilization:
  - Seed or plant the area, and provide temporary cover to protect the planted area;
  - Once established, vegetation must be uniform, perennial (if final stabilization), and cover at least 70% of stabilized area based on density of native vegetation.

- If using non-vegetative stabilization, by no later than 14 days after initiating stabilization:
  - Install or apply all non-vegetative measures;
  - Cover all areas of exposed soil.

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

Exceptions:

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

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

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

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

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

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

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

8.J.4.4.1 Inspection Frequency

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

Note:

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

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

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

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

8.J.4.4.2 Reductions in Inspection Frequency

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

8.J.4.4.3 Areas to be Inspected. **You must at a minimum inspect the all of the following areas:**

- Disturbed areas;
- Stormwater controls and pollution prevention measures;
- Locations where stabilization measures have been implemented;
- Material, waste, borrow, or equipment storage and maintenance areas;
- Areas where stormwater flows;
- Points of discharge.

8.J.4.4.4 What to Check for During Inspections. At a minimum you must check:

- Whether all stormwater controls are installed, operational and working as intended;
- Whether any new or modified stormwater controls are needed;
- For conditions that could lead to a spill or leak;

- For visual signs of erosion/sedimentation at points of discharge.

If a discharge is occurring:
- The quality and characteristics of the discharge;
- Whether controls are operating effectively.

8.J.4.4.5 Inspection Report. Within 24 hours of an inspection, complete a report that includes:
- Inspection date;
- Name and title of inspector(s);
- Summary of inspection findings;
- Rainfall amount that triggered the inspection (if applicable);
- If it was unsafe to inspect a portion of the site, include documentation of the reason and the location(s);
- Each inspection report must be signed;
- Keep a current copy of all reports at the site or at an easily accessible location.

8.J.4.5 Cessation of Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities. The requirements in 8.J.4 no longer apply for any earth-disturbing activities conducted prior to active mining activities as defined in 8.J.3.2(a) or 8.J.3.2(b) where:
1. Earth-disturbing activities have ceased; and
2. Stabilization has been met consistent with Part 8.J.4.1.9 or 8.J.4.2.11 (not required for areas where active mining activities will occur).

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

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

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

8.J.5.2 Stormwater Controls. Apart from the control measures you implement to meet your Part 2 effluent limits, where necessary to minimize pollutant discharges in stormwater, implement the following control measures at your site. The potential pollutants identified in Part 8.J.6.3 shall determine the priority and appropriateness of the control measures selected.

Stormwater Diversions: Divert stormwater away from potential pollutant sources through implementation of control measures such as the following, where determined to be feasible (list not exclusive): interceptor or diversion controls (e.g., dikes, swales, curbs, berms); pipe slope drains; subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts); or their equivalents. For mines subject to dust control requirements under state or county air quality permits, provided the requirements are equivalent, compliance with such air permit dust requirements shall constitute compliance with the dust control effluent limit in Part 2.1.2.10.

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

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

under this permit provided the discharge is not combined with discharges subject to effluent limitation guidelines for the Mineral Mining and Processing Point Source Category (40 CFR Part 436).

8.J.5.3 ***Discharge Testing.*** (See also Part 5.2.3.4) Test or evaluate all outfalls covered under this permit for the presence of specific mining-related but unauthorized non-stormwater discharges such as discharges subject to effluent limitations guidelines (e.g., 40 CFR Part 436). Alternatively (if applicable), you may keep a certification with your SWPPP, per Part 8.J.6.6.

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

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

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

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

8.J.6.3 ***Potential Pollutant Sources.*** (See also Part 5.2.3) For each area of the mine or mill site where stormwater discharges associated with industrial activities occur, document in your SWPPP the types of pollutants (e.g., heavy metals, sediment) likely to be present in significant amounts. For example, phosphate mining facilities will likely need to document pollutants such as selenium, which can be present in significant amounts in their discharges. Consider these factors: the mineralogy of the waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced, or discharged; the likelihood of contact with stormwater; vegetation of site (if any); and history of significant leaks or spills of toxic or hazardous pollutants. Also include a summary of any existing waste rock or overburden characterization data and test results for potential generation of acid rock drainage.

8.J.6.4 ***Documentation of Control Measures.*** To the extent that you use any of the control measures in Part 8.J.5.2, document them in your SWPPP per Part 5.2.4. If control measures are implemented or planned but are not listed here (e.g., substituting a less toxic chemical for a more toxic one), include descriptions of them in your SWPPP. If you are in compliance with dust control requirements under state or county air quality permits, you must state (or summarize, as necessary) what the state or county air quality permit dust control requirements are and how you've achieved compliance with them.

8.J.6.5 ***Employee Training.*** All employee training(s) conducted in accordance with Part 8.J.5.1 must be documented with the SWPPP.

8.J.6.6 ***Certification of Permit Coverage for Commingled Non-Stormwater Discharges***. If you determine that you are able to certify, consistent with Part 8.J.5.3, that a particular

discharge composed of commingled stormwater and non-stormwater is covered under a separate NPDES permit, and that permit subjects the non-stormwater portion to effluent limitations prior to any commingling, you must retain such certification with your SWPPP. This certification must identify the non-stormwater discharges, the applicable NPDES permit(s), the effluent limitations placed on the non-stormwater discharge by the permit(s), and the points at which the limitations are applied.

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

Except for earth-disturbing activities conducted prior to active mining activities as defined in Part 8.J.3.2(a) and 8.J.3.2(b), which are subject to Part 8.J.4.4, perform inspections at least quarterly unless adverse weather conditions make the site inaccessible. Sites which discharge to waters which are designated as Tier 2 or 2.5 or waters which are impaired for sediment or nitrogen must be inspected monthly. See Part 8.J.8.1 for inspection requirements for inactive and unstaffed sites.

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

Table 8.J-1 identifies benchmarks that apply to the specific subsectors of Sector J. These benchmarks apply to both your primary industrial activity and any co-located industrial activities. Note: There are no Part 8.J.8 monitoring and reporting or impaired waters monitoring requirements for inactive and unstaffed sites.

Table 8.J-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector J1. Sand and Gravel Mining (SIC 1442, 1446)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Suspended Solids (TSS)	100 mg/L
Subsector J2. Dimension and Crushed Stone and Nonmetallic Minerals (except fuels) (SIC 1411, 1422-1429, 1481, 1499)	Total Suspended Solids (TSS)	100 mg/L

8.J.8.1 Inactive and Unstaffed Sites – Conditional Exemption from No Exposure Requirement for Routine Inspections, Quarterly Visual Assessments, and Benchmark and Impaired Waters Monitoring. As a Sector J facility, if you are seeking to exercise a waiver from either the routine inspection, quarterly visual assessment or the benchmark and/or impaired monitoring requirements for inactive and unstaffed sites (including temporarily inactive sites), you are conditionally exempt from the requirement to certify that "there are no industrial materials or activities exposed to stormwater" in Parts 3.1.1, 3.2.3, 6.2.1.3, and 6.2.4.3. This exemption is conditioned on the following:

- If circumstances change and your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the applicable benchmark monitoring requirements as if you were in your first year of permit coverage, and the quarterly visual assessment requirements; and
- EPA retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to cause, or contributes to an instream excursion above an applicable water quality standard, including designated uses.

Subject to the two conditions above, if your facility is inactive and unstaffed, you are waived from the requirement to conduct routine facility inspections, quarterly visual assessments, and benchmark and impaired waters monitoring. You must still conduct an annual site inspection in

accordance with Part 3.1. You are encouraged to inspect your site more frequently where you have reason to believe that severe weather or natural disasters may have damaged control measures or increased discharges.

8.J.9 Effluent Limitations Based on Effluent Limitations Guidelines. (See also Part 6.2.2.1).

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

Table 8.J-2

Industrial Activity	Parameter	Effluent 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

[1]Monitor annually.

8.J.10 Termination of Permit Coverage.

8.J.10.1 ***Termination of Permit Coverage for Sites Reclaimed After December 17, 1990.*** A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in Part 8.J.3.5.

8.J.10.2 ***Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990.*** A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if: (1) stormwater runoff that comes into contact with raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards, (2) soil disturbing activities related to mining at the sites or portion of the site have been completed, (3) the site or portion of the site has been stabilized to minimize soil erosion, and (4) as appropriate depending on location, size, and the potential to contribute pollutants to stormwater discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart K – Sector K – Hazardous Waste Treatment, Storage, or Disposal Facilities.

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

8.K.1 Covered Stormwater Discharges.

The requirements in Subpart K apply to stormwater discharges associated with industrial activity from Hazardous Waste Treatment, Storage, or Disposal facilities (TSDFs) as identified by the Activity Code specified under Sector K in Table D-1 of Appendix D of the permit.

8.K.2 Industrial Activities Covered by Sector K.

This permit authorizes stormwater discharges associated with industrial activity from facilities that treat, store, or dispose of hazardous wastes and that are operating under interim status or a permit under subtitle C of RCRA.

Disposal facilities that have been properly closed and capped, and have no significant materials exposed to stormwater, are considered inactive and do not require permits.

8.K.3 Limitations on Coverage.

8.K.3.1 ***Prohibition of Non-Stormwater Discharges.*** (See also Part 1.1.4) The following are not authorized by this permit: leachate, gas collection condensate, drained free liquids, contaminated ground water, laboratory-derived wastewater, and contact wash water from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.K.3.2 ***Limitations on Coverage for Facilities Providing Commercial TSDF Services.*** For facilities located in Region 6 (see Appendix C) coverage is limited to hazardous waste TSDFs that are self-generating (including occasionally accepting wastes from community household hazardous waste collection events as public service), handle only residential wastes, and/or only store hazardous wastes and do not treat or dispose of them. Coverage under this permit is not available to commercial waste disposal and treatment facilities located in Region 6 that dispose and treat on a commercial basis any produced hazardous wastes (i.e., not their own) as a service to commercial or industrial generators.

8.K.4 Definitions.

8.K.4.1 ***Contaminated stormwater*** – stormwater that comes into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in Part 8.K.4.4. Some specific areas of a landfill that may produce contaminated stormwater include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

8.K.4.2 ***Drained free liquids*** – aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

8.K.4.3 ***Landfill*** – an area of land or an excavation in which wastes are placed for permanent disposal, but that is not a land application or land treatment unit, surface

impoundment, underground injection well, waste pile, salt dome formation, salt bed formation, underground mine, or cave as these terms are defined in 40 CFR 257.2, 258.2, and 260.10.

8.K.4.4 ***Landfill wastewater*** – as defined in 40 CFR Part 445 (Landfills Point Source Category), all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated stormwater, contaminated ground water, and wastewater from recovery pumping wells. Landfill wastewater includes, but is not limited to, leachate, gas collection condensate, drained free liquids, laboratory derived wastewater, contaminated stormwater, and contact wash water from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

8.K.4.5 ***Leachate*** – liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

8.K.4.6 ***Non-contaminated stormwater*** – stormwater that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in Part 8.K.4.4. Non-contaminated stormwater includes stormwater that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

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

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

Table 8.K-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector K1. ALL - Industrial Activity Code "HZ" (Note: permit coverage limited in some states). Benchmarks only applicable to discharges not subject to effluent limitations in 40 CFR Part 445 Subpart A (see below).	Ammonia	2.14 mg/L
	Total Magnesium	0.064 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L
	Total Arsenic (freshwater) Total Arsenic (saltwater)[1]	0.15 mg/L 0.069 mg/L
	Total Cadmium (freshwater)[2] Total Cadmium (saltwater)[1]	Hardness Dependent 0.04 mg/L
	Total Cyanide (freshwater) Total Cyanide (saltwater)[1]	0.022 mg/L 0.001 mg/L
	Total Lead (freshwater)[2] Total Lead (saltwater)[1]	Hardness Dependent 0.21 mg/L
	Total Mercury (freshwater) Total Mercury (saltwater)[1]	0.0014 mg/L 0.0018 mg/L
	Total Selenium (freshwater) Total Selenium (saltwater)[1]	0.005 mg/L 0.29 mg/L
	Total Silver (freshwater)[2] Total Silver (saltwater)[1]	Hardness Dependent 0.0019 mg/L

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

Freshwater Hardness Range	**Cadmium** (mg/L)	**Lead** (mg/L)	**Silver** (mg/L)
0-24.99 mg/L	0.0005	0.014	0.0007
25-49.99 mg/L	0.0008	0.023	0.0007
50-74.99 mg/L	0.0013	0.045	0.0017
75-99.99 mg/L	0.0018	0.069	0.0030
100-124.99 mg/L	0.0023	0.095	0.0046
125-149.99 mg/L	0.0029	0.122	0.0065
150-174.99 mg/L	0.0034	0.151	0.0087
175-199.99 mg/L	0.0039	0.182	0.0112
200-224.99 mg/L	0.0045	0.213	0.0138
225-249.99 mg/L	0.0050	0.246	0.0168
250+ mg/L	0.0053	0.262	0.0183

8.K.6 Effluent Limitations Based on Effluent Limitations Guidelines. (See also Part 6.2.2.1)

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

Table 8.K-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:

(a) landfills operated in conjunction with other industrial or commercial operations when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;

(b) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;

(c) landfills operated in conjunction with Centralized Waste Treatment (CWT) facilities subject to 40 CFR Part 437, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or

(d) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart L – Sector L – Landfills, Land Application Sites, and Open Dumps.

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

8.L.1 Covered Stormwater Discharges.

The requirements in Subpart L apply to stormwater discharges associated with industrial activity from Landfills and Land Application Sites as identified by the Activity Code specified under Sector L in Table D-1 of Appendix D of the permit.

8.L.2 Industrial Activities Covered by Sector L.

This permit may authorize stormwater discharges for Sector L facilities associated with waste disposal at landfills, land application sites that receive or have received industrial waste, including sites subject to regulation under Subtitle D of RCRA. This permit does not cover discharges from landfills that receive only municipal wastes.

8.L.3 Limitations on Coverage.

8.L.3.1 ***Prohibition of Non-Stormwater Discharges.*** (See also Part 1.1.4) The following discharges are not authorized by this permit: leachate, gas collection condensate, drained free liquids, contaminated ground water, laboratory wastewater, and contact wash water from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.L.3.2 ***Prohibition Stormwater Discharges from Open Dumps.*** Discharges from open dumps as defined under RCRA are also not authorized under this permit.

8.L.4 Definitions.

8.L.4.1 ***Contaminated stormwater*** – stormwater that comes into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Some areas of a landfill that may produce contaminated stormwater include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

8.L.4.2 ***Drained free liquids*** – aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

8.L.4.3 ***Landfill wastewater*** – as defined in 40 CFR Part 445 (Landfills Point Source Category) all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated stormwater, contaminated ground water, and wastewater from recovery pumping wells. Landfill process wastewater includes, but is not limited to, leachate; gas collection condensate; drained free liquids; laboratory-derived wastewater; contaminated stormwater; and contact wash water from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

8.L.4.4 ***Leachate*** – liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

8.L.4.5 ***Non-contaminated stormwater*** – stormwater that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Non-contaminated stormwater includes stormwater that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

8.L.5 Additional Technology-Based Effluent Limits.

8.L.5.1 ***Preventive Maintenance Program.*** (See also Part 2.1.2.3) As part of your preventive maintenance program, maintain the following: all elements of leachate collection and treatment systems, to prevent commingling of leachate with stormwater; the integrity and effectiveness of any intermediate or final cover (including repairing the cover as necessary), to minimize the effects of settlement, sinking, and erosion.

8.L.5.2 ***Erosion and Sedimentation Control.*** (See also Part 2.1.2.5) Provide temporary stabilization (e.g., temporary seeding, mulching, and placing geotextiles on the inactive portions of stockpiles) for the following in order to minimize discharges of pollutants in stormwater: materials stockpiled for daily, intermediate, and final cover; inactive areas of the landfill or open dump; landfills or open dump areas that have gotten final covers but where vegetation has yet to establish itself; and land application sites where waste application has been completed but final vegetation has not yet been established.

8.L.6 Additional SWPPP Requirements.

8.L.5.1 ***Drainage Area Site Map.*** (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: active and closed landfill cells or trenches, active and closed land application areas, locations where open dumping is occurring or has occurred, locations of any known leachate springs or other areas where uncontrolled leachate may commingle with runoff, and leachate collection and handling systems.

8.L.5.2 ***Summary of Potential Pollutant Sources.*** (See also Part 5.2.3) Document in your SWPPP the following sources and activities that have potential pollutants associated with them: fertilizer, herbicide, and pesticide application; earth and soil moving; waste hauling and loading or unloading; outdoor storage of significant materials, including daily, interim, and final cover material stockpiles as well as temporary waste storage areas; exposure of active and inactive landfill and land application areas; uncontrolled leachate flows; and failure or leaks from leachate collection and treatment systems.

8.L.7 Additional Inspection Requirements. (See also Part 3)

8.L.7.1 ***Inspections of Active Sites.*** Except in arid and semi-arid climates, inspect operating landfills, open dumps, and land application sites at least once every 7 days. Focus on areas of landfills that have not yet been finally stabilized; active land application areas, areas used for storage of material and wastes that are exposed to precipitation, stabilization, and structural control measures; leachate collection and treatment systems; and locations where equipment and waste trucks enter and exit the site. Ensure that sediment and erosion control measures are operating properly. For stabilized sites and areas where land application has been completed, or where the climate is arid or semi-arid, conduct inspections at least once every month.

8.L.7.2 ***Inspections of Inactive Sites.*** Inspect inactive landfills, open dumps, and land application sites at least quarterly. Qualified personnel must inspect landfill (or open dump) stabilization and structural erosion control measures, leachate collection and treatment systems, and all closed land application areas.

8.L.8 Additional Post-Authorization Documentation Requirements.

8.L.8.1 ***Recordkeeping and Internal Reporting.*** Keep records with your SWPPP of the types of wastes disposed of in each cell or trench of a landfill or open dump. For land application sites, track the types and quantities of wastes applied in specific areas.

8.L.9 Sector-Specific Benchmarks. (See also Part 6)

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

Table 8.L-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring 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

[1]Benchmark monitoring required only for discharges not subject to effluent limitations in 40 CFR Part 445 Subpart B (see Table L-2 below).

8.L.10. Effluent Limitations Based on Effluent Limitations Guidelines. (See also Part 6.2.2.1)

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

Table 8.L-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

Table 8.L-2[1]		
Industrial Activity	**Parameter**	**Effluent Limitation**
	Phenol	0.026 mg/L, daily maximum
		0.015 mg/L, monthly avg. maximum
	Total Zinc	0.20 mg/L, daily maximum
		0.11 mg/L, monthly avg. maximum
	pH	Within the range of 6-9 standard pH units (s.u.)

[1] Monitor annually. As set forth at 40 CFR Part 445 Subpart B, these numeric limitations apply to contaminated stormwater discharges from MSWLFs that have not been closed in accordance with 40 CFR 258.60, and to contaminated stormwater discharges from those landfills that are subject to the provisions of 40 CFR Part 257 except for discharges from any of the following facilities:

(a) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;

(b) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation, or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;

(c) landfills operated in conjunction with CWT facilities subject to 40 CFR Part 437, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or

(d) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart M – Sector M – Automobile Salvage Yards.

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

8.M.1 Covered Stormwater Discharges.

The requirements in Subpart M apply to stormwater discharges associated with industrial activity from Automobile Salvage Yards as identified by the SIC Code specified under Sector M in Table D-1 of Appendix D of this permit.

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

8.M.2.1 ***Spill and Leak Prevention Procedures.*** (See also Part 2.1.2.4) Drain vehicles intended to be dismantled of all fluids upon arrival at the site (or as soon thereafter as practicable), or employ some other equivalent means to prevent spills and leaks.

8.M.2.2 ***Employee Training.*** (See also Part 2.1.2.8) If applicable to your facility, address the following areas (at a minimum) in your employee training program: proper handling (collection, storage, and disposal) of oil, used mineral spirits, anti-freeze, mercury switches, and solvents.

8.M.2.3 ***Management of Runoff.*** (See also Part 2.1.2.6) Implement control measures to minimize discharges of pollutants in runoff such as the following, where determined to be feasible (list not exclusive): berms or drainage ditches on the property line (to help prevent run-on from neighboring properties); berms for uncovered outdoor storage of oily parts, engine blocks, and above-ground liquid storage; installation of detention ponds; and installation of filtering devices and oil and water separators.

8.M.3 Additional SWPPP Requirements.

8.M.3.1 ***Drainage Area Site Map.*** (See also Part 5.2.2) Identify locations used for dismantling, storing, and maintaining used motor vehicle parts. Also identify where any of the following may be exposed to precipitation or surface runoff: dismantling areas, parts (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers) storage areas, and liquid storage tanks and drums for fuel and other fluids.

8.M.3.2 ***Potential Pollutant Sources.*** (See also Part 5.2.3) Assess the potential for the following to contribute pollutants to stormwater discharges: vehicle storage areas, dismantling areas, parts storage areas (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers), and fueling stations.

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

Immediately (or as soon thereafter as practicable) inspect vehicles arriving at the site for leaks. Inspect quarterly for signs of leakage all equipment containing oily parts, hydraulic fluids, any other types of fluids, or mercury switches. Also, inspect quarterly for signs of leakage all vessels and areas where hazardous materials and general automotive fluids are stored, including, but not limited to, mercury switches, brake fluid, transmission fluid, radiator water, and antifreeze.

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

Table 8.M-1 identifies benchmarks that apply to Sector M. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.M-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Subsector M1. Automobile Salvage Yards (SIC 5015)	Total Suspended Solids (TSS)	100 mg/L
	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Total Lead (freshwater)[2] Total Lead (saltwater)[1]	Hardness Dependent 0.21 mg/L

[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	**Lead** (mg/L)
0-24.99 mg/L	0.014
25-49.99 mg/L	0.023
50-74.99 mg/L	0.045
75-99.99 mg/L	0.069
100-124.99 mg/L	0.095
125-149.99 mg/L	0.122
150-174.99 mg/L	0.151
175-199.99 mg/L	0.182
200-224.99 mg/L	0.213
225-249.99 mg/L	0.246
250+ mg/L	0.262

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart N – Sector N – Scrap Recycling and Waste Recycling Facilities.

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

8.N.1 Covered Stormwater Discharges.

The requirements in Subpart N apply to stormwater discharges associated with industrial activity from Scrap Recycling and Waste Recycling facilities as identified by the SIC Code specified under Sector N in Table D-1 of Appendix D of the permit.

8.N.2 Limitation on Coverage.

Separate permit requirements have been established for recycling facilities that receive, process, and do wholesale distribution of only source-separated recyclable materials primarily from non-industrial and residential sources (i.e., common consumer products including paper, newspaper, glass, cardboard, plastic containers, and aluminum and tin cans). This includes recycling facilities commonly referred to as material recovery facilities (MRF). See Part 8.N.3.3.

8.N.2.1 ***Prohibition of Non-Stormwater Discharges.*** (See also Part 1.1.4) Non-stormwater discharges from turnings containment areas are not covered by this permit (see also Part 8.N.3.1.3). Discharges from containment areas in the absence of a storm event are prohibited unless covered by a separate NPDES permit. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

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

8.N.3.1 ***Scrap and Waste Recycling Facilities (Non-Source Separated, Nonliquid Recyclable Materials).*** The following requirements are for facilities that receive, process, and do wholesale distribution of non-source separated, nonliquid recyclable wastes (e.g., ferrous and nonferrous metals, plastics, glass, cardboard, and paper). These facilities may receive both nonrecyclable and recyclable materials. This section is not intended for those facilities that accept recyclables only from primarily non-industrial and residential sources.

8.N.3.1.1 ***Inbound Recyclable and Waste Material Control Program.*** Minimize the chance of accepting materials that could be significant sources of pollutants by conducting inspections of inbound recyclables and waste materials and through implementation of control measures such as the following, where determined to be feasible (list not exclusive): providing information and education to suppliers of scrap and recyclable waste materials on draining and properly disposing of residual fluids (e.g., from vehicles and equipment engines, radiators and transmissions, oil filled transformers, and individual containers or drums) and removal of mercury switches from vehicles before delivery to your facility; establishing procedures to minimize the potential of any residual fluids from coming into contact with precipitation or runoff; establishing procedures for accepting scrap lead-acid batteries (additional requirements for the handling, storage, and disposal or recycling of batteries are contained in the scrap lead-acid battery program provisions in Part 8.N.3.1.6); providing training targeted for those personnel engaged in the inspection and acceptance of inbound recyclable materials; and

establishing procedures to ensure that liquid wastes, including used oil, are stored in materially compatible and non-leaking containers and are disposed of or recycled in accordance with the Resource Conservation and Recovery Act (RCRA).

8.N.3.1.2 ***Scrap and Waste Material Stockpiles and Storage (Outdoor).*** Minimize contact of stormwater runoff with stockpiled materials, processed materials, and nonrecyclable wastes through implementation of control measures such as the following, where determined to be feasible (list not exclusive): permanent or semi-permanent covers; sediment traps, vegetated swales and strips, catch basin filters, and sand filters to facilitate settling or filtering of pollutants; dikes, berms, containment trenches, culverts, and surface grading to divert runoff from storage areas; silt fencing; and oil and water separators, sumps, and dry absorbents for areas where potential sources of residual fluids are stockpiled (e.g., automobile engine storage areas).

8.N.3.1.3 ***Stockpiling of Turnings Exposed to Cutting Fluids (Outdoor Storage)***. Minimize contact of surface runoff with residual cutting fluids by storing all turnings exposed to cutting fluids under some form of permanent or semi-permanent cover, or establishing dedicated containment areas for all turnings that have been exposed to cutting fluids. Any containment areas must be constructed of concrete, asphalt, or other equivalent types of impermeable material and include a barrier (e.g., berms, curbing, elevated pads) to prevent contact with stormwater run-on. Stormwater runoff from these areas can be discharged, provided that any runoff is first collected and treated by an oil and water separator or its equivalent. You must regularly maintain the oil and water separator (or its equivalent) and properly dispose of or recycle collected residual fluids.

8.N.3.1.4 ***Scrap and Waste Material Stockpiles and Storage (Covered or Indoor Storage).*** Minimize contact of residual liquids and particulate matter from materials stored indoors or under cover with surface runoff through implementation of control measures such as the following, where determined to be feasible (list not exclusive): good housekeeping measures, including the use of dry absorbents or wet vacuuming to contain, dispose of, or recycle residual liquids originating from recyclable containers, and mercury spill kits for spills from storage of mercury switches; not allowing wash water from tipping floors or other processing areas to discharge to the storm sewer system; and disconnecting or sealing off all floor drains connected to the storm sewer system.

8.N.3.1.5 ***Scrap and Recyclable Waste Processing Areas.*** Minimize surface runoff from coming in contact with scrap processing equipment. Pay attention to operations that generate visible amounts of particulate residue (e.g., shredding) to minimize the contact of accumulated particulate matter and residual fluids with runoff (i.e., through good housekeeping, preventive maintenance). To minimize discharges of pollutants in stormwater from scrap and recyclable waste processing areas, implement control measures such as the following, where determined to be feasible (list not exclusive): at least once per month inspecting equipment for spills or leaks and malfunctioning, worn, or corroded parts or equipment; establishing a preventive maintenance program for processing equipment; using dry-absorbents or other cleanup practices to collect and dispose of or recycle spilled or leaking fluids or use mercury spill kits for spills from storage of mercury switches; on unattended

hydraulic reservoirs over 150 gallons in capacity, installing protection devices such as low-level alarms or equivalent devices, or secondary containment that can hold the entire volume of the reservoir; implementing containment or diversion structures such as dikes, berms, culverts, trenches, elevated concrete pads, and grading to minimize contact of stormwater runoff with outdoor processing equipment or stored materials; using oil and water separators or sumps; installing permanent or semi-permanent covers in processing areas where there are residual fluids and grease; and using retention or detention ponds or basins, sediment traps, vegetated swales or strips, and/or catch basin filters or sand filters for pollutant settling and filtration.

8.N.3.1.6 ***Scrap Lead-Acid Battery Program.*** To minimize the discharge of pollutants in stormwater from lead-acid batteries, properly handle, store, and dispose of scrap lead-acid batteries, and implement control measures such as the following, where determined to be feasible (list not exclusive): segregating scrap lead-acid batteries from other scrap materials; properly handling, storing, and disposing of cracked or broken batteries; collecting and disposing of leaking lead-acid battery fluid; minimizing or eliminating (if possible) exposure of scrap lead-acid batteries to precipitation or runoff; and providing employee training for the management of scrap batteries.

8.N.3.1.7 ***Spill Prevention and Response Procedures.*** (See also Part 2.1.2.4) Install alarms and/or pump shutoff systems on outdoor equipment with hydraulic reservoirs exceeding 150 gallons in the event of a line break. Alternatively, a secondary containment system capable of holding the entire contents of the reservoir plus room for precipitation can be used. Use a mercury spill kit for any release of mercury from switches, anti-lock brake systems, and switch storage areas.

8.N.3.1.8 ***Supplier Notification Program.*** As appropriate, notify major suppliers which scrap materials will not be accepted at the facility or will be accepted only under certain conditions.

8.N.3.2 ***Waste Recycling Facilities*** (Liquid Recyclable Materials).

8.N.3.2.1 ***Waste Material Storage (Indoor).*** Minimize or eliminate contact between residual liquids from waste materials stored indoors and from surface runoff. The plan may refer to applicable portions of other existing plans, such as Spill Prevention, Control, and Countermeasure (SPCC) plans required under 40 CFR Part 112. To minimize discharges of pollutants in stormwater from indoor waste material storage areas, implement control measures such as the following, where determined to be feasible (list not exclusive): implementing procedures for material handling (including labeling and marking); cleaning up spills and leaks with dry absorbent materials and/or a wet vacuum system; installing appropriate containment structures (e.g., trenching, curbing, gutters, etc.); and installing a drainage system, including appurtenances (e.g., pumps or ejectors, manually operated valves), to handle discharges from diked or bermed areas. Drainage should be discharged to an appropriate treatment facility or sanitary sewer system, or otherwise disposed of properly. These discharges may require coverage under a separate NPDES wastewater permit or industrial user permit under the pretreatment program.

8.N.3.2.2 ***Waste Material Storage (Outdoor).*** Minimize contact between stored residual liquids and precipitation or runoff. The plan may refer to applicable portions of other existing plans, such as SPCC plans required under 40 CFR Part 112.

Discharges of stormwater from containment areas containing used oil must also be in accordance with applicable sections of 40 CFR Part 112. To minimize discharges of pollutants in stormwater from outdoor waste material storage areas, implement control measures such as the following, where determined to be feasible (list not exclusive): appropriate containment structures (e.g., dikes, berms, curbing, pits) to store the volume of the largest tank, with sufficient extra capacity for precipitation; drainage control and other diversionary structures; corrosion protection and/or leak detection systems for storage tanks; and dry-absorbent materials or a wet vacuum system to collect spills.

8.N.3.2.3 ***Trucks and Rail Car Waste Transfer Areas.*** Minimize pollutants in stormwater discharges from truck and rail car loading and unloading areas. Include measures to clean up minor spills and leaks resulting from the transfer of liquid wastes. To minimize discharges of pollutants in stormwater from truck and rail car waste transfer areas, implement control measures such as the following, where determined to be feasible (list not exclusive): containment and diversionary structures to minimize contact with precipitation or runoff; and dry clean-up methods, wet vacuuming, roof coverings, and/or runoff controls.

8.N.3.3 ***Recycling Facilities (Source-Separated Materials).*** The following requirements are for facilities that receive only source-separated recyclables, primarily from non-industrial and residential sources.

8.N.3.3.1 ***Inbound Recyclable Material Control.*** Minimize the chance of accepting nonrecyclables (e.g., hazardous materials) that could be a significant source of pollutants by conducting inspections of inbound materials and through the implementation of control measures such as the following, where determined to be feasible (list not exclusive): providing information and education measures to inform suppliers of recyclables about acceptable and non-acceptable materials; training drivers responsible for pickup of recycled material; clearly marking public drop-off containers regarding which materials can be accepted; rejecting nonrecyclable wastes or household hazardous wastes at the source; and establishing procedures for handling and disposal of nonrecyclable material.

8.N.3.3.2 ***Outdoor Storage.*** Minimize exposure of recyclables to precipitation and runoff by using good housekeeping measures to prevent accumulation of particulate matter and fluids, particularly in high traffic areas and through implementation of control measure such as the following, where determined to be feasible (list not exclusive): providing totally enclosed drop-off containers for the public; installing a sump and pump with each container pit and treat or discharge collected fluids to a sanitary sewer system; providing dikes and curbs for secondary containment (e.g., around bales of recyclable waste paper); diverting surface water runoff away from outside material storage areas; providing covers over containment bins, dumpsters, and roll-off boxes; and storing the equivalent of one day's volume of recyclable material indoors.

8.N.3.3.3 ***Indoor Storage and Material Processing.*** Minimize the release of pollutants from indoor storage and processing areas through implementation of control measures such as the following, where determined to be feasible (list not exclusive): scheduling routine good housekeeping measures for all storage and processing areas; prohibiting tipping floor wash water from draining to

the storm sewer system; and providing employee training on pollution prevention practices.

8.N.3.3.4 ***Vehicle and Equipment Maintenance***. Minimize the discharge of pollutants in stormwater from areas where vehicle and equipment maintenance occur outdoors through implementation of control measures such as the following, where determined to be feasible (list not exclusive): minimizing or eliminating outdoor maintenance areas; establishing spill prevention and clean-up procedures in fueling areas; avoiding topping off fuel tanks; diverting runoff from fueling areas; storing lubricants and hydraulic fluids indoors; and providing employee training on proper handling and storage of hydraulic fluids and lubricants.

8.N.4 Additional SWPPP Requirements.

8.N.4.1 ***Drainage Area Site Map.*** (See also Part 5.2.2) Document in your SWPPP the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: scrap and waste material storage; outdoor scrap and waste processing equipment; and containment areas for turnings exposed to cutting fluids.

8.N.4.2 ***Maintenance Schedules/Procedures for Collection, Handling, and Disposal or Recycling of Residual Fluids at Scrap and Waste Recycling Facilities.*** If you are subject to Part 8.N.3.1.3, your SWPPP must identify any applicable maintenance schedule and the procedures to collect, handle, and dispose of or recycle residual fluids.

8.N.5 Additional Inspection Requirements.

8.N.5.1 ***Inspections for Waste Recycling Facilities.*** The inspections must be performed quarterly, per Part 3.1, and include, at a minimum, all areas where waste is generated, received, stored, treated, or disposed of and that are exposed to either precipitation or stormwater runoff.

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

Table 8.N-1 identifies benchmarks that apply to Sector N. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.N-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector N1. Scrap Recycling and Waste Recycling Facilities except those only receiving source-separate recyclable materials primarily from non-industrial and residential sources (SIC 5093)	Chemical Oxygen Demand (COD)	120 mg/L
	Total Suspended Solids (TSS)	100 mg/L
	Aluminum Total Recoverable	0.75 mg/L
	Total Copper (freshwater)[2] Total Copper (saltwater)[1]	Hardness Dependent 0.0048 mg/L
	Total Recoverable Iron	1.0 mg/L
	Total Lead (freshwater)[2] Total Lead (saltwater)[1]	Hardness Dependent 0.21 mg/L
	Total Zinc (freshwater)[2] Total Zinc (saltwater)[1]	Hardness Dependent 0.09 mg/L

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

Freshwater Hardness Range	**Copper** (mg/L)	**Lead** (mg/L)	**Zinc** (mg/L)
0-24.99 mg/L	0.0038	0.014	0.04
25-49.99 mg/L	0.0056	0.023	0.05
50-74.99 mg/L	0.0090	0.045	0.08
75-99.99 mg/L	0.0123	0.069	0.11
100-124.99 mg/L	0.0156	0.095	0.13
125-149.99 mg/L	0.0189	0.122	0.16
150-174.99 mg/L	0.0221	0.151	0.18
175-199.99 mg/L	0.0253	0.182	0.20
200-224.99 mg/L	0.0285	0.213	0.23
225-249.99 mg/L	0.0316	0.246	0.25
250+ mg/L	0.0332	0.262	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart O – Sector O – Steam Electric Generating Facilities.

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

8.O.1 Covered Stormwater Discharges.

The requirements in Subpart O apply to stormwater discharges associated with industrial activity from Steam Electric Power Generating Facilities as identified by the Activity Code specified under Sector O in Table D-1 of Appendix D.

8.O.2 Industrial Activities Covered by Sector O.

This permit authorizes stormwater discharges from the following industrial activities at Sector O facilities:

8.O.2.1 ***Steam electric power generation using coal, natural gas, oil, nuclear energy, etc., to produce a steam source, including coal handling areas (does not include geothermal power);***

8.O.2.2 ***Coal pile runoff, including effluent limitations established by 40 CFR Part 423;***

8.O.2.3 Dual fuel facilities that could employ a steam boiler.

8.O.3 Limitations on Coverage.

8.O.3.1 ***Prohibition of Non-Stormwater Discharges.*** Non-stormwater discharges subject to effluent limitations guidelines are not covered by this permit. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.O.3.2 ***Prohibition of Stormwater Discharges.*** Stormwater discharges from the following are not covered by this permit:

8.O.3.2.1 ***Ancillary facilities (e.g., fleet centers and substations) that are not contiguous to a steam electric power generating facility;***

8.O.3.2.2 ***Gas turbine facilities (provided the facility is not a dual-fuel facility that includes a steam boiler), and combined-cycle facilities where no supplemental fuel oil is burned (and the facility is not a dual-fuel facility that includes a steam boiler);***

8.O.3.2.3 ***Cogeneration (combined heat and power) facilities utilizing a gas turbine.***

8.O.4 Additional Technology-Based Effluent Limits. The following good housekeeping measures are required in addition to Part 2.1.2.2:

8.O.4.1 ***Fugitive Dust Emissions.*** Minimize fugitive dust emissions from coal handling areas to minimize the tracking of coal dust offsite that could be discharged in stormwater through implementation of control measures such as the following, where determined to be feasible, (list not exclusive): installing specially designed tires; and washing vehicles in a designated area before they leave the site and controlling the wash water.

8.O.4.2 ***Delivery Vehicles.*** Minimize contamination of stormwater runoff from delivery vehicles arriving at the plant site. Implement procedures to inspect delivery vehicles arriving at the plant site as necessary to minimize discharges of pollutants in stormwater. Ensure the overall integrity of the body or container of the delivery vehicle and implement procedures to deal with leakage or spillage from delivery vehicles.

8.O.4.3 ***Fuel Oil Unloading Areas.*** Minimize contamination of precipitation or surface runoff from fuel oil unloading areas. Use containment curbs in unloading areas where feasible. In addition, ensure personnel familiar with spill prevention and response procedures are available to respond expeditiously in the event of a leak or spill during deliveries. Ensure that any leaks or spills are immediately contained and cleaned up, and use spill and overflow protection devices (e.g., drip pans, drip diapers, or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).

8.O.4.4 ***Chemical Loading and Unloading.*** Minimize contamination of precipitation or surface runoff from chemical loading and unloading areas. Use containment curbs at chemical loading and unloading areas to contain spills, where practicable. In addition, ensure personnel familiar with spill prevention and response procedures are available to respond expeditiously in the event of a leak or spill during deliveries. Ensure leaks and spills are immediately contained and cleaned up and, where practicable, load and unload in covered areas and store chemicals indoors.

8.O.4.5 ***Miscellaneous Loading and Unloading Areas.*** Minimize contamination of precipitation or surface runoff from loading and unloading areas through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering the loading area; grading, curbing, or berming around the loading area to divert run-on; locating the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems; or equivalent procedures.

8.O.4.6 ***Liquid Storage Tanks.*** Minimize contamination of surface runoff from above-ground liquid storage tanks through implementation of control measures such as the following, where determined to be feasible, the following (list not exclusive): using protective guards around tanks; using containment curbs; installing spill and overflow protection; using dry cleanup methods; or equivalent measures.

8.O.4.7 ***Large Bulk Fuel Storage Tanks.*** Minimize contamination of surface runoff from large bulk fuel storage tanks. Use containment berms (or their equivalent). You must also comply with applicable state and federal laws, including Spill Prevention, Control and Countermeasure (SPCC) Plan requirements.

8.O.4.8 ***Spill Reduction Measures.*** Minimize the potential for an oil or chemical spill, or reference the appropriate part of your SPCC plan. Visually inspect as part of your routine facility inspection the structural integrity of all above-ground tanks, pipelines, pumps, and related equipment that may be exposed to stormwater, and make any necessary repairs immediately.

8.O.4.9 ***Oil-Bearing Equipment in Switchyards.*** Minimize contamination of surface runoff from oil-bearing equipment in switchyard areas. Use level grades and gravel surfaces to retard flows and limit the spread of spills, or collect runoff in perimeter ditches.

8.O.4.10 ***Residue-Hauling Vehicles.*** Inspect all residue-hauling vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the container body. Repair vehicles without load covering or adequate gate sealing, or with leaking containers or beds.

8.O.4.11 ***Ash Loading Areas***. Reduce or control the tracking of ash and residue from ash loading areas. Clear the ash building floor and immediately adjacent roadways of spillage, debris, and excess water as necessary to minimize discharges of pollutants in stormwater.

8.O.4.12 ***Areas Adjacent to Disposal Ponds or Landfills.*** Minimize contamination of surface runoff from areas adjacent to disposal ponds or landfills. Reduce ash residue that may be tracked on to access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.

8.O.4.13 ***Landfills, Scrap Yards, Surface Impoundments, Open Dumps, General Refuse Sites.*** Minimize the potential for contamination of runoff from these areas.

8.O.5 Additional SWPPP Requirements.

8.O.5.1 ***Drainage Area Site Map.*** (See also Part 5.2.2) Document in your SWPPP the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: storage tanks, scrap yards, and general refuse areas; short- and long-term storage of general materials (including but not limited to supplies, construction materials, paint equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizer, and pesticides); landfills and construction sites; and stock pile areas (e.g., coal or limestone piles).

8.O.5.2 ***Documentation of Good Housekeeping Measures.*** You must document in your SWPPP the good housekeeping measures implemented to meet the effluent limits in Part 8.O.4.

8.O.6 Additional Inspection Requirements.

As part of your inspection, inspect the following areas monthly: coal handling areas, loading or unloading areas, switchyards, fueling areas, bulk storage areas, ash handling areas, areas adjacent to disposal ponds and landfills, maintenance areas, liquid storage tanks, and long term and short term material storage areas.

8.O.7 Sector-Specific Benchmarks. (See also Part 6)

Table 8.O-1 identifies benchmarks that apply to Sector O. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.O-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector O1. Steam Electric Generating Facilities (Industrial Activity Code "SE")	Total Iron	1.0 mg/L

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

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

Table 8.O-2[1]		
Industrial Activity	**Parameter**	**Effluent Limitation**
Discharges from coal storage piles at Steam Electric Generating Facilities	TSS	50 mg/l[2]
	pH	6.0 min - 9.0 max

[1] Monitor annually.
[2] If your facility is designed, constructed, and operated to treat the volume of coal pile runoff that is associated with a 10-year, 24-hour rainfall event, any untreated overflow of coal pile runoff from the treatment unit is not subject to the 50 mg/L limitation for total suspended solids.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart P – Sector P – Land Transportation and Warehousing.

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

8.P.1 Covered Stormwater Discharges.

The requirements in Subpart P apply to stormwater discharges associated with industrial activity from Land Transportation and Warehousing facilities as identified by the SIC Codes specified under Sector P in Table D-1 of Appendix D of the permit.

8.P.2 Limitation on Coverage.

8.P.2.1 ***Prohibited Discharges*** (see also Parts 1.1.4 and 8.P.3.1.4) This permit does not authorize the discharge of vehicle/equipment/surface wash water, including tank cleaning operations. Such discharges must be authorized under a separate NPDES permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or recycled on-site.

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

8.P.3.1 ***Good Housekeeping Measures.*** (See also Part 2.1.2.2) In addition to the Good Housekeeping requirements in Part 2.1.2.2, you must do the following.

8.P.3.1.1 ***Vehicle and Equipment Storage Areas.*** Minimize the potential for stormwater exposure to leaky or leak-prone vehicles/equipment awaiting maintenance through implementation of control measures such as the following, where determined to be feasible (list not exclusive): using of drip pans under vehicles/equipment; storing vehicles and equipment indoors; installing berms or dikes; using of absorbents; roofing or covering storage areas; and cleaning pavement surfaces to remove oil and grease.

8.P.3.1.2 ***Fueling Areas.*** Minimize contamination of stormwater runoff from fueling areas through implementation of control measures such as the following, where determined to be feasible: covering the fueling area; using spill/overflow protection and cleanup equipment; minimizing stormwater run-on/runoff to the fueling area; using dry cleanup methods; and treating and/or recycling collected stormwater runoff.

8.P.3.1.3 ***Material Storage Areas.*** Maintain all material storage vessels (e.g., for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) to prevent contamination of stormwater and plainly label them (e.g., "Used Oil," "Spent Solvents"). To minimize discharges of pollutants in stormwater from material storage areas, implement control measures such as the following, where determined to be feasible (list not exclusive): storing the materials indoors; installing berms/dikes around the areas; minimizing runoff of stormwater to the areas; using dry cleanup methods; and treating and/or recycling collected stormwater runoff.

8.P.3.1.4 ***Vehicle and Equipment Cleaning Areas.*** Minimize contamination of stormwater runoff from all areas used for vehicle/equipment cleaning through implementation of control measures such as the following, where determined to be feasible (list not exclusive): performing all cleaning operations indoors;

covering the cleaning operation, ensuring that all wash water drains to a proper collection system (i.e., not the stormwater drainage system); treating and/or recycling collected wash water; or other equivalent measures. Discharges of vehicle and equipment wash water, including tank cleaning operations, are not authorized by this permit for this sector.

8.P.3.1.5 ***Vehicle and Equipment Maintenance Areas.*** Minimize contamination of stormwater runoff from all areas used for vehicle/equipment maintenance through implementation of control measures such as the following, where determined to be feasible (list not exclusive): performing maintenance activities indoors; using drip pans; keeping an organized inventory of materials used in the shop; draining all parts of fluid prior to disposal; prohibiting wet clean up practices if these practices would result in the discharge of pollutants to stormwater drainage systems; using dry cleanup methods; treating and/or recycling collected stormwater runoff; and minimizing run on/runoff of stormwater to maintenance areas.

8.P.3.1.6 ***Locomotive Sanding (Loading Sand for Traction) Areas.*** Minimize discharges of pollutants in stormwater from locomotive sanding areas through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering sanding areas; minimizing stormwater run on/runoff; or appropriate sediment removal practices to minimize the offsite transport of sanding material by stormwater.

8.P.3.2 ***Employee Training.*** (See also Part 2.1.2.8) Train personnel at least once a year and address the following activities, as applicable: used oil and spent solvent management; fueling procedures; general good housekeeping practices; proper painting procedures; and used battery management.

8.P.4 Additional SWPPP Requirements.

8.P.4.1 ***Drainage Area Site Map.*** (See also Part 5.2.2) Identify in the SWPPP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: fueling stations; vehicle/equipment maintenance or cleaning areas; storage areas for vehicle/equipment with actual or potential fluid leaks; loading/unloading areas; areas where treatment, storage or disposal of wastes occur; liquid storage tanks; processing areas; and storage areas.

8.P.4.2 ***Potential Pollutant Sources.*** (See also Part 5.2.3) Assess the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: onsite waste storage or disposal; dirt/gravel parking areas for vehicles awaiting maintenance; illicit plumbing connections between shop floor drains and the stormwater conveyance system(s); and fueling areas. Describe these activities in the SWPPP.

8.P.4.3 ***Description of Good Housekeeping Measures***. You must document in your SWPPP the good housekeeping measures you implement consistent with Part 8.P.3.

8.P.4.4 ***Vehicle and Equipment Wash Water Requirements.*** If wash water is handled in a manner that does not involve separate NPDES permitting (e.g., hauled offsite), describe the disposal method and include all pertinent information (e.g., frequency, volume, destination, etc.) in your SWPPP. Discharges of vehicle and equipment wash water, including tank cleaning operations, are not authorized by this permit for this sector.

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

Inspect all the following areas/activities: storage areas for vehicles/equipment awaiting maintenance, fueling areas, indoor and outdoor vehicle/equipment maintenance areas, material storage areas, vehicle/equipment cleaning areas and loading/unloading areas.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart Q – Sector Q – Water Transportation.

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

8.Q.1 Covered Stormwater Discharges.

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

8.Q.2 Limitations on Coverage.

8.Q.2.1 ***Prohibition of Non-Stormwater Discharges.*** (See also Part 1.1.4) Not covered by this permit: discharges from vessels including bilge and ballast water, sanitary wastes, pressure wash water, and cooling water. Any discharge of pollutants from a point source to a water of the U.S. requires coverage under an NPDES permit. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

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

8.Q.3.1 ***Good Housekeeping Measures.*** You must implement the following good housekeeping measures in addition to the requirements of Part 2.1.2.2:

8.Q.3.1.1 ***Pressure Washing Area.*** If pressure washing is used to remove marine growth from vessels, the discharge water must be permitted by a separate NPDES permit. Collect or contain the discharges from the pressure washing area so that they are not commingled with stormwater discharges authorized by this permit.

8.Q.3.1.2 ***Blasting and Painting Area.*** Minimize the potential for spent abrasives, paint chips, and overspray to be discharged into receiving waters or the storm sewer system. Contain all blasting and painting activities, or use other measures, to minimize the discharge of contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). At least once per month, you must clean stormwater conveyances of deposits of abrasive blasting debris and paint chips.

8.Q.3.1.3 ***Material Storage Areas.*** Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Minimize the contamination of precipitation or surface runoff from the storage areas. Specify which materials are stored indoors, and contain or enclose or use other measures for those stored outdoors. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Implement an inventory control plan to limit the presence of potentially hazardous materials onsite.

8.Q.3.1.4 ***Engine Maintenance and Repair Areas.*** Minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair through implementation of control measures such as the following,

where determined to be feasible (list not exclusive): performing all maintenance activities indoors; maintaining an organized inventory of materials used in the shop; draining all parts of fluid prior to disposal; prohibiting the practice of hosing down the shop floor; using dry cleanup methods; and treating and/or recycling stormwater runoff collected from the maintenance area.

8.Q.3.1.5 ***Material Handling Area.*** Minimize the contamination of precipitation or surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels) through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering fueling areas; using spill and overflow protection; mixing paints and solvents in a designated area (preferably indoors or under a shed); and minimizing runoff of stormwater to material handling areas.

8.Q.3.1.6 ***Drydock Activities.*** Routinely maintain and clean the drydock to minimize dischrges of pollutants in stormwater. Address the cleaning of accessible areas of the drydock prior to flooding, and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, and fuel spills occurring on the drydock. To minimize discharges of pollutants in stormwater from drydock activities, implement control measures such as the following, where determined to be feasible (list not exclusive): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding; and making absorbent materials and oil containment booms readily available to clean up or contain any spills.

8.Q.3.2 ***Employee Training.*** (See also Part 2.1.2.8) As part of your employee training program, address, at a minimum, the following activities (as applicable): used oil management; spent solvent management; disposal of spent abrasives; disposal of vessel wastewaters; spill prevention and control; fueling procedures; general good housekeeping practices; painting and blasting procedures; and used battery management.

8.Q.3.3 ***Preventive Maintenance.*** (See also Part 2.1.2.3) As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

8.Q.4 Additional SWPPP Requirements.

8.Q.4.1 ***Drainage Area Site Map.*** (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: fueling; engine maintenance and repair; vessel maintenance and repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading and unloading areas; locations used for the treatment, storage, or disposal of wastes; liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

8.Q.4.2 ***Summary of Potential Pollutant Sources.*** (See also Part 5.2.3) Document in the SWPPP the following additional sources and activities that have potential pollutants associated with them: outdoor manufacturing or processing activities (e.g., welding, metal

fabricating) and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, and painting).

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

Include the following in all quarterly routine facility inspections: pressure washing areas; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.

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

Table 8.Q-1 identifies benchmarks that apply to Sector Q. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.Q-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector Q1. Water Transportation Facilities (SIC 4412-4499)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Total Lead (freshwater)[2] Total Lead (saltwater)[1]	Hardness Dependent 0.21 mg/L
	Total Zinc (freshwater)[2] Total Zinc (saltwater)[1]	Hardness Dependent 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	Lead (mg/L)	Zinc (mg/L)
0-24.99 mg/L	0.014	0.04
25-49.99 mg/L	0.023	0.05
50-74.99 mg/L	0.045	0.08
75-99.99 mg/L	0.069	0.11
100-124.99 mg/L	0.095	0.13
125-149.99 mg/L	0.122	0.16
150-174.99 mg/L	0.151	0.18
175-199.99 mg/L	0.182	0.20
200-224.99 mg/L	0.213	0.23
225-249.99 mg/L	0.246	0.25
250+ mg/L	0.262	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart R – Sector R – Ship and Boat Building and Repair Yards.

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

8.R.1 Covered Stormwater Discharges.

The requirements in Subpart R apply to stormwater discharges associated with industrial activity from Ship and Boat Building and Repair Yards as identified by the SIC Codes specified under Sector R in Table D-1 of Appendix D of the permit.

8.R.2 Limitations on Coverage.

8.R.2.1 ***Prohibition of Non-Stormwater Discharges.*** (See also Part 1.1.4) Not covered by this permit: discharges from vessels including bilge and ballast water, sanitary wastes, pressure wash water, and cooling water. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

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

8.R.3.1 ***Good Housekeeping Measures.*** (See also Part 2.1.2.2)

8.R.3.1.1 ***Pressure Washing Area***. If pressure washing is used to remove marine growth from vessels, the discharged water must be permitted as a process wastewater by a separate NPDES permit.

8.R.3.1.2 ***Blasting and Painting Area.*** Minimize the potential for spent abrasives, paint chips, and overspray to be discharged into receiving waters or the storm sewer system. Contain all blasting and painting activities, or use other measures, to prevent the discharge of the contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). When necessary, regularly clean stormwater conveyances of deposits of abrasive blasting debris and paint chips.

8.R.3.1.3 ***Material Storage Areas.*** Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Minimize the contamination of precipitation or surface runoff from the storage areas. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Implement an inventory control plan to limit the presence of potentially hazardous materials onsite.

8.R.3.1.4 ***Engine Maintenance and Repair Areas.*** Minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair through implementation of control measures such as the following, where determined to be feasible (list not exclusive): performing all maintenance activities indoors; maintaining an organized inventory of materials used in the shop; draining all parts of fluid prior to disposal; prohibiting the practice of hosing down the shop floor; using dry cleanup methods; and treating and/or recycling stormwater runoff collected from the maintenance area.

8.R.3.1.5 ***Material Handling Area.*** Minimize the discharge of pollutants in stormwater from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels) through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering fueling areas, using spill and overflow protection, mixing paints and solvents in a designated area (preferably indoors or under a shed), and minimizing stormwater run-on to material handling areas.

8.R.3.1.6 ***Drydock Activities.*** Routinely maintain and clean the drydock to minimize pollutants in stormwater runoff. Clean accessible areas of the drydock prior to flooding and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, or fuel spills occurring on the drydock. To minimize discharges of pollutants in stormwater from drydock activities, implement control measures such as the following, where determined to be feasible (list not exclusive): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding; and having absorbent materials and oil containment booms readily available to clean up and contain any spills.

8.R.3.2 ***Employee Training.*** (See also Part 2.1.2.8) As part of your employee training program, address, at a minimum, the following activities (as applicable): used oil management, spent solvent management, disposal of spent abrasives, disposal of vessel wastewaters, spill prevention and control, fueling procedures, general good housekeeping practices, painting and blasting procedures, and used battery management.

8.R.3.4 ***Preventive Maintenance.*** (See also Part 2.1.2.3) As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

8.R.4 Additional SWPPP Requirements.

8.R.4.1 ***Drainage Area Site Map.*** (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: fueling; engine maintenance or repair; vessel maintenance or repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading and unloading areas; treatment, storage, and waste disposal areas; liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

8.R.4.2 ***Potential Pollutant Sources.*** (See also Part 5.2.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them (if applicable): outdoor manufacturing or processing activities (e.g., welding, metal fabricating) and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, and painting).

8.R.4.3 ***Documentation of Good Housekeeping Measures.*** Document in your SWPPP any good housekeeping measures implemented to meet the effluent limits in Part 8.R.3.

8.R.4.3.1 ***Blasting and Painting Areas.*** Document in the SWPPP any standard operating practices relating to blasting and painting (e.g., prohibiting uncontained blasting and painting over open water or prohibiting blasting and painting during windy conditions, which can render containment ineffective).

8.R.4.3.2 ***Storage Areas.*** Specify in your SWPPP which materials are stored indoors, and contain or enclose or use other measures for those stored outdoors.

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

Include the following in all quarterly routine facility inspections: pressure washing areas; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart S – Sector S – Air Transportation.

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

8.S.1 Covered Stormwater Discharges.

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

8.S.2 Limitation on Coverage.

8.S.2.1 ***Limitations on Coverage.*** This permit authorizes stormwater discharges from only those portions of the air transportation facility that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations or deicing operations.

Note: the term "deicing" in this permit will generally be used to mean both deicing (removing frost, snow or ice) and anti-icing (preventing accumulation of frost, snow or ice) activities, unless specific mention is made otherwise.

8.S.2.2 ***Prohibition of Non-Stormwater Discharges.*** (See also Part 1.1.4 and Part 8.S.5.3) This permit does not authorize the discharge of aircraft, ground vehicle, runway and equipment wash waters; nor the dry weather discharge of deicing chemicals. Such discharges must be covered by separate NPDES permit(s). Note that a discharge resulting from snowmelt is not a dry weather discharge. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.S.3 Multiple Operators at Air Transportation Facilities.

Air transportation facilities often have more than one operator who could discharge stormwater associated with industrial activity. Operators include the airport authority and airport tenants, including air passenger or cargo companies, fixed based operators, and other parties who routinely perform industrial activities on airport property.

8.S.3.1 ***Permit Coverage/Submittal of NOIs.*** Where an airport transportation facility has multiple industrial operators that discharge stormwater, each individual operator must obtain coverage under an NPDES stormwater permit. To obtain coverage under the MSGP, all such operators must meet the eligibility requirements in Part 1 and must submit an NOI, per Part 1.2.1.1 (or, if appropriate, a no exposure certification per Part 1.4).

8.S.3.2 ***MSGP Implementation Responsibilities for Airport Authority and Tenants.*** The airport authority, in collaboration with its tenants, may choose to implement certain MSGP requirements on behalf of its tenants in order to increase efficiency and eliminate redundancy or duplication of effort. Options available to the airport authority and its tenants for implementation of MSGP requirements include:

- The airport authority performs certain activities on behalf of itself and its tenants and reports on its activities;
- Tenants provide the airport authority with relevant inputs about tenants' activities, including deicing chemical usage*, and the airport authority compiles and reports on tenants' and its own activities;

- Tenants independently perform, document and submit required information on their activities.

*Tenants who report their deicing chemical usage to the airport authority and rely on the airport authority to perform monitoring should not check the glycol and urea use box on their NOI forms.

8.S.3.3 ***SWPPP Requirements.*** A single comprehensive SWPPP must be developed for all stormwater discharges associated with industrial activity at the airport before submittal of any NOIs. The comprehensive SWPPP should be developed collaboratively by the airport authority and tenants. If any operator develops a SWPPP for discharges from its own areas of the airport, that SWPPP must be coordinated and integrated with the comprehensive SWPPP. All operators and their separate SWPPP contributions and compliance responsibilities must be clearly identified in the comprehensive SWPPP, which all operators must sign and certify per Part 5.2.7. As applicable, the SWPPP must clearly specify the MSGP requirements to be complied with by:

- The airport authority for itself;
- The airport authority on behalf of its tenants;
- Tenants for themselves.

For each activity that an operator (e.g., the airport authority) conducts on behalf of another operator (e.g., a tenant), the SWPPP must describe a process for reporting results to the latter operator and for ensuring appropriate follow-up, if necessary, by all affected operators. This is to ensure all actions are taken to correct any potential deficiencies or permit violations. For example, where the airport authority is conducting monitoring for itself and its tenants, the SWPPP must identify how the airport authority will share the monitoring results with its tenants, and then follow-up with its tenants where there are any exceedances of benchmarks, effluent limits, or water quality standards. In turn, the SWPPP must describe how the tenants will also follow-up to ensure permit compliance.

8.S.3.4 ***Duty to Comply.*** All individual operators are responsible for implementing their assigned portion of the comprehensive SWPPP, and operators must ensure that their individual activities do not render another operator's stormwater controls ineffective. In addition, the standard permit conditions found in Appendix B apply to each individual operator, including B.1 Duty to Comply (which states, in part, "You [each individual operator] must comply with all conditions of this permit."). For multiple operators at an airport this means that each individual operator remains responsible for ensuring all requirements of its own MSGP coverage are met regardless of whether the comprehensive SWPPP allocates the actual implementation of any of those responsibilities to another entity. That is, the failure of the entity allocated responsibility in the SWPPP to implement an MSGP requirement on behalf of other operators does not negate the other operators' ultimate liability.

8.S.4 Additional Technology-Based Effluent Limits.

8.S.4.1 ***Good Housekeeping Measures.*** (See also Part 2.1.2.2)

8.S.4.1.1 ***Aircraft, Ground Vehicle and Equipment Maintenance Areas.*** Minimize the contamination of stormwater runoff from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangers) through implementation of control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive):

performing maintenance activities indoors; maintaining an organized inventory of material used in the maintenance areas; draining all parts of fluids prior to disposal; prohibiting the practice of hosing down the apron or hanger floor; using dry cleanup methods; and collecting the stormwater runoff from the maintenance area and providing treatment or recycling.

8.S.4.1.2 ***Aircraft, Ground Vehicle and Equipment Cleaning Areas.*** (See also Part 8.S.4.6) Clearly demarcate these areas on the ground using signage or other appropriate means. Minimize the contamination of stormwater runoff from cleaning areas.

8.S.4.1.3 ***Aircraft, Ground Vehicle and Equipment Storage Areas.*** Store all aircraft, ground vehicles and equipment awaiting maintenance in designated areas only and implement control measures to minimize the discharge of pollutants in stormwater from these storage areas such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): storing aircraft and ground vehicles indoors; using drip pans for the collection of fluid leaks; and perimeter drains, dikes or berms surrounding the storage areas.

8.S.4.1.4 ***Material Storage Areas.*** Maintain the vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition to prevent or minimize contamination of stormwater. Also plainly label the vessels (e.g., "used oil," "Contaminated Jet A"). To minimize contamination of precipitation/runoff from these areas, implement control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): storing materials indoors; storing waste materials in a centralized location; and installing berms/dikes around storage areas.

8.S.4.1.5 ***Airport Fuel System and Fueling Areas.*** Minimize the discharge of pollutants in stormwater from airport fuel system and fueling areas through implementation of control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): implementing spill and overflow practices (e.g., placing absorptive materials beneath aircraft during fueling operations); using only dry cleanup methods; and collecting stormwater runoff. If you have implemented a SPCC plan developed in accordance with the 2006 amendments to the SPCC rule, you may cite the relevant aspects from your SPCC plan that comply with the requirements of this section in your SWPPP.

8.S.4.1.6 ***Source Reduction.*** Consistent with safety considerations, minimize the use of urea and glycol-based deicing chemicals to reduce the aggregate amount of deicing chemicals used that could add pollutants to stormwater discharges. Chemical options to replace pavement deicers (urea or glycol) include (list not exclusive): potassium acetate; magnesium acetate; calcium acetate; and anhydrous sodium acetate.

8.S.4.1.6.1 ***Runway Deicing Operations.*** To minimize the discharge of pollutants in stormwater from runway deicing operations, implement source reduction control measures such as the following, where determined to be feasible and that

accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): metered application of chemicals; pre-wetting dry chemical constituents prior to application; installing a runway ice detection system; implementing anti-icing operations as a preventive measure against ice buildup; heating sand; and product substitution.

8.S.4.1.6.2 ***Aircraft Deicing Operations.*** Minimize the discharge of pollutants in stormwater from aircraft deicing operations. Determine whether excessive application of deicing chemicals occurs and adjust as necessary, consistent with considerations of flight safety. Determine whether alternatives to glycol and whether containment measures for applied chemicals are feasible. Implement control measures for reducing deicing fluid such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): forced-air deicing systems, computer-controlled fixed-gantry systems, infrared technology, hot water, varying glycol content to air temperature, enclosed-basket deicing trucks, mechanical methods, solar radiation, hangar storage, aircraft covers, and thermal blankets for MD-80s and DC-9s. Consider using ice-detection systems and airport traffic flow strategies and departure slot allocation systems where feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations. The evaluations and determinations required by this Part should be carried out by the personnel most familiar with the particular aircraft and flight operations and related systems in question (versus an outside entity such as the airport authority).

8.S.4.1.7 ***Management of Runoff.*** (See also Part 2.1.2.6) Minimize the discharge of pollutants in stormwater from deicing chemicals in runoff. To minimize discharges of pollutants in stormwater from aircraft deicing, implement runoff management control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): installing a centralized deicing pad to recover deicing fluid following application; plug-and-pump (PnP); using vacuum/collection trucks (glycol recovery vehicles); storing contaminated stormwater/deicing fluids in tanks; recycling collected deicing fluid where feasible; releasing controlled amounts to a publicly owned treatment works; separation of contaminated snow; conveying contaminated runoff into a stormwater impoundment for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations); and directing runoff into vegetative swales or other infiltration measures. To minimize discharges of pollutants in stormwater from runway deicing, implement runoff management control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): mechanical systems (snow plows, brushes); conveying contaminated runoff into swales and/or a stormwater impoundment; and pollution prevention practices such as ice detection systems, and airfield prewetting.

When applying deicing fluids during non-precipitation events (also referred to as "clear ice deicing"), implement control measures to prevent unauthorized discharge of pollutants (dry-weather discharges of pollutants would need coverage under an NPDES wastewater permit), or to minimize the discharge of pollutants from deicing fluids in later stormwater discharges, implement control measures such as the following, where determined to be feasible and that accommodate considerations safety, space, operational constraints, and flight considerations (list not exclusive): recovering deicing fluids; preventing the fluids from entering storm sewers or other stormwater discharge conveyances (e.g., covering storm sewer inlets, using booms, installing absorptive interceptors in the drains); releasing controlled amounts to a publicly owned treatment works Used deicing fluid should be recycled whenever practicable.

8.S.4.2 ***Deicing Season.*** You must determine the seasonal timeframe (e.g., December-February, October - March) during which deicing activities typically occur at the facility. Implementation of control measures, including any BMPs, facility inspections and monitoring must be conducted with particular emphasis throughout the defined deicing season. If you meet the deicing chemical usage thresholds of 100,000 gallons glycol and/or 100 tons of urea, the deicing season you identified is the timeframe during which you must obtain the four required benchmark monitoring event results for deicing-related parameters, i.e., BOD, COD, ammonia and pH. See also Part 8.S.7.

8.S.5 Additional SWPPP Requirements.

8.S.5.1 ***Drainage Area Site Map***. (See also Part 5.2.2) Document in the SWPPP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: aircraft and runway deicing operations; fueling stations; aircraft, ground vehicle and equipment maintenance/cleaning areas; and storage areas for aircraft, ground vehicles and equipment awaiting maintenance.

8.S.5.2 ***Potential Pollutant Sources.*** (See also Part 5.2.3) In the inventory of exposed materials, describe in the SWPPP the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: aircraft, runway, ground vehicle and equipment maintenance and cleaning; and aircraft and runway deicing operations (including apron and centralized aircraft deicing stations, runways, taxiways and ramps). If deicing chemicals are used, a record of the types (including the Safety Data Sheets [SDS]) used and the monthly quantities, either as measured or, in the absence of metering, using best estimates, must be maintained. This includes all deicing chemicals, not just glycols and urea (e.g., potassium acetate), because large quantities of these other chemicals can still have an adverse impact on receiving waters. Deicing operators must provide the above information to the airport authority for inclusion with any comprehensive airport SWPPPs.

8.S.5.3 ***Vehicle and Equipment Wash Water Requirements.*** If wash water is handled in a manner that does not involve separate NPDES permitting or local pretreatment requirements (e.g., hauled offsite, retained onsite), describe the disposal method and include all pertinent information (e.g., frequency, volume, destination) in your SWPPP. Discharges of vehicle and equipment wash water are not authorized by this permit for this sector.

8.S.5.4 ***Documentation of Control Measures Used for Management of Runoff.*** Document in your SWPPP the control measures used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow.

8.S.6 Additional Inspection Requirements.

At a minimum conduct facility inspections at least monthly during the deicing season (e.g., October through April for most mid-latitude airports). If your facility needs to deice before or after this period, expand the monthly inspections to include all months during which deicing chemicals may be used. The Director may specifically require you to increase inspection frequencies.

8.S.7 Sector-Specific Benchmarks. (See also Part 6)

Table 8.S-1 identifies benchmarks that apply to Sector S. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.S-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
For airports where a single permittee, or a combination of permitted facilities use more than 100,000 gallons of pure glycol in glycol-based deicing fluids and/or 100 tons or more of urea on an average annual basis, monitor the first four parameters in ONLY those outfalls that collect runoff from areas where deicing activities occur (SIC 4512-4581).	Biochemical Oxygen Demand (BOD_5)[1]	30 mg/L
	Chemical Oxygen Demand (COD)[1]	120 mg/L
	Ammonia[1]	2.14 mg/L
	pH[1]	6.0 - 9.0 s.u.

[1] These are deicing-related parameters. Collect the four benchmark samples, and any required follow-up benchmark samples, during the timeframe defined in Part 8.S.4.2 when deicing activities are occurring.

8.S.8 Effluent Limitations Based on Effluent Limitations Guidelines and New Source Performance Standards. (See also Part 6.2.2.1)

8.S.8.1 ***Airfield Pavement Deicing.*** For both existing and new "primary airports" (as defined at 40 CFR 449.2) with 1,000 or more annual non-propeller aircraft departures that discharge stormwater from airfield pavement deicing activities, there shall be no discharge of airfield pavement deicers containing urea. To comply with this limitation, such airports must do one of the following: (1) certify annually on the annual report that you do not use pavement deicers containing urea, or (2) meet the effluent limitation in Table 8.S-2.

8.S.8.2 ***Aircraft Deicing.*** Airports that are both "primary airports" (as defined at 40 CFR 449.2) and new sources ("new airports") with 1,000 or more annual non-propeller aircraft departures must meet the applicable requirements for aircraft deicing at 40 CFR 449.11(a). Discharges of the collected aircraft deicing fluid directly to waters of the U.S. are not eligible for coverage under this permit.

8.S.8.3 ***Monitoring, Reporting and Recordkeeping.*** For new and existing airports subject to the effluent limitations in Part 8.S.8.1 or 8.S.8.2 of this permit, you must comply with the applicable monitoring, reporting and recordkeeping requirements outlined in 40 CFR 449.20.

Table 8.S-2		
Industrial Activity	**Parameter**	**Effluent Limitation**
Runoff containing urea from airfield pavement deicing at existing and new primary airports with 1,000 or more annual non-propeller aircraft departures	Ammonia as Nitrogen	14.7 mg/L, daily maximum

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart T – Sector T – Treatment Works.

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

8.T.1 Covered Stormwater Discharges.

The requirements in Subpart T apply to stormwater discharges associated with industrial activity from Treatment Works as identified by the Activity Code specified under Sector T in Table D-1 of Appendix D of the permit.

8.T.2 Industrial Activities Covered by Sector T.

The requirements listed under this part apply to all existing point source stormwater discharges associated with the following activities:

8.T.2.1 ***Treatment works treating domestic sewage, or any other sewage sludge or wastewater treatment device or system used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge; that are located within the confines of a facility with a design flow of 1.0 million gallons per day (MGD) or more; or are required to have an approved pretreatment program under 40 CFR Part 403.***

8.T.2.2 ***The following are not required to have permit coverage: farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located within the facility, or areas that are in compliance with Section 405 of the CWA.***

8.T.3 Limitations on Coverage.

8.T.3.1 ***Prohibition of Non-Stormwater Discharges.*** (See also Part 1.1.4) Sanitary and industrial wastewater and equipment and vehicle wash water are not authorized by this permit. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.T.4 Additional Technology-Based Effluent Limits.

8.T.4.1 ***Control Measures.*** (See also Part 2.1.2) To minimize the discharge of pollutants in stormwater, implement control measures such as the following, where determined to be feasible (list not exclusive): routing stormwater to the treatment works; or covering exposed materials (i.e., from the following areas: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste receiving station).

8.T.4.2 ***Employee Training.*** (See also Part 2.1.2.8) At a minimum, training must address the following areas when applicable to a facility: petroleum product management; process chemical management; spill prevention and controls; fueling procedures; general good housekeeping practices; and proper procedures for using fertilizer, herbicides, and pesticides.

8.T.5 Additional SWPPP Requirements.

8.T.5.1 ***Site Map.*** (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and storage areas for process chemicals, petroleum products, solvents, fertilizers, herbicides, and pesticides.

8.T.5.2 ***Potential Pollutant Sources.*** (See also Part 5.2.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them, as applicable: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and access roads and rail lines.

8.T.5.3 ***Wastewater and Wash Water Requirements.*** If wastewater and/or vehicle and equipment wash water is not covered by another NPDES permit but is handled in another manner (e.g., hauled offsite, retained onsite), the disposal method must be described and all pertinent information (e.g., frequency, volume, destination) must be included in your SWPPP. Discharges of vehicle and equipment wash water, including tank cleaning operations, are not authorized by this permit for this sector.

8.T.6 Additional Inspection Requirements. (See also Part 3.1)

Include the following areas in all inspections: access roads and rail lines; grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste receiving station.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart U – Sector U – Food and Kindred Products.

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

8.U.1 Covered Stormwater Discharges.

The requirements in Subpart U apply to stormwater discharges associated with industrial activity from Food and Kindred Products facilities as identified by the SIC Codes specified in Table D-1 of Appendix D of the permit.

8.U.2 Limitations on Coverage.

8.U.2.1 ***Prohibition of Non-Stormwater Discharges.*** (See also Part 1.1.4) The following discharges are not authorized by this permit: discharges containing boiler blowdown, cooling tower overflow and blowdown, ammonia refrigeration purging, and vehicle washing and clean-out operations. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.U.3 Additional Technology-Based Limitations.

8.U.3.1 ***Employee Training.*** (See also Part 2.1.2.8) Address pest control in your employee training program.

8.U.4 Additional SWPPP Requirements.

8.U.4.1 ***Drainage Area Site Map.*** (See also Part 5.2.2) Document in your SWPPP the locations of the following activities if they are exposed to precipitation or runoff: vents and stacks from cooking, drying, and similar operations; dry product vacuum transfer lines; animal holding pens; spoiled product; and broken product container storage areas.

8.U.4.2 ***Potential Pollutant Sources.*** (See also Part 5.2.3) Document in your SWPPP, in addition to food and kindred products processing-related industrial activities, application and storage of pest control chemicals (e.g., rodenticides, insecticides, fungicides) used on plant grounds.

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

Inspect on a quarterly basis, at a minimum, the following areas where the potential for exposure to stormwater exists: loading and unloading areas for all significant materials; storage areas, including associated containment areas; waste management units; vents and stacks emanating from industrial activities; spoiled product and broken product container holding areas; animal holding pens; staging areas; and air pollution control equipment.

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

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

Table 8.U-1.		
Subsector (You may be subject to requirements for more than one Sector / Subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Subsector U1. Grain Mill Products (SIC 2041-2048)	Total Suspended Solids (TSS)	100 mg/L
Subsector U2. Fats and Oils Products (SIC 2074-2079)	Biochemical Oxygen Demand (BOD_5)	30 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Suspended Solids (TSS)	100 mg/L

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart V – Sector V – Textile Mills, Apparel, and Other Fabric Products.

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

8.V.1 Covered Stormwater Discharges.

The requirements in Subpart V apply to stormwater discharges associated with industrial activity from Textile Mills, Apparel, and Other Fabric Product manufacturing as identified by the SIC Codes specified under Sector V in Table D-1 of Appendix D of the permit.

8.V.2 Limitations on Coverage.

8.V.2.1 ***Prohibition of Non-Stormwater Discharges.*** (See also Part 1.1.4) The following are not authorized by this permit: discharges of wastewater (e.g., wastewater resulting from wet processing or from any processes relating to the production process), reused or recycled water, and waters used in cooling towers. If you have these types of discharges from your facility, you must cover them under a separate NPDES permit. (EPA includes these prohibited non-stormwater discharges here solely as a helpful reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.1.3.)

8.V.3 Additional Technology-Based Limitations.

8.V.3.1 ***Good Housekeeping Measures.*** (See also Part 2.1.2.2)

8.V.3.1.1 ***Material Storage Areas.*** Plainly label and store all containerized materials (e.g., fuels, petroleum products, solvents, and dyes) in a protected area, away from drains. Minimize contamination of the stormwater runoff from such storage areas. Also consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances. For storing empty chemical drums or containers, ensure that the drums and containers are clean (consider triple-rinsing) and that there is no contact of residuals with precipitation or runoff. Collect and dispose of wash water from these cleanings properly.

8.V.3.1.2 ***Material Handling Areas.*** Minimize contamination of stormwater runoff from material handling operations and areas through implementation of control measures such as the following, where determined to be feasible: using spill and overflow protection; covering fueling areas; and covering or enclosing areas where the transfer of material may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines and pipes that may carry chemicals, dyes or wastewater.

8.V.3.1.3 ***Fueling Areas.*** Minimize contamination of stormwater runoff from fueling areas through implementation of control measures such as the following, where determined to be feasible: covering the fueling area; using spill and overflow protection; minimizing run-on of stormwater to the fueling areas; using dry cleanup methods; and treating and/or recycling stormwater runoff collected from the fueling area.

8.V.3.1.4 ***Above-Ground Storage Tank Area.*** Minimize contamination of stormwater runoff from above-ground storage tank areas, including the associated piping and valves, through implementation of control measures such as the following, where determined to be feasible (list not exclusive): regular cleanup of these areas; including measures for tanks, piping and valves explicitly in your SPCC program; minimizing runoff of stormwater from adjacent areas; restricting access to the area; inserting filters in adjacent catch basins; providing absorbent booms in unbermed fueling areas; using dry cleanup methods; and permanently sealing drains within critical areas that may discharge to a storm drain.

8.V.3.2 ***Employee Training.*** (See also Part 2.1.2.8) As part of your employee training program, address, at a minimum, the following activities (as applicable): use of reused and recycled waters, solvents management, proper disposal of dyes, proper disposal of petroleum products and spent lubricants, spill prevention and control, fueling procedures, and general good housekeeping practices.

8.V.4 Additional SWPPP Requirements.

8.V.4.1 ***Potential Pollutant Sources.*** (See also Part 5.2.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them: industry-specific significant materials and industrial activities (e.g., backwinding, beaming, bleaching, backing bonding, carbonizing, carding, cut and sew operations, desizing, drawing, dyeing locking, fulling, knitting, mercerizing, opening, packing, plying, scouring, slashing, spinning, synthetic-felt processing, textile waste processing, tufting, turning, weaving, web forming, winging, yarn spinning, and yarn texturing).

8.V.4.2 ***Description of Good Housekeeping Measures for Material Storage Areas.*** Document in the SWPPP your containment area or enclosure for materials stored outdoors in connection with Part 8.V.3.1.1 above.

8.V.5 Additional Inspection Requirements.

Inspect, at least monthly, the following activities and areas (at a minimum): transfer and transmission lines, spill prevention, good housekeeping practices, management of process waste products, and all structural and nonstructural management practices.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart W – Sector W – Furniture and Fixtures.

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

8.W.1 Covered Stormwater Discharges.

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

8.W.2 Additional SWPPP Requirements.

8.W.2.1 ***Drainage Area Site Map.*** (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: material storage (including tanks or other vessels used for liquid or waste storage) areas; outdoor material processing areas; areas where wastes are treated, stored, or disposed of; access roads; and rail spurs.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart X – Sector X – Printing and Publishing.

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

8.X.1 Covered Stormwater Discharges.

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

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

8.X.2.1 ***Good Housekeeping Measures.*** (See also Part 2.1.2.2)

8.X.2.1.1 ***Material Storage Areas.*** Plainly label and store all containerized materials (e.g., skids, pallets, solvents, bulk inks, hazardous waste, empty drums, portable and mobile containers of plant debris, wood crates, steel racks, and fuel oil) in a protected area, away from drains. Minimize contamination of the stormwater runoff from such storage areas. Also consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances.

8.X.2.1.2 ***Material Handling Area.*** Minimize contamination of stormwater runoff from material handling operations and areas (e.g., blanket wash, mixing solvents, loading and unloading materials) through implementation of control measures such as the following, where determined to be feasible (list not exclusive): using spill and overflow protection; covering fueling areas; and covering or enclosing areas where the transfer of materials may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines, and pipes that may carry chemicals or wastewater.

8.X.2.1.3 ***Fueling Areas.*** Minimize contamination of stormwater runoff from fueling areas through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering the fueling area; using spill and overflow protection; minimizing runoff of stormwater to the fueling areas; using dry cleanup methods; and treating and/or recycling stormwater runoff collected from the fueling area.

8.X.2.1.4 ***Above Ground Storage Tank Area.*** Minimize contamination of the stormwater runoff from above-ground storage tank areas, including the associated piping and valves, through implementation of control measures such as the following, where determined to be feasible (list not exclusive): regularly cleaning these areas; explicitly addressing tanks; piping and valves in the SPCC program; minimizing stormwater runoff from adjacent areas; restricting access to the area; inserting filters in adjacent catch basins; providing absorbent booms in unbermed fueling areas; using dry cleanup methods; and permanently sealing drains within critical areas that may discharge to a storm drain.

8.X.2.2 ***Employee Training.*** (See also Part 2.1.2.8) As part of your employee training program, address, at a minimum, the following activities (as applicable): spent solvent management, spill prevention and control, used oil management, fueling procedures, and general good housekeeping practices.

8.X.3 Additional SWPPP Requirements.

8.X.3.1 ***Description of Good Housekeeping Measures for Material Storage Areas.*** In connection with Part 8.X.2.1.1, describe in the SWPPP the containment area or enclosure for materials stored outdoors.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart Y – Sector Y – Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries.

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

8.Y.1 Covered Stormwater Discharges.

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

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

8.Y.2.1 ***Controls for Rubber Manufacturers***. (See also Part 2.1.2) Minimize the discharge of zinc in your stormwater discharges. Parts 8.Y.2.1.1 to 8.Y.2.1.5 give possible sources of zinc to be reviewed and list control measures to be implemented where determined to be feasible. Implement additional control measures such as the following, where determined to be feasible (list not exclusive): using chemicals purchased in pre-weighed, sealed polyethylene bags; storing in-use materials in sealable containers, ensuring an airspace between the container and the cover to minimize "puffing" losses when the container is opened; and using automatic dispensing and weighing equipment.

8.Y.2.1.1 ***Zinc Bags.*** Ensure proper handling and storage of zinc bags at your facility through implementation of control measures such as the following, where determined to be feasible (list not exclusive): employee training on the handling and storage of zinc bags; indoor storage of zinc bags; cleanup of zinc spills without washing the zinc into the storm drain; and the use of 2,500-pound sacks of zinc rather than 50- to 100-pound sacks.

8.Y.2.1.2 ***Dumpsters.*** Minimize discharges of zinc from dumpsters through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering the dumpster; moving the dumpster indoors; and providing a lining for the dumpster.

8.Y.2.1.3 ***Dust Collectors and Baghouses***. Minimize contributions of zinc to stormwater from dust collectors and baghouses. Replace or repair, as appropriate, improperly operating dust collectors and baghouses.

8.Y.2.1.4 ***Grinding Operations.*** Minimize contamination of stormwater as a result of dust generation from rubber grinding operations. Where determined to be feasible, install a dust collection system.

8.Y.2.1.5 ***Zinc Stearate Coating Operations.*** Minimize the potential for stormwater contamination from drips and spills of zinc stearate slurry that may be released to the storm drain. Where determined to be feasible, use alternative compounds to zinc stearate.

8.Y.2.2 ***Controls for Plastic Products Manufacturers.*** Minimize the discharge of plastic resin pellets in your stormwater discharges through implementation of control measures such as the following, where determined to be feasible (list not exclusive): minimizing spills; cleaning up of spills promptly and thoroughly; sweeping thoroughly; pellet capturing; employee education; and disposal precautions.

8.Y.3 Additional SWPPP Requirements.

8.Y.3.1 ***Potential Pollutant Sources for Rubber Manufacturers.*** (See also Part 5.2.3) Document in your SWPPP the use of zinc at your facility and the possible pathways through which zinc may be discharged in stormwater runoff.

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

Table 8.Y-1 identifies benchmarks that apply to Sector Y. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.Y-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Subsector Y1. Rubber Products Manufacturing (SIC 3011, 3021, 3052, 3053, 3061, 3069)	Total Zinc (freshwater)[2] Total Zinc (saltwater)[1]	Hardness Dependent 0.09 mg/L

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

Freshwater Hardness Range	**Zinc** (mg/L)
0-24.99 mg/L	0.04
25-49.99 mg/L	0.05
50-74.99 mg/L	0.08
75-99.99 mg/L	0.11
100-124.99 mg/L	0.13
125-149.99 mg/L	0.16
150-174.99 mg/L	0.18
175-199.99 mg/L	0.20
200-224.99 mg/L	0.23
225-249.99 mg/L	0.25
250+ mg/L	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart Z – Sector Z – Leather Tanning and Finishing.

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

8.Z.1 Covered Stormwater Discharges.

The requirements in Subpart Z apply to stormwater discharges associated with industrial activity from Leather Tanning and Finishing facilities as identified by the SIC Code specified under Sector Z in Table D-1 of Appendix D of the permit.

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

8.Z.2.3 ***Good Housekeeping Measures.*** (See also Part 2.1.2.2)

8.Z.2.3.1 ***Storage Areas for Raw, Semiprocessed, or Finished Tannery By-products.*** Minimize contamination of stormwater runoff from pallets and bales of raw, semiprocessed, or finished tannery by-products (e.g., splits, trimmings, shavings). Store or protect indoors with polyethylene wrapping, tarpaulins, roofed storage, etc. where practicable. Place materials on an impermeable surface and enclose or put berms (or equivalent measures) around the area to prevent stormwater run-on and runoff where practicable.

8.Z.2.3.2 ***Material Storage Areas.*** Label storage containers of all materials (e.g., specific chemicals, hazardous materials, spent solvents, waste materials) and minimize contact of such materials with stormwater.

8.Z.2.3.3 ***Buffing and Shaving Areas.*** Minimize contamination of stormwater runoff with leather dust from buffing and shaving areas through implementation of control measures such as the following, where determined to be feasible (list not exclusive): implementing dust collection enclosures; implementing preventive inspection and maintenance programs; or other appropriate preventive measures.

8.Z.2.3.4 ***Receiving, Unloading, and Storage Areas.*** Minimize contamination of stormwater runoff from receiving, unloading, and storage areas. If these areas are exposed, implement control measures such as the following, where determined to be feasible (list not exclusive): covering all hides and chemical supplies; diverting drainage to the process sewer; or grade berming or curbing the area to prevent stormwater runoff.

8.Z.2.3.5 ***Outdoor Storage of Contaminated Equipment.*** Minimize contact of stormwater with contaminated equipment through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering equipment, diverting drainage to the process sewer, and cleaning thoroughly prior to storage.

8.Z.2.3.6 ***Waste Management.*** Minimize contamination of stormwater runoff from waste storage areas through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering dumpsters; moving waste management activities indoors; covering waste piles with temporary covering material such as tarpaulins or polyethylene; and

minimizing stormwater runoff by enclosing the area or building berms around the area.

8.Z.3 Additional SWPPP Requirements.

8.Z.3.1 ***Drainage Area Site Map.*** (See also Part 5.2.2) Identify in your SWPPP where any of the following may be exposed to precipitation or surface runoff: processing and storage areas of the beamhouse, tanyard, and re-tan wet finishing and dry finishing operations.

8.Z.3.2 ***Potential Pollutant Sources.*** (See also Part 5.2.3) Document in your SWPPP the following sources and activities that have potential pollutants associated with them (as appropriate): temporary or permanent storage of fresh and brine-cured hides; extraneous hide substances and hair; leather dust, scraps, trimmings, and shavings.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart AA – Sector AA – Fabricated Metal Products

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

8.AA.1 Covered Stormwater Discharges.

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

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

8.AA.2.1 ***Good Housekeeping Measures.*** (See also Part 2.1.2.2)

8.AA.2.1.1 ***Raw Steel Handling Storage.*** Minimize the generation of and/or recover and properly manage scrap metals, fines, and iron dust. Include measures for containing materials within storage handling areas.

8.AA.2.1.2 ***Paints and Painting Equipment.*** Minimize exposure of paint and painting equipment to stormwater.

8.AA.2.2 ***Spill Prevention and Response Procedures.*** (See also Part 2.1.2.4) Ensure that the necessary equipment to implement a cleanup is available to personnel. The following areas should be addressed:

8.AA.2.2.1 ***Metal Fabricating Areas.*** Maintain clean, dry, orderly conditions in these areas. Use dry clean-up techniques where practicable.

8.AA.2.2.2 ***Storage Areas for Raw Metal.*** Keep these areas free of conditions that could cause, or impede appropriate and timely response to, spills or leakage of materials through implementation of control measures such as the following, where determined to be feasible (list not exclusive): maintaining storage areas so that there is easy access in the event of a spill, and labeling stored materials to aid in identifying spill contents.

8.AA.2.2.3 ***Metal Working Fluid Storage Areas.*** Minimize the potential for stormwater contamination from storage areas for metal working fluids.

8.AA.2.2.4 ***Cleaners and Rinse Water***. Control and clean up spills of solvents and other liquid cleaners, control sand buildup and disbursement from sand-blasting operations, and prevent exposure of recyclable wastes. Substitute environmentally benign cleaners when possible.

8.AA.2.2.5 ***Lubricating Oil and Hydraulic Fluid Operations.*** Minimize the potential for stormwater contamination from lubricating oil and hydraulic fluid operations. Use monitoring equipment or other devices to detect and control leaks and overflows where feasible. Install perimeter controls such as dikes, curbs, grass filter strips, or equivalent measures where feasible.

8.AA.2.2.6 ***Chemical Storage Areas.*** Minimize stormwater contamination and accidental spillage in chemical storage areas. Include a program to inspect containers and identify proper disposal methods.

8.AA.2.3 ***Spills and Leaks.*** (See also Part 5.2.3.3) In your spill prevention and response procedures, required by Part 2.1.2.4, pay attention to the following materials (at a minimum): chromium, toluene, pickle liquor, sulfuric acid, zinc and other water priority chemicals, and hazardous chemicals and wastes.

8.AA.3 Additional SWPPP Requirements.

8.AA.3.1 ***Drainage Area Site Map.*** (See also Part 5.2.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: raw metal storage areas; finished metal storage areas; scrap disposal collection sites; equipment storage areas; retention and detention basins; temporary and permanent diversion dikes or berms; right-of-way or perimeter diversion devices; sediment traps and barriers; processing areas, including outside painting areas; wood preparation; recycling; and raw material storage.

8.AA.3.2 ***Potential Pollutant Sources.*** (See also Part 5.2.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them: loading and unloading operations for paints, chemicals, and raw materials; outdoor storage activities for raw materials, paints, empty containers, corn cobs, chemicals, and scrap metals; outdoor manufacturing or processing activities such as grinding, cutting, degreasing, buffing, and brazing; onsite waste disposal practices for spent solvents, sludge, pickling baths, shavings, ingot pieces, and refuse and waste piles.

8.AA.4 Additional Inspection Requirements.

8.AA.4.1 ***Inspections.*** (See also Part 3.1) At a minimum, include the following areas in all inspections: raw metal storage areas, finished product storage areas, material and chemical storage areas, spent solvents and chemical storage areas, recycling areas, loading and unloading areas, equipment storage areas, paint areas, drainage from roof and vehicle fueling and maintenance areas. Potential pollutants include chromium, zinc, lubricating oil, solvents, aluminum, oil and grease, methyl ethyl ketone, steel, and related materials.

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

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

Table 8.AA-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector AA1. Fabricated Metal Products, except Coating (SIC 3411-3499; 3911-3915)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Total Zinc (freshwater)[2] Total Zinc (saltwater)[1]	Hardness Dependent 0.09 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
Subsector AA2. Fabricated Metal Coating and Engraving (SIC 3479)	Total Zinc (freshwater)[2] Total Zinc (saltwater)[1]	Hardness Dependent 0.09 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L

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

Freshwater Hardness Range	**Zinc** (mg/L)
0-24.99 mg/L	0.04
25-49.99 mg/L	0.05
50-74.99 mg/L	0.08
75-99.99 mg/L	0.11
100-124.99 mg/L	0.13
125-149.99 mg/L	0.16
150-174.99 mg/L	0.18
175-199.99 mg/L	0.20
200-224.99 mg/L	0.23
225-249.99 mg/L	0.25
250+ mg/L	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart AB – Sector AB – Transportation Equipment, Industrial or Commercial Machinery Facilities.

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

8.AB.1 Covered Stormwater Discharges.

The requirements in Subpart AB apply to stormwater discharges associated with industrial activity from Transportation Equipment, Industrial or Commercial Machinery facilities as identified by the SIC Codes specified under Sector AB in Table D-1 of Appendix D of the permit.

8.AB.2 Additional SWPPP Requirements.

8.AB.2.1 ***Drainage Area Site Map.*** (See also Part 5.2.2) Identify in your SWPPP where any of the following may be exposed to precipitation or surface runoff: vents and stacks from metal processing and similar operations.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart AC– Sector AC – Electronic and Electrical Equipment and Components, Photographic and Optical Goods.

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

8.AC.1 Covered Stormwater Discharges.

The requirements in Subpart AC apply to stormwater discharges associated with industrial activity from facilities that manufacture Electronic and Electrical Equipment and Components, Photographic and Optical goods as identified by the SIC Codes specified in Table D-1 of Appendix D of the permit.

8.AC.2 Additional Requirements.

No additional sector-specific requirements apply.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart AD – Sector AD – Stormwater Discharges Designated by the Director as Requiring Permits.

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

8.AD.1 Covered Stormwater Discharges.

Sector AD is used to provide permit coverage for facilities designated by the Director as needing a stormwater permit, and any discharges of stormwater associated with industrial activity that do not meet the description of an industrial activity covered by Sectors A-AC.

8.AD.1.1 ***Eligibility for Permit Coverage.*** Because this sector is primarily intended for use by discharges designated by the Director as needing a stormwater permit (which is an atypical circumstance), and your facility may or may not normally be discharging stormwater associated with industrial activity, you must obtain the Director's written permission to use this permit prior to submitting an NOI. If you are authorized to use this permit, you will still be required to ensure that your discharges meet the basic eligibility provisions of this permit at Part 1.1.

8.AD.2 Sector-Specific Benchmarks and Effluent Limits. (See also Part 6)

The Director will establish any additional monitoring and reporting requirements for your facility prior to authorizing you to be covered by this permit. Additional monitoring requirements would be based on the nature of activities at your facility and your stormwater discharges.

9. Permit Conditions Applicable to Specific States, Indian Country Lands, or Territories

9.1 EPA Region 1: Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont.

9.1.1 CTR05I000: Indian Country within the State of Connecticut

No additional requirements.

9.1.2 MAR050000: Commonwealth of Massachusetts, except Indian country

Permittees in the Commonwealth of Massachusetts must meet the following conditions:

9.1.2.1 ***Additional conditions required by the Commonwealth of Massachusetts.*** Discharges covered by the general permit must comply with the provisions of 314 CMR 3.00; 314 CMR 4.00; 314 CMR 9.00; and 314 CMR 10.00 and any other related policies adopted under the authority of the Massachusetts Clean Waters Act, MGL c.21, ss. 26-53 and Wetlands Protection Act, MGL s. 40.

New facilities or redevelopment of existing facilities subject to this permit must comply with applicable stormwater performance standards prescribed by state regulation or policy. A permit under 314 CMR 3.04 is not required for existing facilities which meet state stormwater performance standards. An application for a permit under 314 CMR 3.00 is required only when required under 314 CMR 3.04(2)(b) {designation of a discharge on a case-by-case basis} or is otherwise identified in 314 CMR 3.00 or any Massachusetts Department of Environmental Protection policy as a discharge requiring a permit application. Department regulations and policies may be obtained through the State House Bookstore or online at www.mass.gov/dep.

9.1.2.2 ***SWPPP Availability.*** The Department may request a copy of the Stormwater Pollution Prevention Plan (SWPPP) and the permittee is required to submit the SWPPP to the Department within 14 days of such a request.

9.1.2.3 ***Authorization to Inspect.*** The Department may conduct an inspection of any facility covered by this permit to ensure compliance with state law requirements, including state water quality standards. The Department may enforce its certification conditions.

9.1.2.4 ***Submission of Monitoring Data.*** The results of any monitoring [four samples required in the first year of the permit] required by this permit must be sent to the appropriate Regional Office of the Department [attention: Bureau of Waste Prevention] where the monitoring identifies violations of any effluent limits or benchmarks for any parameter for which monitoring is required under this permit. In addition, any follow-up monitoring and a description of the corrective actions required and undertaken to meet the effluent limits or benchmarks must be sent to the appropriate Department Regional Office.

9.1.2.5 ***Sector-Specific Requirements.*** The Massachusetts Coastal Zone Management Program submitted the following conditions to be added to the permit in order to meet the Programs' Consistency Review and which are included in the requirements of this Water Quality Certification:

- In Sector Q [Water Transportation] add copper to the required monitoring parameters with a benchmark monitoring concentration as included in the MSGP 2015 Fact Sheet Part X.B.1, and Appendix J.
- In Sector R [Ship and Boat Building and Repair Yards] add aluminum, iron, lead and copper to the list of required monitoring parameters with a benchmark monitoring concentration as included in the MSGP 2015 Fact Sheet Part X.B.1 and Appendix J.
- Modify the monitoring requirements [Part 6.2.1.2] for Sectors Q and R such that all four of the quarterly monitoring samples must meet the benchmarks rather than the average of the four before no further monitoring is required.

9.1.3 MAR05I000: Indian country within the Commonwealth of Massachusetts

No additional requirements.

9.1.4 NHR050000: State of New Hampshire

Permittees in New Hampshire must also meet the following conditions:

9.1.4.1 ***Consider Opportunities for on-site infiltration of stormwater.*** In Part 2.1.1 Control Measure Selection and Design Considerations, you are required to consider opportunities for infiltrating runoff onsite. This is encouraged, but it should only be done if consistent with the statutes and rules of the Department of Environmental Services written to protect groundwater, including Env-Wq 1507.04(e). Infiltration best management practices are not recommended at industrial sites except in areas where industrial activities do not occur, such as at office buildings and their associated parking facilities, or in drainage areas at the facility where a certification of no exposure will always be possible [see 40 CFR 122.26(g)].

9.1.4.2 ***Maintenance of Infiltration Best Management Practices.*** In Part 2.1.2.3 you are required to maintain control measures. In Parts 5.2.2, 5.2.5.1, and 5.5 you are required to document the location of control measures, perform inspections and maintenance, and keep records. Accordingly, the SWPPP must contain the following:

- A description of and the location of each on-site infiltration BMP installed;
- The maintenance procedures that will be followed to ensure proper operation, including the removal of sediment from pretreatment devices;
- The inspection produces that will be followed at least annually. These should include the produces for ensuring that the stormwater being infiltrated is not exposed to industrial pollutants and the procedures for ensuring proper drainage to prevent mosquito breeding;
- The employee name (or title of the position) who is a member of the stormwater pollution prevention team (see Part 5.2.1) who will be responsible for the maintenance required in this section, the inspection required in this section, and any necessary corrective action required in Part 4; and
- Records for all maintenance performed, inspections conducted, and corrective actions taken.

9.1.4.3 ***Discontinue, Permit or Register On-site Infiltration BMP if Necessary.*** If at any time a certification of no exposure can no longer be made for any of the stormwater to be infiltrated, then the infiltration BMP must cease for that portion of the runoff or

the discharge must be permitted or registered as appropriate. The following may be required:

- Infiltration BMP that meets the definition of a Class V well or that infiltrates stormwater via a subsurface structure (i.e. concrete chambers, dry well, leach field, etc.) will need an underground injection control (UIC) registration from NHDES; and
- Permitting as a groundwater discharge as required in Env-Wq 402, if the stormwater will or may contain regulated contaminants.

The SWPPP must be modified immediately if new infiltration BMPs are proposed or if existing infiltration BMPs will cease.

9.1.4.4 Required NHDES notification.

- Notify the NHDES Groundwater Discharge Permit Coordinator immediately if you believe that any infiltration BMP may need to be permitted or registered (See Part 9.1.4.3) during the permit term.
- Notify the NHDES Wastewater Engineering Bureau immediately of any plans to discharge any new non-stormwater discharges during the permit term. This does not include the allowable non-stormwater discharges listed in Part 1.1.3.

9.1.4.5 Information That May Be Requested by NHDES. To ensure compliance with RSA 485-C, RSA 485-A, RSA 485-A:13, I(a), Env-Wq 400 and Env-Wq 401 the following information may be requested by NHDES. This information must be kept on site unless you receive a written request from NHDES that it be sent to the address shown in Part 9.1.4.6.

- The site map required in Part 5.2.2, showing the type and location of all on-site infiltration BMP utilized at the facility or the reason(s) why none were installed.
- A list of all non-stormwater discharges that occur at the facility, including their source locations and the control measures being used (See Sections 1.1.3 and 5.2.3.4).
- A copy of the Annual Reports required in Part 7.5

9.1.4.6 Where to Submit Information. Information submitted to NHDES must be sent to the following address:

NH Department of Environmental Services
Wastewater Engineering Bureau, Permits & Compliance Section
P.O. Box 95
Concord, NH 03302-0095

9.1.4.7 Modification of Clean Water Act Section 401 Water Quality Certification. When NHDES determines that additional water quality certification requirements are necessary to protect water quality, it may require individual dischargers to meet additional conditions to obtain or continue coverage under the MSGP. Any such conditions shall be supplied to the permittee in writing. Any required pollutant loading analyses and any designs for structural best management practices necessary to protect water quality must be prepared by a civil or sanitary engineer registered in New Hampshire.

9.1.5 RIR05I000: Indian country within the State of Rhode Island

No additional requirements.

9.1.6 VTR05F000: Areas in the State of Vermont subject to industrial activity by a Federal Operator

No additional requirements.

9.2 EPA Region 2: New Jersey, New York, Puerto Rico, Virgin Islands.

9.2.1 PRR050000: Commonwealth of Puerto Rico

No additional requirements.

9.3 EPA Region 3: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia.

9.3.1 DCR050000: District of Columbia

Permittees in the District of Columbia must also meet the following conditions:

9.3.1.1 ***Compliance with District of Columbia Laws and Regulations.*** Discharges covered by the MSGP must comply with the District of Columbia Water Pollution Control Act of 1984, as amended, D.C. Official Code § 8-103.01 *et seq*.; and its implementing regulations in Title 21, Chapters 11 and 19 of the District of Columbia Municipal Regulations. Nothing in this permit will be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to District of Columbia laws and regulations.

9.3.1.2 ***Submission of SWPPP.*** The Stormwater Pollution Prevention Plan (SWPPP) shall be submitted to the District Department of the Environment (DDOE) at the same time the Notice of Intent (NOI) is submitted to EPA.

9.3.1.3 ***Submission of No Exposure Certification and NOT.*** Copies of the No Exposure Certification and Notice of Termination (NOT) shall be submitted to DDOE at the same time they are submitted to EPA.

9.3.1.4 ***Authorization to Inspect.*** The permittee shall allow DDOE to inspect any facility, equipment, practices, or operations regulated or required under this permit and to access records maintained under the conditions of this permit.

9.3.1.5 ***Submission of Reports.*** Signed copies of all reports required under this permit including the reporting requirements of Appendix B.12 shall be submitted to DDOE at the same time they are submitted to EPA.

9.3.1.6 ***Where to Submit Information.*** All required or requested documents shall be sent to the:

Attention: Associate Director
Water Quality Division, Natural Resources Administration
District Department of the Environment
1200 First Street, NE, 5th Floor
Washington, D.C. 20002

9.3.2 DER05F000: Areas in the State of Delaware subject to industrial activity by a Federal Operator

No additional requirements.

9.4 EPA Region 4: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

Coverage not available under this permit.

9.5 EPA Region 5: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin.

9.5.1 MIR05I000: Indian country within the State of Michigan

No additional requirements.

9.5.2 MNR05I000: Indian country within the State of Minnesota

9.5.2.1 Fond du Lac Reservation

The following conditions apply only to discharges on the Fond du Lac Reservation.

9.5.2.1.1 Submission of SWPPP. A copy of the Stormwater Pollution Plan (SWPPP) must be submitted to the Office of Water Protection at least thirty (30) days in advance of sending the Notice of Intent to EPA. MSGP applicants are encouraged to work with the Fond du Lac Office of Water Protection in the identification of all proposed receiving waters.

9.5.2.1.2 Submission of NOI and NOT. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be sent to the Fond du Lac Office of Water Protection at the same time they are submitted to EPA.

9.5.2.1.3 Benchmark Monitoring for Turbidity. The Benchmark Monitoring Concentration (BMC) for Turbidity shall NOT exceed 10% of natural background as determined by Office of Water Protection staff as measured in NTU.

9.5.2.1.4 Effluent Limitations. The Effluent Limitations for ALL sectors shall NOT exceed more than two times (2x) Fond du Lac's ambient concentrations (based upon 15 years of monitoring data) for the following:

a) Ammonia	Ambient = <0.3 mg/l
b) Arsenic	Ambient = <3.0 µg/l
c) Chromium	Ambient = <0.8 µg/l
d) Total Phosphorus	Ambient = <0.09 mg/l
e) Total Suspended Solids	Ambient = <16.0 mg/l
f) Zinc	Ambient = <24.0 mg/l

9.5.2.1.5 Outstanding Reservation Resource Waters (ORRW). This Certification does not pertain to any new discharge to Outstanding Reservation Resource Waters (ORRW) as described in § 105 b.3. of the Fond du Lac Water Quality Standards (Ordinance #12/98). Although additional waters may be designated in the future, currently Perch Lake, Rice Portage Lake, Miller Lake, Deadfish Lake, and Jaskari Lake are designated as ORRWs. New dischargers wishing to discharge to an ORRW must obtain an individual permit for storm water discharges.

9.5.2.1.6 ***Water Quality Criteria.*** All industrial activities shall be carried out in such a manner as will prevent violations of water quality criteria as stated in the Water Quality Standards of the Fond du Lac Reservation, Ordinance 12/98, as amended. This includes, but is not limited to, the prevention of any discharge that causes a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of water of the Fond du Lac Reservation for any of the uses designated in the Water Quality Standards of the Fond du Lac Reservation. These uses include wildlife, aquatic life, warm and cold water fisheries, subsistence farming (netting), primary contact recreation, cultural, wild rice areas, aesthetic waters, agriculture, navigation, and commercial.

9.5.2.1.7 ***Impacts to cultural sites.*** This certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for such listing.

9.5.2.1.8 ***Where to Submit Information.*** All required or requested documents shall be sent to the:

Fond du Lac Reservation
Office of Water Protection
1720 Big Lake Road
Cloquet, Minnesota 55720

9.5.2.2 ***Grand Portage Band of the Minnesota Chippewa Tribe***

The following conditions apply to industrial storm water discharges into Waters of the Grand Portage Reservation:

9.5.2.2.1 ***Definitions.*** The definitions set forth in the Grand Portage Water Resources Ordinance, as amended, ("Water Resources Ordinance") govern these certification conditions.

9.5.2.2.2 ***Water Quality Standards.*** All industrial storm water discharges authorized by this permit must comply with the Grand Portage Water Quality Standards, Applicable Federal Standards, and the Water Resources Ordinance.

9.5.2.2.3 ***Additional Monitoring.*** Grand Portage reserves the right to require monitoring of storm water discharges as determined on a case-by-case basis. If the Grand Portage Environmental Resources Board ("Board") determines that a monitoring plan is necessary, the monitoring plan must be prepared and incorporated into the Storm Water Pollution Prevention Plan ("SWPPP") before the SWPPP is submitted to the U.S. EPA. Accordingly, the Board must be contacted, at the address listed below, at the onset of writing the SWPPP.

9.5.2.2.4 ***Submission of SWPPP, NOI, and NOT.*** In addition, a copy of the SWPPP, Notice of Intent ("NOI"), and Notice of Termination (NOT) (collectively the "application") must be submitted to the Board at least 30 days before submitting the NOI to the U.S. EPA. Applications should be sent to the address below.

9.5.2.2.5 ***Additional information.*** Upon receipt of the application, the Board shall order the Grand Portage Environmental Department (Department) to conduct a technical review of the application materials. If necessary, Department staff will send a

request for additional information to the applicant within 30 days of receipt of the application.

9.5.2.2.6 ***Preliminary coverage determination.*** After considering the application and such other information and data as the Department staff deems relevant, the Department Director will evaluate whether there is a reasonable probability that the proposed activity will violate the Grand Portage Water Quality Standards or any Applicable Federal Standards and recommend one of the following preliminary determinations:

- Unconditionally grant coverage under the MSGP;
- Grant coverage under the MSGP subject to certain conditions; or
- Deny coverage under the MSGP.

9.5.2.2.7 ***Final coverage determination.*** Within 30 days of the Department Director's recommendation, the Board will provide public notice of the application for coverage under the MSGP and the Department Director's recommendations. Upon request, the Department will schedule a hearing as provided in 40 CFR Part 25. If, after considering the evidence provided at the hearing and the entire record, the Board determines by a preponderance of the evidence that the proposed activity will violate the Grand Portage Water Quality Standards or any Applicable Federal Standards, the Board shall deny eligibility for coverage under the MSGP, unless there is a reasonable certainty that compliance can be achieved by the applicant's adherence to reasonable conditions. If the Board finds insufficient evidence to show that the proposed activity will violate the Grand Portage Water Quality Standards or any Applicable Federal Standards, it shall approve coverage under the MSGP.

9.5.2.2.8 ***Appeals.*** Appeals related to water quality certification decisions or permits will be heard by the Grand Portage Tribal Court.

9.5.2.2.9 ***Prohibition of Discharge.*** The applicant is prohibited from discharging into the Waters of the Reservation pursuant to the MSGP unless the Board has granted coverage under the MSGP, or until the applicant has adhered to conditions required by the Board's conditional grant of coverage.

9.5.2.2.10 ***Compliance.*** The Board retains full authority provided by the Water Resources Ordinance to ensure compliance with and enforce the provisions of the Water Resource Ordinance, the Grand Portage Water Quality Standards, Applicable Federal Standards, and these certification conditions.

9.5.2.2.11 ***Where to Submit Information.*** All required or requested information mentioned above shall be sent to:

Grand Portage Environmental Resources Board
P.O. Box 428
Grand Portage, MN 55605

9.5.3 WIR05I000: Indian country within the State of Wisconsin, except those on Bad River Band of Lake Superior Tribe of Chippewa Indians lands and on Sokaogon Chippewa Community lands

No additional requirements.

Note: Facilities in the Bad River Band of Lake Superior Tribe of Chippewa Indians land Sokaogon Chippewa Community lands and are not eligible for stormwater discharge coverage under this permit. Contact the EPA Region 5 office for an individual permit application.

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

9.6.1 LAR05I000: Indian country within the State of Louisiana

No additional requirements.

9.6.2 NMR050000: The State of New Mexico, except Indian country

Permittees in New Mexico must also meet the following conditions:

9.6.2.1 Benchmark Monitoring Concentrations. The benchmark values for the indicated pollutants in the table below must be modified to reflect New Mexico water quality standards for the facilities in New Mexico, based on benchmark values from the *Standards for Interstate and Intrastate Surface Waters* (as approved on June. 5, 2013), 20.6.4.900 NMAC).

Pollutant	MSGP Benchmark	Lowest New Mexico Water Quality Standard	Hardness dependent value (if appropriate)[1]
Ammonia*	2.14 mg/L	No Standard	
Biochemical Oxygen Demand (BOD 5 day)	30 mg/L	No Standard	
Chemical Oxygen Demand (COD)	120 mg/L	No Standard	
Total Suspended Solids	100 mg/L	Segment specific	
Turbidity	50 NTU	Segment specific	
Nitrate + Nitrite Nitrogen	0.68 mg/L	132 mg/L	
Total Phosphorus	2.0 mg/L	Segment specific	
pH	6.0 – 9.0 SU	Segment specific	
Aluminum (T) (pH 6.5 – 9)*	0.75 mg/L	--	3.4 mg/L (acute) 1.37 mg/L (chronic)
Antimony (T)	0.64 mg/L	0.006 mg/L	
Arsenic (T) (Freshwater)*	0.15 mg/L	0.01 mg/L	
Beryllium (T)	0.13 mg/L	0.004 mg/L	
Cadmium (T) (Freshwater)*	0.0021 mg/L	--	0.00165 mg/L (acute) 0.00045 mg/L (chronic)
Copper (T) (Freshwater)*	0.014 mg/L	--	0.013 mg/L (acute) 0.009 mg/L (chronic)
Cyanide (Freshwater)*	0.022 mg/L	0.0052 (WH)	
Iron (T)	1.0mg/L	No standard	
Lead (Freshwater)*	0.082 mg/L		0.065 mg/L (acute) 0.003 mg/L (chronic)
Magnesium (T)	0.064 mg/L	No standard	
Mercury (Freshwater)*	0.0014 mg/L	0.00077 mg/L	
Nickel (T) (Freshwater)*	0.47 mg/L		0.47 mg/L (acute) 0.052 mg/L (chronic)
Selenium (T) (Freshwater)* [2]	0.005 mg/L	0.005 mg/L (WH)	

Pollutant	MSGP Benchmark	Lowest New Mexico Water Quality Standard	Hardness dependent value (if appropriate)[1]
Silver (Freshwater)*	0.0038 mg/L		0.0032 mg/L (acute)
Zinc (T) (Freshwater)*	0.12 mg/L		0.16 mg/L (acute) 0.121 mg/L (chronic)

* EPA's Criteria are based on receiving water hardness of 100 mg/L. The facility will need to test their receiving water these hardness values and use Table 1 in Appendix J of this permit to determine their applicable limit.

[1] New Mexico Environment Department's criteria are listed at a hardness value of 100 mg/L as $CaCO_3$ for comparison to EPA's benchmark standard.

[2] SO_4 dependent

EPA defines saline/salt waters as having salinity concentrations greater than or equal to 10 parts per thousand 95 percent or more of the time (as discussed on Page 55 of the permit's proposed fact sheet). Saltwater values may apply to certain areas of New Mexico, such as the Pecos Basin below Santa Rosa and the Rio Grande below Elephant Butte. These values may also apply to waters that are part of the Colorado River Basin.

New Mexico water quality hardness-based values in the table below replace values listed in Appendix J and are the applicable benchmark values for New Mexico in this permit.

All Units mg/L	*	(mg/L, dissolved)						
		Aluminum	Cadmium	Copper	Lead	Nickel	Silver	Zinc
25	Acute	0.512	0.00051	0.004	0.014	0.140	0.0003	0.045
	Chronic	0.205	0.00017	0.003	0.001	0.016		0.034
30	Acute	0.658	0.00059	0.004	0.017	0.170	0.0004	0.054
	Chronic	0.263	0.00019	0.003	0.001	0.019		0.041
40	Acute	0.975	0.00076	0.006	0.024	0.220	0.0007	0.070
	Chronic	0.391	0.00023	0.004	0.001	0.024		0.053
50	Acute	1.324	0.00091	0.007	0.03	0.260	0.0010	0.085
	Chronic	0.530	0.00028	0.005	0.001	0.029		0.065
60	Acute	1.699	0.00107	0.008	0.037	0.300	0.0013	0.101
	Chronic	0.681	0.00031	0.006	0.001	0.034		0.076
70	Acute	2.099	0.00122	0.010	0.044	0.350	0.0017	0.116
	Chronic	0.841	0.00035	0.007	0.002	0.038		0.088
80	Acute	2.520	0.00137	0.011	0.051	0.390	0.0022	0.131
	Chronic	1.010	0.00039	0.007	0.002	0.043		0.099
90	Acute	2.961	0.00151	0.012	0.058	0.430	0.0027	0.145
	Chronic	1.186	0.00042	0.008	0.002	0.048		0.110
100	Acute	3.421	0.00165	0.013	0.065	0.470	0.0032	0.160
	Chronic	1.370	0.00045	0.009	0.003	0.052		0.121
200	Acute	8.838	0.00298	0.026	0.14	0.840	0.011	0.301
	Chronic	3.541	0.00075	0.016	0.005	0.09		0.228
220	Acute	10.071						
	Chronic	4.035						
300	Acute	10.071	0.00421	0.038	0.210	1.190	0.021	0.435
	Chronic	4.035	0.00100	0.023	0.008	0.130		0.329
400+	Acute	10.071	0.00538	0.050	0.280	1.510	0.035	0.564
	Chronic	4.035	122	0.029	0.011	0.170		428

*Acute vs. Chronic applicability: Acute numeric standards shall be attained at the "point of discharge" (end-of-pipe) for any discharge to surface water with a *designated aquatic life use*. TSS values will be important for any criteria differences between total and dissolved measurements.

9.6.2.2 ***Notice of Termination.*** Requirements in Part 8 of the this permit, in sectors G (Metal Mining), H (Coal Mines and Coal Mining-Related Facilities), I (Oil and Gas Extraction), and J (Non-Metallic Mineral Mining and Dressing), at the Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities" section were made more stringent as to inspection frequencies and timing of inspections and corrective actions required as a result of a rain event. These certification requirements will apply to these sectors mentioned in this condition, as follows:

Permittees can only use the option to "plant the area so that within 3 years the 70% cover requirement is met" as stated in Part 8.G.4.2.11, Part 8.H.4.2.11, and Part 8.J.4.2.11 of this Permit, in New Mexico as a method for final vegetative stabilization for purposes of filing a Notice of Termination (NOT) under the following conditions:

If this option is selected, you must notify New Mexico Environment Department (NMED) at the address listed below at the time the NOT is submitted to EPA. The information to be submitted includes:

- A copy of the NOT;
- Contact information, including individual name or title, address, and phone number for the party responsible for implementing the final stabilization measures; and
- The date that the permanent vegetative stabilization practice was implemented and the projected timeframe that the 70% native vegetative cover requirements are expected to be met. (Note that if more than three years is required to establish 70 percent of the natural vegetative cover, this technique cannot be used or cited for fulfillment of the final stabilization requirement- you remain responsible for establishment of final stabilization.)

NMED also requires that operators periodically (minimum once/year) inspect and properly maintain the area until the criteria for final stabilization, as specified in Part 2.2 of the Construction General Permit (CGP), have been met. Operators must prepare an inspection report documenting the findings of these inspections and signed in accordance with Appendix B.11. This inspection record must be retained along with the SWPPP for three years after the NOT is submitted for the site and additionally submitted to NMED at the address listed below. The inspections must at a minimum include the following:

- Observations of all areas of the site disturbed by construction activity;
- Best Management Practices (BMPs)/post-construction storm water controls must be observed to ensure they are effective;
- An assessment of the status of vegetative re-establishment; and
- Corrective actions required to ensure vegetative success within three years, and control of pollutants in storm water runoff from the site, including implementation dates.

9.6.2.3 ***Where to Submit Information.*** All required or requested information mentioned above shall be sent to:

Program Manager
Point Source Regulation Section
NMED Surface Water Quality Bureau
PO Box 5469
Santa Fe, NM 87502

9.6.3 NMR05I000: Indian country within the State of New Mexico, except Ute Mountain Reservation lands that are covered under Colorado permit COR05I000 and Navajo Reservation lands that are covered under Arizona permit AZR05I000

9.6.3.1 Pueblo of Sandia

The following conditions apply only to discharges on the Pueblo of Sandia:

9.6.3.1.1 Submission of NOI. Copies of all Notices of Intent (NOI) submitted to the EPA must also be sent concurrently to the Pueblo of Sandia Environment Department. Discharges are not authorized by this permit unless an accurate and complete NOI has been submitted to the Pueblo of Sandia.

9.6.3.1.2 SWPPP Availability. The Stormwater Pollution Prevention Plan (SWPPP) must be available to the Pueblo of Sandia Environment Department either electronically or hard copy upon request for review. Failure to provide a SWPPP to the Pueblo of Sandia Environment Department may result in denial of the water quality certification.

9.6.3.1.3 SWPPP Amendments. Any Stormwater Pollution Prevention Plan (SWPPP) modification, update or amendment shall be submitted to the Pueblo of Sandia Environment Department either electronically or hard copy within seven (7) calendar days of its finalization. Failure to provide a SWPPP to the Pueblo of Sandia Environment Department may result in denial of the water quality certification.

9.6.3.1.4 Submission of Monitoring Data. All monitoring and analytical data (e.g., Discharge Monitoring Reports (DMRs), follow-up monitoring reports, Exceedance Reports for Numeric Effluent Limits, etc.) submitted to the EPA must also be sent concurrently to the Pueblo of Sandia Environment Department.

9.6.3.1.5 Submission of Annual Reports. Copies of all Annual Reports submitted to the EPA must also be sent concurrently to the Pueblo of Sandia Environment Department. Discharges are not authorized by this permit unless an accurate and complete Annual Report has been submitted to the Pueblo of Sandia.

9.6.3.1.6 Submission of Quarterly Visual Assessments. Copies of all "Quarterly Visual Assessments" (Part 3.2) must be submitted either electronically or hard copy to the Pueblo of Sandia Environment Department within seven (7) calendar days.

9.6.3.1.7 Submission of Corrective Action Documentation. Copies of all "Corrective Action Documentation" (Part 4.4) must be submitted electronically or hard copy to the Pueblo of Sandia Environment Department within seven (7) calendar days.

9.6.3.1.8 Additional Reporting. Any notice of release of oils or hazardous substances shall be submitted to the Pueblo of Sandia Environment Department within twenty-four (24) hours of becoming aware of the situation or circumstance, followed by the reporting requirements of 40 CFR 110, 40 CFR 300, and 40 CFR 302 relating to spills or other releases of oil or hazardous substances. The permittee must also telephone

the Pueblo of Sandia Environment Department at (505) 867-4533 of any non-emergency spills or unauthorized discharges that may affect drinking water supplies, ceremonial and recreational surface waters, elicit fish kills, harm wildlife or endangered and threatened species, or endanger human health or the environment within eight (8) hours of becoming aware of the situation or circumstance, followed by the written report when it is sent to the EPA.

9.6.3.1.9 ***Authorization to Inspect.*** If requested by the Pueblo of Sandia Environment Department, the permittee must allow the Pueblo of Sandia to perform its own routine or compliance inspection to ensure the permittee is in compliance and any discharge is not contributing to a violation of the permit and the Pueblo of Sandia's Water Quality Standards.

9.6.3.1.10 ***Water Quality Standards.*** If requested by the Pueblo of Sandia Environment Department, the permittee shall provide additional information necessary for a "case by case" eligibility determination to assure compliance with the Pueblo of Sandia's Water Quality Standards. *****Note: Upon receipt of a determination by the Pueblo of Sandia that discharges from a permittee under this general permit have reasonable potential to be causing or contributing to a violation of the Pueblo of Sandia's Water Quality Standards, EPA Region 6 would be notified. EPA Region 6 would then notify the permittee to either improve their Stormwater Pollution Prevention Plan (SWPPP) to achieve compliance with the Pueblo of Sandia's Water Quality Standards or have the permittee apply for and obtain an individual NPDES permit for these discharges per CFR 122.28(B)(3).

9.6.3.1.11 ***Alternative Permit.*** Any industry discharging to waters of the United States that has been designated by the EPA or the Pueblo of Sandia as impaired or degraded water shall not be covered under this general permit but will be required to obtain an individual permit.

9.6.3.1.12 ***Submission of NOT.*** Before submitting a Notice of Termination (NOT), permittees must clearly demonstrate to the Pueblo of Sandia Environment Department through a site visit or documentation that requirements for site stabilization have been met and any degradation has been mitigated. A short letter stating the stabilization requirements have been met will be sent to the permittee. Upon receipt the permittee may apply for an NOT to the EPA. Copies of the NOT submitted to the EPA must also be sent concurrently to the Pueblo of Sandia Environment Department.

9.6.3.1.13 ***Where to Submit Information.*** All required or requested information mentioned above shall be sent to:

- Regular U.S. Delivery Mail:

  Pueblo of Sandia Environment Department
  Attention: Scott Bulgrin, Water Quality Manager
  481 Sandia Loop
  Bernalillo, New Mexico 87004

- Or Electronically to: sbulgrin@sandiapueblo.nsn.us

9.6.3.2 ***Pueblo of Santa Clara.***

The following condition applies only to discharges on the Santa Clara Indian Pueblo:

9.6.3.2.1 ***Submission of NOI and NOT.*** The Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Santa Clara Pueblo Governor's Office at the same time it is provided to EPA.

9.6.3.2.2 ***SWPPP Availability.*** A copy of the Stormwater Pollution Prevention Plan must be made available to the Pueblo of Santa Clara staff upon request.

9.6.3.2.3 ***Where to Submit Information.*** All required or requested documents shall be sent to the:

Santa Clara Pueblo
Governor's Office
P.O. Box 580
Espanola, NM 87532

9.6.4 OKR05I000: Indian country within the State of Oklahoma

9.6.4.1 ***Certification Requirements.*** In accordance with Oklahoma's Water Quality Standards (OAC 785:45-5-25) certification is denied for any new or proposed discharges located within the watershed of any part of the Oklahoma Scenic Rivers system, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork Creek, Little Lee Creek, Big Lee Creek or to any water designated as an Outstanding Resource Water (ORW). Existing discharges of stormwater in these watersheds may be permitted under this permit only from point sources existing as of June 25, 1992, whether or not such stormwater discharges were permitted as point sources prior to June 25, 1992. For any such existing discharge, increased load of any pollutant above levels of June 25, 1992 is prohibited.

Note: Operators of facilities within the watershed of any part of the Oklahoma Scenic Rivers system must contact the EPA Region 6 office for an individual permit application.

9.6.5 OKR05F000: Facilities in the State of Oklahoma not under the jurisdiction of the Oklahoma Department of Environmental Quality or the Oklahoma Department of Agriculture, Food and Forestry, except those on Indian Country. EPA jurisdiction facilities include SIC Codes 1311, 1381, 1382, 1389, and 5171

9.6.5.1 ***Certification Requirements.*** In accordance with Oklahoma's Water Quality Standards (OAC 785:45-5-25), Certification is denied for any new or proposed discharges located within the watershed or any part of the Oklahoma Scenic Rivers system, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork River, Little Lee Creek, Big Lee Creek or to any water designated as an Outstanding Resource Water (ORW). Existing discharges of stormwater in these watersheds may be permitted under this permit only from point sources existing as of June 25, 1992, whether or not such stormwater discharges were permitted as point sources prior to June 25, 1992. For any such existing discharge, increased load of any pollutant above levels of June 25, 1992 is prohibited.

Note: Operators of facilities within the watershed of any part of the Oklahoma Scenic Rivers system must contact the EPA Region 6 office for an individual permit application.

9.6.6 TXR05F000: Facilities in the State of Texas not under the jurisdiction of the Texas Commission on Environmental Quality, except those on Indian Country. EPA-

jurisdiction facilities include SIC Codes 1311, 1321, 1381, 1382, and 1389 (other than oil field service company "home base" facilities)

No additional requirements.

9.6.7 TXR05I000: Indian country within the State of Texas

No additional requirements.

9.7 EPA Region 7: Iowa, Kansas, Missouri, Nebraska (except see Region 8 for Pine Ridge Reservation Lands).

9.7.1 IAR05I000: Indian country within the State of Iowa

No additional requirements.

9.7.2 KSR05I000: Indian country within the State of Kansas

No additional requirements.

9.7.3 NER05I000: Indian country within the State of Nebraska, except Pine Ridge Reservation lands (see Region 8)

No additional requirements.

9.8 EPA Region 8: Colorado, Montana, North Dakota, South Dakota, Wyoming, Utah (except see Region 9 for Goshute Reservation and Navajo Reservation Lands), the Ute Mountain Reservation in NM, and the Pine Ridge Reservation in NE.

9.8.1 COR05F000: Areas in the State of Colorado, except those located on Indian country, subject to industrial activity by a Federal Operator

No additional requirements.

9.8.2 COR05I000: Indian country within the State of Colorado, as well as the portion of the Ute Mountain Reservation located in New Mexico

No additional requirements

9.8.3 MTR05I000: Indian country within the State of Montana

No additional requirements.

9.8.4 NDR05I000: Indian country within the State of North Dakota, as well as that portion of the Standing Rock Reservation located in South Dakota (except for the portion of the lands within the former boundaries of the Lake Traverse Reservation which is covered under South Dakota permit SDR05I000 listed below)

No additional requirements.

9.8.5 SDR05I000: Indian country within the State of South Dakota, as well as the portion of the Pine Ridge Reservation located in Nebraska and the portion of the lands within the former boundaries of the Lake Traverse Reservation located in North Dakota (except for the Standing Rock Reservation which is covered under North Dakota permit NDR05I000 listed above)

No additional requirements.

9.8.6 UTR05I000: Indian country within the State of Utah, except Goshute and Navajo Reservation lands (see Region 9)

No additional requirements.

9.8.7 WYR05I000: Indian country within the State of Wyoming

No additional requirements.

9.9 EPA Region 9: California, Hawaii, Nevada, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Confederated Tribes of the Goshute Reservation in Utah and Nevada, Indian Country within the State of Arizona including the Navajo Reservation in Utah and New Mexico and Arizona, the Duck Valley Reservation in Idaho, and the Fort McDermitt Reservation in Oregon.

9.9.1 ASR050000: American Samoa

No additional requirements.

9.9.2 AZR05I000: Indian country within the State of Arizona, including Navajo Reservation lands in New Mexico and Utah

9.9.2.1 Hualapai Tribe

The following condition applies only to discharges on the Hualapai Tribe:

9.9.2.1.1 Submission of NOI and SWPPP. All Notices of Intent (NOI) for proposed stormwater discharges under this permit and all Stormwater Pollution Plans (SWPPPs) for stormwater discharges on Hualapai Tribal lands shall be submitted to the Water Resource Program through the Tribal Chairwoman for review and approval.

9.9.2.1.2 Where to Submit Information. All required or requested documents shall be sent to:

Water Resource Program through the Tribal Chairwoman
P.O. Box 179
Peach Springs, AZ 86434

9.9.2.2 Navajo Nation

The following conditions apply only to discharges on the Navajo Nation:

9.9.2.2.1 Submission of NOI and SWPPP. Courtesy copies of Notices of Intent (NOI) and Stormwater Water Pollution Plans (SWPPPs) shall be made available to Navajo EPA for facilities located on Navajo lands.

9.9.2.2.2 Submission of Monitoring Data. Copies of all monitoring reports must be provided to Navajo EPA for facilities located on Navajo lands.

9.9.2.2.3 Authorization to Inspect. Facilities located on Navajo lands and covered under this permit will be subject to compliance inspections by Navajo EPA staff with active Federal Inspector Credentials under authority of the Clean Water Act.

9.9.2.3 White Mountain Apache Tribe

The following condition applies only to discharges on the White Mountain Apache Tribe:

9.9.2.3.1 Submission of SWPPP. The Storm Water Pollution Prevention Plan (SWPPP) must be available to the White Mountain Apache Water Resources Programs either electronically or hard copy upon request for review before a Notice of Intent (NOI) for comments from the White Mountain Apache Water Resources Programs. Failure

to provide a SWPPP to the White Mountain Apache Water Resources Programs may result in denial of the water quality certification.

9.9.2.3.2 **Submission of NOI.** Copies of all Notices of Intent (NOI)) submitted to the EPA must also be sent concurrently to the White Mountain Apache Water Resources Programs. Discharges are not authorized by this permit unless an accurate and complete NOI has been submitted to the White Mountain Apache Tribe.

9.9.2.3.3 ***SWPPP Modification.*** Any Storm Water Pollution Prevention Plan (SWPPP) modification, update or amendment shall be submitted to the White Mountain Apache Water Resources Programs either electronically or hard copy within seven (7) calendar days of its finalization. Failure to provide a SWPPP to the White Mountain Apache Water Resources Programs may result in denial of the water quality certification.

9.9.2.3.4 ***Submission of Monitoring Data.*** All monitoring and analytical data (e.g. Discharge Monitoring Reports (DMRs), follow-up monitoring reports, Exceedance Reports for Numerical Effluent Limits, etc.) submitted to EPA must also be sent concurrently to the White Mountain Apache Water Resources Programs.

9.9.2.3.5 ***Submission of Annual Reports.*** Copies of all Annual Reports submitted to the EPA must also be sent concurrently to the White Mountain Apache Water Resources Programs. Discharges are not authorized by this permit unless an accurate and complete Annual Report has been submitted to the White Mountain Apache Tribe.

9.9.2.3.6 ***Submission of Quarterly Visual Assessments.*** Copies of all "Quarterly Visual Assessments" (Part 3.2) must be submitted either electronically or hard copy to the White Mountain Apache Water Resources Programs within seven (7) calendar days.

9.9.2.3.7 ***Submission of Corrective Action Documentation.*** Copies of all "Corrective Action Documentation" (Part 4.4) must be submitted either electronically or hard copy to the White Mountain Apache Water Resources Programs within seven (7) calendar days.

9.9.2.3.8 ***Additional Reporting.*** Any notice of release of oils or hazardous substances shall be submitted to the White Mountain Apache Water Resources Programs within twenty-four (24) hours of becoming aware of the situation or circumstance, followed by the reporting requirements of 40 CFR 110, 40 CFR 300, and 40 CFR 302 relating to spills or other releases of oils or hazardous substances. The permittee must also telephone the White Mountain Apache Water Resources Programs at (928) 338-4267 of any non-emergency spills or unauthorized discharge that may affect drinking water, supplies, ceremonial and recreational surface waters, elicit fish kills, harm wildlife or endangered and threaten species, or endanger human health or the environment within eight (8) hours of becoming aware of the situation or circumstance, followed by a written report when it is sent to the EPA.

9.9.2.3.9 ***Authorization to Inspect.*** If requested by the White Mountain Apache Water Resources Programs, the permittee must allow the White Mountain Apache Tribe to perform its own routine or compliance inspection to ensure the permittee is in compliance and any discharge is not contributing to a violation of the permit and the White Mountain Apache Tribe's Water Quality Standards.

9.9.2.3.10 ***Water Quality Standards.*** If requested by the White Mountain Apache Water Resources Programs, the permittee shall provide additional information necessary for a "case by case" eligibility determination to assure compliance with the White Mountain Apache Tribe's Water Quality Standards. *Note: Upon receipt of a determination by the White Mountain Apache Tribe that discharges from a permittee under this general permit have reasonable potential to be causing or contributing to a violation of the White Mountain Apache Tribe's Water Quality Standards, EPA Region 9 would be notified. EPA Region 9 would then notify the permittee to either improve their Stormwater Pollution Prevention Plan (SWPPP) to achieve compliance with the White Mountain Apache Tribe's Water Quality Standards or have the permittee apply for and obtain an individual NPDES permit for those discharges per CFR 122.28 (B)(3).

9.9.2.3.11 ***Alternative Permit.*** Any industry discharging into waters of the United States that has been designated by the EPA or the White Mountain Apache Tribe as impaired or degraded water shall not be covered under this general permit but will be required to obtain an individual permit.

9.9.2.3.12 ***Submission of NOT.*** Before submitting a Notice of Termination (NOT), permittees must clearly demonstrate to the White Mountain Apache Water Resources Programs through a site visit or documentation that requirements for site stabilization have been met and any degradation has been mitigated. A short letter stating the stabilization requirements have been met will be sent to the permittee. Upon receipt the permittee may apply for an NOT to the EPA. Copies of the NOT submitted to the EPA must also be sent concurrently to the White Mountain Apache Water Resources Programs.

9.9.2.3.13 ***Where to Submit Information.*** All required or requested information mentioned above shall be sent to:

- Regular U.S. Delivery Mail:

  White Mountain Apache Tribe Water Resources Programs
  Attention: Tara Chief, Water Quality Officer
  P.O. Box 816
  Fort Apache, AZ 85926

- Or Electronically to: tarachief@wmat.us

9.9.3 CAR05I000: Indian country within the State of California

9.9.3.1 Hoopa Valley Tribe

The following conditions apply only to discharges on the Hoopa Valley Tribe:

9.9.3.1.1 ***Submission of NOI.*** All Notices of Intent (NOI) submitted for stormwater discharges under the general permits in Hoopa Valley Indian Reservation (HVIR) shall be submitted to the Tribal Environmental Protection Agency (TEPA).

9.9.3.1.2 ***Submission of SWPPP.*** All Stormwater Pollution Plans (SWPPPs) for stormwater discharge in HVIR shall be submitted to TEPA for review and approval.

9.9.3.2 Twenty-Nine Palms Band of Mission Indians

The following conditions apply only to discharges on the Twenty-Nine Palms Band of Mission Indians:

9.9.3.2.1 ***Submission of Monitoring Data.*** The Twenty-Nine Palms Tribal Water Quality Standards require that routine monitoring be performed quarterly at each sampling site. Additional special monitoring requirements include: a) Sampling following a significant storm event; and b) Sampling in the event of an accidental spill. Monitoring results for discharges into Twenty-Nine Palms Tribal waters must be reported to Twenty-Nine Palms Tribal EPA.

9.9.3.2.2 ***Certification.*** Certification does not relieve the applicant of the responsibility to comply with applicable local, state, or federal regulations or statutes, including regulations affecting any discharge into waters of the U.S. Copies of this certification shall be kept on the job site and readily available for reference by tribal members and tribal representatives. If the project is operated in a manner not consistent with the MSGPs, the permittee will be in violation of this certification.

9.9.3.2.3 ***Pollution Prevention.*** All practicable measures and precautions must be taken to prevent pollution affecting public health, fish, shellfish, wildlife, and recreation due to turbidity, pH, temperature, nutrients, suspended solids, floating debris, visible oil and grease, or other pollutants entering tribal waters, including wetlands.

9.9.3.2.4 ***Spills or Leaks.*** All equipment operated within any tribal waters must be cleaned away from the tribal waters and maintained to prevent fuel and oil leaks. These methods include, but are not limited to: offsite/ upland fuel and oil storage and refueling areas, on-site spill containment equipment, a spill contingency plan, and spill prevention/contaminant training for on-site personnel. Should a spill of petroleum products or chemicals occur, immediately call the National Response Center at (800) 424-8802 and the Tribal Environmental Protection Agency at (760) 398-6767.

9.9.3.2.5 ***Ground Disturbance.*** Ground disturbance shall not exceed the minimum necessary.

9.9.3.2.6 ***Minimizing Adverse Impacts.*** All projects using the MSGP must avoid discharges to the maximum extent practicable, and utilize the best available and practicable means of minimizing the adverse impact of discharges that cannot be avoided.

9.9.4 GUR050000: Island of Guam

No additional requirements.

9.9.5 JAR050000: Johnston Atoll

No additional requirements.

9.9.6 MWR050000: Midway Island and Wake Island

No additional requirements.

9.9.7 MPR050000: Commonwealth of the Northern Mariana Islands

No additional requirements.

9.9.8 NVR05I000: Indian country within the State of Nevada, including the Duck Valley Reservation in Idaho, the Fort McDermitt Reservation in Oregon and the Confederated Tribes of the Goshute Reservation in Utah

No additional requirements.

9.10 Region 10: Alaska, Idaho (except see Region 9 for Duck Valley Reservation lands), Oregon (except see Region 9 for Fort McDermitt Reservation), Washington.

9.10.1 AKR05F000: Areas in the Denali National Park and Preserve subject to industrial activity by a Federal Operator

No additional requirements.

9.10.2 AKR05I000: Indian country lands within the State of Alaska

No additional requirements.

9.10.3 IDR050000: The State of Idaho, except Indian country lands

Permit coverage not available until Clean Water Act (CWA) 401 certification is received.

9.10.4 IDR05I000: Indian country lands within the State of Idaho, except Duck Valley Reservation lands, which are covered under Nevada permit NVR05I000

9.10.4.1 Shoshone-Bannock Tribes

The following conditions apply only to discharges to waters of the Shoshone-Bannock Tribes:

9.10.4.1.1 Submission of NOI, Monitoring Data, and Reports. Copies of the Notices of Intent (NOI), Monitoring data collected pursuant to section 6.2 of this permit, and Exceedance Reports must be sent to the Shoshone-Bannock Tribes Water Resources Department (SBT-WRD). The monitoring data and exceedance reports must be sent to the SBT-WRD within thirty (30) days of receipt of analytical results.

9.10.4.1.2 Submission of SWPPP. If requested by the SBT-WRD, the permittee must submit a copy of the SWPPP to SBT-WRD within fourteen (14) days of the request.

9.10.4.1.3 Where to Submit Information. All required or requested documents shall be sent to:

Shoshone-Bannock Tribes Water Resources Department
P.O. Box 306 Pima Drive
Fort Hall, ID 83203
Phone: (208) 239-4582
Fax: (208) 239-4592

9.10.5 ORR05I000: Indian country lands within the State of Oregon, except Fort McDermitt Reservation lands, which are covered under Nevada permit NVR05I000

9.10.5.1 Confederated Tribes of the Umatilla Indian Reservation

Projects located within the exterior boundaries of the Umatilla Indian Reservation must meet the following conditions:

9.10.5.1.1 Water Quality Standards. The operator shall be responsible for achieving compliance with Confederated Tribes of the Umatilla Indian Reservation's (CTUIR) Water Quality Standards.

9.10.5.1.2 Submission of NOI. The operator shall submit a copy of the Notice of Intent (NOI to be covered by this permit to the CTUIR Water Resources Program at the address below, at the same time it is submitted to EPA.

9.10.5.1.3 Submission of SWPPP. The operator shall be responsible for submitting all Stormwater Pollution Prevention Plans (SWPPPs) required under this general permit to the CTUIR Water Resources Program for review and determination that the SWPPP is sufficient to meet Tribal Water Quality Standards, prior to the beginning of any discharge activities taking place.

9.10.5.1.4 Additional Reporting. The operator shall be responsible for reporting an exceedance to Tribal Water Quality Standards to the CTUIR Water Resources Program at the same time it is reported to EPA.

9.10.5.1.5 Additional Requirements for Historic Properties Preservation. The applicant shall submit copies of each NOI to the CTUIR Tribal Historic Preservation Office (THPO). The NOI shall define the undertaking's area of potential effect (APE). This information will be used to determine whether or not the undertaking has the potential to affect historic properties. To be in compliance with the NHPA and be eligible for coverage under this permit, the operator must meet the following criteria:

- The THPO will be provided 30 days to comment on the APE as defined in the permit application.
- If the project is an undertaking, a cultural resource investigation must occur. All fieldwork must be conducted by qualified personnel (as outlined by the Secretary of Interior's Standards and Guidelines) and documented using Oregon Reporting Standards. The resulting report must be submitted to the THPO and the THPO must concur with the findings and recommendations before any ground disturbing work can occur. The THPO requires 30 days to review all reports.
- The operator must obtain THPO concurrence in writing. If historic properties are present, this written concurrence will outline measures to be taken to prevent or mitigate effects to historic properties.

9.10.5.1.6 Where to Submit Information. The NOI, SWPPP, and reports must be sent to:

Confederated Tribes of the Umatilla Indian Reservation
Water Resources Program
46411 Timine Way
Pendleton, OR 97801
(541) 966-2420

All required Historic Properties Preservation information must be sent to:

Confederated Tribes of the Umatilla Indian Reservation
Cultural Resources Protection Program
Tribal Historic Preservation Office
46411 Timine Way
Pendleton, OR 97801
(541) 429-7234

9.10.5.2 Confederated Tribes of the Warm Springs Indian Reservation

The following conditions apply for projects within the exterior boundaries of the Warm Springs Indian Reservation:

9.10.5.2.1 ***Water Quality Standards.*** The operator shall be responsible for achieving compliance with the Confederated Tribes of the Warm Springs Indian Reservation's Water Quality Standards. (Tribal Ordinance 80).

9.10.5.2.2 ***Submission of NOI.*** The operator shall submit a copy of the Notice of Intent (NOI) to be covered by this permit to the Tribes' Environmental Office at the address below, at the same time it is submitted to EPA.

9.10.5.2.3 ***Submission of SWPPP.*** The operator shall be responsible for filing all Stormwater Pollution Prevention Plans (SWPPP) required under this permit to the Tribes' Environmental Office for review and determination that the SWPPP is sufficient to meet Tribal Water Quality Standards, prior to the beginning of any discharge activities taking place.

9.10.5.2.4 ***Additional Reporting.*** The operator shall be responsible for reporting an exceedance to Tribal Water Quality Standards to the Tribes' Environmental Office at the same time it is reported to EPA.

9.10.5.2.5 ***Tribal Cultural Resources.*** The applicant shall submit copies of each NOI to the Tribal Historic Preservation Office (THPO). The NOI shall define the undertaking's area of potential effect (APE). This information will be used to determine whether or not the undertaking has the potential to affect historic properties. To be in compliance with the NHPA and be eligible for coverage under this permit, the operator must meet the following criteria:

- The THPO will be provided 30 days to comment on the APE as defined in the permit application.
- If the project is an undertaking, a cultural resource investigation must occur. All fieldwork must be conducted by qualified personnel (as outlined by the Secretary of Interior's Standards and Guidelines). The resulting report must be submitted to the THPO and the THPO must concur with the findings and recommendations before any ground disturbing work can occur. The THPO requires 30 days to review all reports.
- The operator must obtain THPO concurrence in writing. If historic properties are present, this written concurrence will outline measures to be taken to prevent or resolve effects to historic properties.

9.10.5.2.6 ***Where to Submit Information.*** All required or requested documents shall be sent to:

Confederated Tribes of Warm Springs
Branch of Natural Resources
Tribal Environmental Office
P.O. Box C
Warm Springs
Oregon, 97761
541-553-2002

9.10.6 WAR05I000: Indian country lands within the State of Washington

9.10.6.1 Confederated Tribes of the Colville Reservation

No Additional Requirements.

9.10.6.2 Lummi Nation

The following conditions apply only to discharges within the Lummi Nation:

9.10.6.2.1 ***Certification.*** This certification does not exempt and is provisional upon compliance with other applicable statutes and codes administered by federal and Lummi tribal agencies. Pursuant to Lummi Code of Laws (LCL) 17.05.020(a), the operator must also obtain a land use permit from the Lummi Planning Department as provided in Title 15 of the Lummi Code of Laws and regulations adopted thereunder.

9.10.6.2.2 ***Submission of SWPPP.*** Pursuant to LCL 17.05.020, each operator shall develop and submit a Storm Water Pollution Prevention Plan to the Lummi Water Resources Division for review and approval by the Water Resources Manager prior to beginning any discharge activities.

9.10.6.2.3 ***Water Quality Standards.*** Pursuant to LCL Title 17, each operator shall be responsible for achieving compliance with the Water Quality Standards for Surface Waters of the Lummi Indian Reservation (Lummi Administrative Regulations [LAR] 17 LAR 07.010 through 17 LAR 07.210).

9.10.6.2.4 ***Submission of NOI, Monitoring Data, Reports and NOT.*** Each operator shall submit a copy of the Notice of Intent (NOI), analytical monitoring results, any Exceedance Reports, Annual Reports, and Notice of Termination (NOT) to the Lummi Water Resources Division at the same time it is submitted to the Environmental Protection Agency (EPA).

9.10.6.2.5 ***Where to Submit Information.*** All required or requested documents shall be sent to:

Lummi Natural Resources Department
ATTN: Water Resources Manager
2665 Kwina Road
Bellingham, WA 98226

Please see the Lummi Nation website (www.lummi-nsn.gov) to review a copy of Title 17 of the Lummi Code of Laws and the references upon which the conditions identified above are based.

9.10.6.3 Puyallup Tribe of Indians

The following conditions apply only to discharges to waters of the Puyallup Tribe of Indians:

9.10.6.3.1 ***Submission of NOI, NOT and No Exposure.*** Copies of the Notice of Intent (NOI), Notice of Termination (NOT), and No Exposure Certification shall be submitted to the Tribe's Natural Resources Department.

9.10.6.3.2 ***Submission of SWPPP.*** A copy of the Stormwater Pollution Plan (SWPPP) shall be submitted to the Tribe's Natural Resources Department at least thirty (30) days in advance of submitting the NOI to EPA.

9.10.6.3.3 ***Compliance with Tribe's Water Quality Standards.*** Each permittee shall be responsible for achieving compliance with the Tribe's Water Quality Standards, including anti-degradation provisions.

9.10.6.3.4 ***Submission and Approval of Sampling Plan.*** A sampling plan shall be submitted to the Tribe's Natural Resources Department and approved by the Tribe prior to initiation of monitoring required under Part 6 of this permit.

9.10.6.3.5 ***Submission of Monitoring Data and Reports.*** The results of any monitoring required by this permit and reports must be sent to the Tribe's Natural Resources Department, including a description of the corrective actions required and undertaken to meet effluent limits or benchmarks (as applicable).

9.10.6.3.6 ***Authorization to Inspect.*** The Natural Resources Department may conduct an inspection of any facility covered by this permit to ensure compliance with tribal water quality standards. The Department may enforce its certification conditions.

9.10.6.3.7 ***Tribal Endangered Species Act Consultation.*** Consultation with the Tribe that addresses the effects of your facility's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities on federally-listed threatened or endangered species and designated critical habitat. Information required as part of the consultation shall include:

- Basis of the determination that your stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities will not adversely affect federally-listed as endangered or threatened ("listed") under the Endangered Species Act (ESA) and will not result in the adverse modification or destruction of designated critical habitat including appropriate measures to be undertaken to avoid or eliminate the likelihood of adverse effects (under Criterion C in Section 1.1.4.5); and
- Notice of Intent form complete with extent of action area, list of federally-listed threatened or endangered species or designated critical habitat likely to occur in action area, list of potential pollutants (if you are a new discharger) or list of pollutants for which you have ever exceeded an applicable benchmark of effluent limitation guideline, or for which your discharge has ever been found to cause or contribute to an exceedance of an applicable water quality standard (if you are an existing discharger).

9.10.6.3.8 ***Discharges to CERCLA Sites.*** This permit does not authorize direct stormwater discharges to certain sites undergoing remedial cleanup actions pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) unless first approved by the appropriate EPA Regional office. In the case of the Commencement Bay, Near Shore/Tide Flats (WAD980726368), the Puyallup Tribe also requests notification by the facility and consultation with EPA prior to discharge. Contaminants at this site include but are not limited to: dioxins, furans, arsenic, copper, lead, zinc, 4-methly-phenol, Hex-CB, HPAHs, PCBs, PCE, cadmium, mercury, and LPAHs.

9.10.6.3.9 ***Discharge-related Activities that have Potential to Cause an Adverse Effect on Historic Properties.*** Installation of stormwater controls that involve subsurface disturbances may potentially have an adverse impact on historic properties. Procedures detailed in Appendix F of the permit shall be completed. Brandon Reynon, the Puyallup Tribe's Cultural Regulatory Specialist, shall be contacted prior to initiating discharge-related activities that may have an impact on historic properties. His contact information is (253) 573-7986 and Brandon.reynon@puyalluptribe.com

9.10.6.3.10 ***Where to Submit Information.*** All required or requested documents shall be sent to the:

Puyallup Tribe of Indians
Department of Natural Resources c/o Bill Sullivan and Char Naylor
3009 E. Portland Avenue
Tacoma, Washington 98404

9.10.6.4 Spokane Tribe of Indians

Permit coverage not available until Clean Water Act (CWA) 401 certification is received.

9.10.6.5 Swinomish Indian Tribal Community

The following conditions apply only to discharges to waters of the Swinomish Indian Tribal Community:

9.10.6.5.1 Certification. This certification does not exempt and is provisional upon compliance with other applicable statutes and codes administered by federal and Swinomish Indian Tribal Community (SITC) agencies. Operator must obtain any applicable SITC permits.

9.10.6.5.2 Submission of SWPPP. Each operator shall develop a Storm Water Pollution Prevention Plan (SWPPP) and submit it to the Swinomish Department of Environmental Protection (SDEP) for review and approval by the Director prior to beginning any discharge activities under the permit.

9.10.6.5.3 Water Quality Standards. Each operator shall be responsible for achieving compliance with applicable Water Quality Standards for Surface Waters of the Swinomish Indian Reservation.

9.10.6.5.4 Submission of NOI, Monitoring Data, Reports and NOT. Each operator shall submit a copy of the Notice of Intent (NOI), analytical monitoring results and Exceedance Reports if any, Annual Reports, and Notice of Termination (NOT) to the Swinomish DEP at the same time it is submitted to EPA.

9.10.6.5.5 Alternative Permit. The permit does not allow discharge of any pollutant on EPA's Persistent Bioaccumulative and Toxic pollutant list. Operator must eliminate such discharge or apply for an Individual permit.

9.10.6.5.6 Historic Properties Preservation. If any archeological/cultural resources or human remains are uncovered during the course of operations, all work will cease and operator must contact the Swinomish Tribal Historic Preservation Officer at 466-7352 or (cell) 840-4127.

9.10.6.5.7 Where to Submit Information. All submittals and correspondence required by this certification including but not limited to Storm Water Pollution Prevention Plans (SWPPP), monitoring results, reports of exceedances, and other notices are to be directed to the Environmental Director, Swinomish Department of Environmental Protection, 11430 Moorage Way, LaConner, WA 98257, phone (360) 466-7201, fax (360) 466-1615, and shall reference 401 Certification # 2014-01 and NPDES MSGP WAR-5I000.

9.10.6.6 Tulalip Tribes

The following conditions apply only to discharges on waters of the Tulalip Tribes:

9.10.6.6.1 Submission of NOI, NOT, and No Exposure. Copies of the Notice of Intent (NOI), Notice of Termination (NOT), and No Exposure Certification shall be submitted to the Tribe's Natural Resources Department.

9.10.6.6.2 Submission of SWPPP. A copy of the Stormwater Pollution Prevention Plan (SWPPP) shall be submitted to the Tribe's Natural Resources Department at least thirty (30) days in advance of submitting the NOI to EPA.

9.10.6.6.3 Compliance with Tribe's Water Quality Standards. Each permittee shall be responsible for achieving compliance with the Tribe's Water Quality Standards.

9.10.6.6.4 Submission and approval of Sampling Plans. A sampling plan shall be submitted to the Tribe's Natural Resources Department and approved by the Tribe prior to initiation of monitoring required under Part 6 of this permit.

9.10.6.6.5 Submission of Monitoring Data and Reports. The results of any monitoring required by this permit and reports must be sent to the Tribe's Natural Resources Department, including a description of the corrective actions required and undertaken to meet effluent limits or benchmarks (as applicable).

9.10.6.6.6 Authorization to Inspect. The Natural Resources Department may conduct an inspection of any facility covered by this permit to ensure compliance with tribal water quality standards. The Department may enforce its certification conditions.

9.10.6.6.7 Incorporation by reference. This certification does not exempt the applicant from compliance with other statues and codes administered by the tribes, county, state and federal agencies.

9.10.6.6.8 Invalidation. This certification will cease to be valid if the project is constructed and/or operated in a manner not consistent with the project description contained in the permit. This certification will also cease to be valid and the applicant must reapply with an updated application if information contained in the permit is voided by subsequent submittals.

9.10.6.6.9 Modification. Nothing in this certification waives the Tulalip Tribes of Washington's authority to issue modifications to this certification if additional impacts due to operational changes are identified, or if additional conditions are necessary to protect water quality or further protect the Tribal Communities interest.

9.10.6.6.10 Permits on-site. A copy of the permit shall be kept on the job site and readily available for reference by the construction supervisor, construction managers and foreman, and Tribal inspectors.

9.10.6.6.11 Project Management. The applicant shall ensure that project managers, construction managers and foreman, and other responsible parties have read and understand conditions of the permit, this certification, and other relevant documents, to avoid violations or noncompliance with this certification.

9.10.6.6.12 Emergencies/Contingency Measures. In the event the operator is unable to comply with the permit terms and conditions due to any cause, the contractor shall immediately take action to stop the violation and correct the problem, and immediately report spill events to EPA's 24-hour Spill Response Team at (206) 553-1263 and the Tulalip Tribes Police Department (425) 508-1565. Compliance with this

condition does not relieve the applicant from responsibility to maintain continuous compliance with the terms and conditions of this certification or the resulting liability from failure to comply.

9.10.6.6.13 Tribal Endangered Species Act Consultation. Consultation with the Tribes that addresses the effects of a facility's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities on federally-listed threatened or endangered species and designated critical habitat. Information required as part of the consultation shall include:

- Basis of the determination that your stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities will not adversely affect federally-listed as endangered or threatened ("listed") under the Endangered Species Act (ESA) and will not result in the adverse modification or destruction of designated critical habitat including appropriate measures to be undertaken to avoid or eliminate the likelihood of adverse effects (under Criterion C in Section 1.1.4.5); and
- Notice of Intent form complete with extent of action area, list of federally-listed threatened or endangered species or designated critical habitat likely to occur in action area, list of potential pollutants (if you are a new discharger) or list of pollutants for which you have ever exceeded an applicable benchmark or effluent limitations guideline, or for which your discharge has ever been found to cause or contribute to an exceedance of an applicable water quality standard (if you are an existing discharger).

9.10.6.6.14 Discharges to CERCLA Sites. This permit does not authorize direct stormwater discharges to certain sites undergoing remedial cleanup actions pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) unless first approved by the appropriate EPA Regional office. In the case of the Tulalip Landfill site (WAD980639256), the Tulalip Tribes also requests notification by the facility and consultation with EPA prior to discharge. Contaminants at this site may include but are not limited to: dioxins, furans, arsenic, copper, lead, zinc, 4-methyl-phenol, Hex-CB, HPAHs, PCBs, PCE, cadmium, mercury, and LPAHs.

9.10.6.6.15 Discharge-related Activities that have Potential to Cause an Adverse Effect on Historic Properties. Installation of stormwater controls that involve subsurface disturbances may potentially have an adverse impact on historic properties. Procedures detailed in Appendix F of the permit shall be completed. Richard Young, of the Tulalip Tribe's Cultural Resources Department shall be contacted prior to initiating discharge-related activities that may have an impact on historic properties. His contact information is (360) 716-2652 and ryoung@tulaliptribesnsn.gov.

9.10.6.6.16 Where to Submit Information: All required or requested documents shall be sent to the:

Tulalip Tribes Natural Resources Environmental Division
c/o Kurt Nelson and Valerie Streeter
6704 Marine Drive, Tulalip, Washington 98271

9.10.7 WAR05F000: Areas in the State of Washington, except those located on Indian Country lands, subject to industrial activity by a Federal Operator

Permit coverage not available until Clean Water Act (CWA) 401 certification is received.

Appendix A - Definitions, Abbreviations, and Acronyms (for the purposes of this permit).

A.1. DEFINITIONS

Action Area – all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. See 50 CFR 402. For the purposes of this permit and for application of Endangered Species Act requirements, the following areas are included in the definition of action area:

- The areas where stormwater discharges originate and flow from the industrial facility to the point of discharge into receiving waters. (Example: Where stormwater flows into a ditch, swale, or gully that leads to receiving waters and where listed species (such as listed amphibians) are found in the ditch, swale, or gully.)
- The areas where stormwater from industrial activities discharge into receiving waters and the areas in the immediate vicinity of the point of discharge. (Example: Where stormwater from industrial activities discharges into a stream segment that is known to harbor listed aquatic species.)
- The areas where stormwater controls will be constructed and operated, including any areas where stormwater flows to and from the stormwater controls. (Example: Where a stormwater retention pond would be built.)
- The areas upstream and/or downstream from the stormwater discharge into a stream segment that may be affected by these discharges. (Example: Where sediment discharged to a receiving stream settles downstream and impacts a breeding area of a listed aquatic species.)

Antidegradation Policy or Antidegradation Requirements – the water quality standards regulation that requires States and Tribes to establish a three-tiered antidegradation program:

1. Tier 1 maintains and protects existing uses and water quality conditions necessary to support such uses. An existing use can be established by demonstrating that fishing, swimming, or other uses have actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur. Where an existing use is established, it must be protected even if it is not listed in the water quality standards as a designated use. Tier 1 requirements are applicable to all surface waters.

2. Tier 2 maintains and protects "high quality" waters -- water bodies where existing conditions are better than necessary to support CWA § 101(a)(2) "fishable/swimmable" uses. Water quality can be lowered in such waters. However, state and tribal Tier 2 programs identify procedures that must be followed and questions that must be answered before a reduction in water quality can be allowed. In no case may water quality be lowered to a level which would interfere with existing or designated uses.

3. Tier 3 maintains and protects water quality in outstanding national resource waters (ONRWs). Except for certain temporary changes, water quality cannot be lowered in such waters. ONRWs generally include the highest quality waters of the United States. However, the ONRW classification also offers special protection for waters of exceptional ecological significance, i.e., those which are important, unique, or sensitive ecologically. Decisions regarding which water bodies qualify to be ONRWs are made by States and authorized Indian Tribes.

Arid Areas – areas where annual rainfall averages from 0 to 10 inches.

Bypass – the intentional diversion of waste streams from any portion of a treatment facility. See 40 CFR 122.41(m)(1)(i).

CERCLA Site (i.e., Superfund Site) - for the purposes of this permit, a site as defined in Section 101(9) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9601(9), that is undergoing a remedial investigation and feasibility study, or for which a Record of Decision for remedial action has been issued in accordance with the National Contingency Plan, 40 CFR Part 300.

Co-located Industrial Activities – any industrial activities, excluding your primary industrial activity(ies), located on-site that are defined by the stormwater regulations at 122.26(b)(14)(i)-(ix) and (xi). An activity at a facility is not considered co-located if the activity, when considered separately, does not meet the description of a category of industrial activity covered by the stormwater regulations or identified by the SIC code list in Appendix D.

Confidential Business Information (CBI) – see 40 CFR Part 2 for relevant definitions of CBI: http://www.gpo.gov/fdsys/pkg/CFR-2013-title40-vol1/pdf/CFR-2013-title40-vol1-part2-subpartB.pdf.

Control Measures – refers to any stormwater control or other method (including narrative effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the United States.

Corrective Action – for the purposes of the permit, any action taken, or required to be taken, to (1) repair, modify, or replace any stormwater control used at the site; (2) clean up and dispose of spills, releases, or other deposits found on the site; and (3) remedy a permit violation.

Critical Habitat – as defined in the Endangered Species Act at 16 U.S.C. 1531 for a threatened or endangered species, (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

Director – a Regional Administrator of the Environmental Protection Agency or an authorized representative. See 40 CFR 122.2.

Discharge – when used without qualification, means the "discharge of a pollutant." See 40 CFR 122.2.

Discharge of a Pollutant – any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. See 40 CFR 122.2.

Discharge Point – for the purposes of this permit, the location where collected and concentrated stormwater flows are discharged from the facility such that the first receiving waterbody into which the discharge flows, either directly or through a separate storm sewer system, is a water of the U.S.

Discharge-Related Activity – activities that cause, contribute to, or result in stormwater and allowable non-stormwater point source discharges, and measures such as the siting, construction and operation of stormwater controls to control, reduce, or prevent pollution in the discharges.

Discharge to an Impaired Water – for the purposes of this permit, a discharge to an impaired water occurs if the first water of the U.S. to which you discharge is identified by a state, tribe, or EPA as not meeting an applicable water quality standard, and requires development of a total maximum daily load (TMDL) (pursuant to Section 303(d) of the Clean Water Act), or is addressed by an EPA-approved or established TMDL, or is not in either of the above categories but the waterbody is covered by pollution control requirements that meet the requirements of 40 CFR 130.7(b)(1). For discharges that enter a separate storm sewer system prior to discharge, the water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system.

Drought-Stricken Area – for the purposes of this permit, an area in which the National Oceanic and Atomospheric Administration's U.S. Seasonal Drought Outlook indicates for the period that any of the following conditions are likely: (1) "Drought to persist or intensify", (2) "Drought ongoing, some improvement", (3) "Drought likely to improve, impacts ease", or (4) "Drought development likely". See http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.gif.

Effective Operating Condition – for the purposes of this permit, a stormwater control is kept in effective operating condition if it has been implemented and maintained in such a manner that it is working as designed to minimize pollutant discharges.

Effluent Limitations – for the purposes of this permit, any of the Part 2 or Part 3 requirements.

Effluent Limitations Guideline (ELG) – defined in 40 CFR § 122.2 as a regulation published by the Administrator under section 304(b) of CWA to adopt or revise effluent limitations.

Eligible – for the purposes of this permit, refers to stormwater and allowable non-stormwater discharges that are authorized for coverage under this general permit.

Endangered Species – defined in the Endangered Species Act at 16 U.S.C. 1531 as any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man.

Existing Discharger – an operator applying for coverage under this permit for discharges authorized previously under an NPDES general or individual permit.

Facility or Activity – any NPDES "point source" (including land or appurtenances thereto) that is subject to regulation under the NPDES program. See 40 CFR 122.2.

Feasible – for the purposes of this permit, feasible means technologically possible and economically practicable and achievable in light of best industry practices. EPA notes that it does not intend for any permit requirement to conlict with state water rights law.

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

Hazardous Materials or Hazardous Substances or Toxic Materials – for the purposes of this permit, any liquid, solid, or contained gas that contain properties that are dangerous or potentially harmful to human health or the environment. See also 40 CFR §261.2.

Historic Property – as defined in the National Historic Preservation Act regulations means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

Impaired Water (or "Water Quality Impaired Water" or "Water Quality Limited Segment") – for the purposes of this permit, waters identified by a state, tribe, or EPA as not meeting an applicable water quality standard, and require development of a total maximum daily load (TMDL) (pursuant to Section 303(d) of the CWA), or are addressed by an EPA-approved or established TMDL, or are covered by pollution controls requirements that meet the requirements of 40 FR 130.7(b)(1). For discharges that enter a separate storm sewer system prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system.

Indian Country or Indian Country Lands – defined at 40 CFR 122.2 as:

a). All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation;

b). All dependent Indian communities within the borders of the United States, whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State: and

c). All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. This definition includes all land held in trust for an Indian tribe. (18 U.S.C. 1151)

Infeasible – for the purposes of this permit, infeasible means not technologically possible or not economically practicable and achievable in light of best industry practices. EPA notes that it does not intend for any permit requirement to conflict with state water rights law.

Industrial Activity – the 10 categories of industrial activities included in the definition of "stormwater discharges associated with industrial activity" as defined in 40 CFR 122.26(b)(14)(i)-(ix) and (xi).

Industrial Stormwater – stormwater runoff from industrial activity.

Measurable Storm Event – a precipitation event that results in a measurable amount of precipitation (i.e., a storm event that results in an actual discharge) and that follows the preceding storm event by at least 72 hours (3-days). The 72-hour storm interval does not apply if you document that less than a 72-hour interval is representative for local storm events.

Minimize – for the purposes of this permit, minimize means to reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer (MS4) – defined at 40 CFR §122.26(b)(8) as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

1. Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

2. Designed or used for collecting or conveying stormwater;

3. Which is not a combined sewer; and

4. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2. See 40 CFR 122.26(b)(4) and (b)(7).

National Pollutant Discharge Elimination System (NPDES) – defined at 40 CFR §122.2 as the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA. The term includes an 'approved program.'

New Discharger – a facility from which there is or may be a discharge, that did not commence the discharge of pollutants at a particular site prior to August 13, 1979, which is not a new source, and which has never received a finally effective NPDES permit for discharges at that site. See 40 CFR 122.2.

New Source – any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced:

- after promulgation of standards of performance under section 306 of the CWA which are applicable to such source, or
- after proposal of standards of performance in accordance with section 306 of the CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal. See 40 CFR 122.2.

New Source Performance Standards (NSPS) – technology-based standards for facilities that qualify as new sources under 40 CFR 122.2 and 40 CFR 122.29.

No Exposure – all industrial materials or activities protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. See 40 CFR 122.26(g).

Non-Stormwater Discharges – discharges that do not originate from storm events. They can include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, pavement wash water, external building washdown, irrigation water, or uncontaminated ground water or spring water.

Notice of Intent (NOI) – the form (electronic or paper) required for authorization of coverage under the Multi-Sector General Permit.

Notice of Termination (NOT) – the form (electronic or paper) required for terminating coverage under the Multi-Sector General Permit.

Operator – any entity with a stormwater discharge associated with industrial activity that meets either of the following two criteria:

1. The entity has operational control over industrial activities, including the ability to make modifications to those activities; or

2. The entity has day-to-day operational control of activities at a facility necessary to ensure compliance with the permit (e.g., the entity is authorized to direct workers at a facility to carry out activities required by the permit).

Outfall – see "Discharge Point."

Permitting Authority – for the purposes of this permit, EPA, a Regional Administrator of EPA, or an authorized representative.

Person – an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof. See 40 CFR 122.2.

Point Source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff. See 40 CFR 122.2.

Pollutant – defined at 40 CFR §122.2. A partial listing from this definition includes: dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal and agricultural waste discharged into water. See 40 CFR 122.2.

Pollutant of Concern – a pollutant which causes or contributes to a violation of a water quality standard, including a pollutant which is identified as causing an impairment in a state's 303(d) list.

Primary Industrial Activity – includes any activities performed on-site which are (1) identified by the facility's primary SIC code and included in the descriptions of 122.26(b)(14)(ii), (iii), (vi), or (viii); or (2) included in the narrative descriptions of 122.26(b)(14)(i), (iv), (v), (vii), or (ix). [For co-located activities covered by multiple SIC codes, it is recommended that the primary industrial determination be based on the value of receipts or revenues or, if such information is not available for a particular facility, the number of employees or production rate for each process may be compared. The operation that generates the most revenue or employs the most personnel is the operation in which the facility is primarily engaged. In situations where the vast majority of on-site activity falls within one SIC code, that activity may be the primary industrial activity.] Narrative descriptions in 40 CFR 122.26(b)(14) identified above include: (i) activities subject to stormwater effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards; (iv) hazardous waste treatment storage, or disposal facilities including those that are operating under interim status or a permit under subtitle C of the Resource Conservation and Recovery Act (RCRA); (v) landfills, land application sites and open

dumps that receive or have received industrial wastes; (vii) steam electric power generating facilities; and (ix) sewage treatment works with a design flow of 1.0 mgd or more.

Qualified Personnel – qualified personnel are those who are knowledgeable in the principles and practices of industrial stormwater controls and pollution prevention, and who possess the education and ability to assess conditions at the industrial facility that could impact stormwater quality, and the education and ability to assess the effectiveness of stormwater controls selected and installed to meet the requirements of the permit.

Reportable Quantity Release – a release of a hazardous substance at or above the established legal threshold that requires emergency notification. Refer to 40 CFR Parts 110, 117, and 302 for complete definitions and reportable quantities for which notification is required.

Restricted Information – for the purposes of this permit, information that is privileged or that is otherwise protected from disclosure pursuant to applicable statutes, Executive Orders, or regulations. Such information includes, but is not limited to: classified national security information, protected critical infrastructure information, sensitive security information, and proprietary business information.

Runoff Coefficient – the fraction of total rainfall that will appear at the conveyance as runoff. See 40 CFR 122.26(b)(11).

Run-On – sources of stormwater that drain from land located upslope or upstream from the regulated facily in question.

Saline Water or Saltwater – for the purposes of this permit, a waterbody with salinity that is equal to or exceeds 10 parts per thousand 95 percent or more of the time, unless otherwise defined as a coastal or marine water by the applicable state or tribal surface water quality standards.

Semi-Arid Areas – areas where annual rainfall averages from 10 to 20 inches.

Significant Materials – includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges. See 40 CFR 122.26(b)(12).

Special Aquatic Sites – sites identified in 40 CFR 230 Subpart E. These are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region.

Spill – for the purpose of this permit, the release of a hazardous or toxic substance from its container or containment.

Stormwater – stormwater runoff, snow melt runoff, and surface runoff and drainage. See 40 CFR 122.26(b)(13).

Stormwater Controls – see "Control Measures."

Stormwater Discharges Associated with Construction Activity – as used in this permit, a discharge of pollutants in stormwater runoff from areas where land-disturbing activities (e.g., clearing, grading, or excavating) occur, or where construction materials or equipment storage or maintenance (e.g., fill piles, borrow areas, concrete truck washout, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located. See 40 CFR 122.26(b)(14)(x) and 40 CFR 122.26(b)(15).

Stormwater Discharges Associated with Industrial Activity – the discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under Part 122. For the categories of industries identified in this section, the term includes, but is not limited to, stormwater discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to stormwater. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with stormwater drained from the above described areas. Industrial facilities include those that are federally, state, or municipally owned or operated that meet the description of the facilities listed in 40 CFR 122.26(b)(14). The term also includes those facilities designated under the provisions of 40 CFR 122.26(a)(1)(v). See 40 CFR 122.26(b)(14).

Stormwater Team – the group of individuals responsible for oversight of the development and modifications of the SWPPP, and oversight of compliance with the permit requirements. The individuals on the "Stormwater Team" must be identified in the SWPPP.

Storm Event – a precipitation event that results in a measurable amount of precipitation.

Threatened Species – defined in the Endangered Species Act at 16 U.S.C. 1531 as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Tier 2 Waters – For antidegradation purposes, pursuant to 40 CFR 131.12(a)(2), Tier 2 waters are characterized as having water quality that exceeds the levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water.

Tier 2.5 Waters – For antidegradation purposes, Tier 2.5 waters are those waters designated by States or Tribes as requiring a level of protection equal to and above that given to Tier 2 waters, but less than that given Tier 3 waters.States have special requirements for these waters.

Tier 3 Waters – For antidegradation purposes, pursuant to 40 CFR 131.12(a)(3), Tier 3 waters are identified by states as having high quality waters constituting an Outstanding National Resource Water (ONRW), such as waters of National Parks and State Parks, wildlife refuges, and waters of exceptional recreational or ecological significance.

Total Maximum Daily Loads (TMDLs) – The sum of the individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background. If receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. (See section 303(d) of the Clean Water Act and 40 CFR 130.2 and 130.7).

Toxic Waste – see "Hazardous Materials."

Uncontaminated Discharge – a discharge that does not cause or contribute to an exceedance of applicable water quality standards.

Upset – Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond your reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See 40 CFR 122.41(n)(1).

Water Quality Impaired – See "Impaired Water."

Water Quality Standards – defined in 40 CFR § 131.3, and are provisions of State or Federal law which consist of a designated use or uses for the waters of the United States, water quality criteria for such waters based upon such uses, and an antidegradation policy to protect high-quality waters. Water quality standards protect the public health or welfare, enhance the quality of water and serve the purposes of the Act.

Waters of the United States – See definition at at 40 CFR §122.2.

A.2. ABBREVIATIONS AND ACRONYMS

BAT – Best Available Technology Economically Achievable

BOD5 – Biochemical Oxygen Demand (5-day test)

BMP – Best Management Practice

BPJ – Best Professional Judgment

BPT – Best Practicable Control Technology Currently Available

CERCLA – Comprehensive Environmental Response, Compensation and Liability Act

CGP – Construction General Permit

CFR – Code of Federal Regulations

COD – Chemical Oxygen Demand

CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 *et seq*)

CWT – Centralized Waste Treatment

DMR – Discharge Monitoring Report

ELG – Effluent Limitations Guideline

EPA – U. S. Environmental Protection Agency

ESA – Endangered Species Act

FWS – U. S. Fish and Wildlife Service

LA – Load Allocations

MGD – Million Gallons per Day

MOS – Margin of Safety

MS4 – Municipal Separate Storm Sewer System

MSGP – Multi-Sector General Permit

NAICS – North American Industry Classification System

NEPA – National Environmental Policy Act

NET – NPDES eReporting Tool

NHPA – National Historic Preservation Act

NMFS – U. S. National Marine Fisheries Service

NOI – Notice of Intent

NOE – No Exposure

NOT – Notice of Termination

NPDES – National Pollutant Discharge Elimination System

NRC – National Response Center

NRHP – National Register of Historic Places

NSPS – New Source Performance Standard

NTU – Nephelometric Turbidity Unit

OMB – U. S. Office of Management and Budget

ORW – Outstanding Resource Water

OSM – U. S. Office of Surface Mining

POTW – Publicly Owned Treatment Works

RCRA – Resource Conservation and Recovery Act

RQ – Reportable Quantity

SARA – Superfund Amendments and Reauthorization Act

SDS – Safety Data Sheet

SHPO – State Historic Preservation Officer

SIC – Standard Industrial Classification

SMCRA – Surface Mining Control and Reclamation Act

SPCC – Spill Prevention, Control, and Countermeasures

SWPPP – Stormwater Pollution Prevention Plan

THPO – Tribal Historic Preservation Officer

TMDL – Total Maximum Daily Load

TSDF – Treatment, Storage, or Disposal Facility

TSS – Total Suspended Solids

USGS – United States Geological Survey

WLA – Wasteload Allocation

WQS – Water Quality Standard

Appendix B - Standard Permit Conditions.

Standard permit conditions in Appendix B are consistent with the general permit provisions required under 40 CFR 122.41.

B.1 Duty To Comply.

You must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

A. You must comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards, even if the permit has not yet been modified to incorporate the requirement.

B. Penalties for Violations of Permit Conditions: The Director will adjust the civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (61 FR 252, December 31, 1996, pp. 69359-69366, as corrected in 62 FR 54, March 20, 1997, pp.13514-13517) as mandated by the Debt Collection Improvement Act of 1996 for inflation on a periodic basis. This rule allows EPA's penalties to keep pace with inflation. The Agency is required to review its penalties at least once every 4 years thereafter and to adjust them as necessary for inflation according to a specified formula. The civil and administrative penalties following were adjusted for inflation starting in 1996.

1. Criminal Penalties.

1.1 Negligent Violations. The CWA provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to criminal penalties of not less than $2,500 nor more than $25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation or by imprisonment of not more than two years, or both.

1.2. *Knowing Violations.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both.

1.3. *Knowing Endangerment.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he or she is placing another person in imminent danger of death or serious bodily injury shall upon conviction be subject to a fine of not more than $250,000 or by imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person

shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision be subject to a fine of not more than $1,000,000 and can fined up to $2,000,000 for second or subsequent convictions.

1.4. *False Statement.* The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

2. *Civil Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently $37,500 per day for each violation).

3. *Administrative Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows

3.1. *Class I Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently $16,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $37,500).

3.2. *Class II Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently $11,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $177,500).

B.2 Duty to Reapply.

If you wish to continue an activity regulated by this permit after the expiration date of this permit, you must apply for and obtain authorization as required by the new permit once EPA issues it.

B.3 Need to Halt or Reduce Activity Not a Defense.

It shall not be a defense for you in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

B.4 Duty to Mitigate.

You must take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

B.5 Proper Operation and Maintenance.

You must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by you to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by you only when the operation is necessary to achieve compliance with the conditions of this permit.

B.6 Permit Actions.

This permit may be modified, revoked and reissued, or terminated for cause. Your filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

B.7 Property Rights.

This permit does not convey any property rights of any sort, or any exclusive privileges.

B.8 Duty to Provide Information.

You must furnish to EPA or an authorized representative (including an authorized contractor acting as a representative of EPA), within a reasonable time, any information which EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. You must also furnish to EPA or an authorized representative upon request, copies of records required to be kept by this permit.

B.9 Inspection and Entry.

You must allow EPA or an authorized representative (including an authorized contractor acting as a representative of EPA), upon presentation of credentials and other documents as may be required by law, to:

A. Enter upon your premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

D. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

B.10 Monitoring and Records.

A. Samples and measurements taken for the purpose of monitoring must be representative of the volume and nature of the monitored activity.

B. You must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date the permit expires or the date the permittee's authorization is terminated. This period may be extended by request of EPA at any time.

C. Records of monitoring information must include:

1. The date, exact place, and time of sampling or measurements;

2. The individual(s) who performed the sampling or measurements;

3. The date(s) analyses were performed

4. The individual(s) who performed the analyses;

5. The analytical techniques or methods used; and

6. The results of such analyses.

D. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit.

E. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

B.11 Signatory Requirements.

A. NOIs, NOTs, and NOEs must be signed as follows:

1. For a corporation: By a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment

recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

3. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

B. Your SWPPP, including changes to your SWPPP to document any corrective actions taken as required by Part 3.1, and any other compliance documentation required under this permit, including the Annual Report, DMRs, inspection reports, and corrective action reports, must be signed by a person described in Appendix B, Subsection 11.A above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described in Appendix B, Subsection 11.A;

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

3. The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.

C. All other changes to your SWPPP, and other compliance documentation required under Part 5.4, must be signed and dated by the person preparing the change or documentation.

D. Changes to Authorization. If an authorization under Part 1.3.1.3 is no longer accurate because the industrial facility has been purchased by a different entity, a new NOI satisfying the requirements of Part 1.3 must be submitted to EPA. See Table 1-2 in Part 1.3.1.1 of the permit. However, if the only change that is occurring is a change in contact information or a change in the facility's address, the operator need only make a modification to the existing NOI submitted for authorization.

E. Any person signing documents in accordance with Appendix B, Subsections 11.A or 11.B above must include the following certification:

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

information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

F. For persons signing documents electronically, in addition to meeting other applicable requirements in Appendix I, Subsection B.11, such signatures must be legally dependable with no less evidentiary value than their paper equivalent.

G. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

B.12 Reporting Requirements.

A. Planned changes. You must give notice to EPA as soon as possible, but no fewer than 30 days, of any planned physical alterations or additions to the permitted facility. Notice is required only when:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

B. Anticipated noncompliance. You must give advance notice to EPA of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

C. Transfers. This permit is not transferable to any person except after notice to EPA. Where a facility wants to change the name of the permittee, the original permittee (the first owner or operators) must submit a Notice of Termination pursuant to Part 1.4. The new owner or operator must submit a Notice of Intent in accordance with Part 1.3.1 and Table 1-2. See also requirements in Appendix B, Subsections 11.B and 11.D.

D. Monitoring reports. Monitoring results must be reported at the intervals specified elsewhere in this permit.

1. Pursuant to Part 7.1, all monitoring data collected pursuant to Part 6 must be submitted to EPA using EPA's online DMR system (http://www.epa.gov/netdmr/).

2. If you monitor any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or as specified in the permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the DMR.

3. Calculations for all limitations which require averaging of measurements must use an arithmetic mean. For averaging purposes, use a value of zero for any individual sample parameter, which is determined to be less than the method detection limit. For sample values that fall between the method detection level and the quantitation limit (i.e., a confirmed detection but below the level that can be reliably quantified), use a value halfway between zero and the quantitation limit.

E. Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.

F. Twenty-four hour reporting.

1. You must report any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time you become aware of the circumstances. A written submission must also be provided within five days of the time you become aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

2. The following shall be included as information which must be reported within 24 hours under this paragraph.

a. Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR 122.41(m)(3)(ii))

b. Any upset which exceeds any effluent limitation in the permit

c. Violation of a maximum daily discharge limit for any numeric effluent limitation. (See 40 CFR 122.44(g).)

3. EPA may waive the written report on a case-by-case basis for reports under Appendix B, Subsection 12.F.2 if the oral report has been received within 24 hours.

G. Other noncompliance. You must report all instances of noncompliance not reported under Appendix B, Subsections 12.D, 12.E, and 12.F, at the time monitoring reports are submitted. The reports must contain the information listed in Appendix B, Subsection 12.F.

H. Other information. Where you become aware that you failed to submit any relevant facts in your NOI, or submitted incorrect information in your NOI or in any report to the Permitting Authority, you must promptly submit such facts or information.

B.13 Bypass.

A. Definitions.

1. Bypass means the intentional diversion of waste streams from any portion of a treatment facility See 40 CFR 122.41(m)(1)(i).

2. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. See 40 CFR 122.41(m)(1)(ii).

B. Bypass not exceeding limitations. You may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Appendix B, Subsections 13.C and 13.D. See 40 CFR 122.41(m)(2).

C. Notice.

1. Anticipated bypass. If you know in advance of the need for a bypass, you must submit prior notice, if possible at least ten days before the date of the bypass. See 40 CFR 122.41(m)(3)(i).

2. Unanticipated bypass. You must submit notice of an unanticipated bypass as required in Appendix B, Subsection 12.F (24-hour notice). See 40 CFR 122.41(m)(3)(ii).

D. Prohibition of bypass. See 40 CFR 122.41(m)(4).

1. Bypass is prohibited, and EPA may take enforcement action against you for bypass, unless:

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

c. You submitted notices as required under Appendix B, Subsection 13.C.

2. EPA may approve an anticipated bypass, after considering its adverse effects, if EPA determines that it will meet the three conditions listed above in Appendix B, Subsection 13.D.1.

B.14 Upset.

A. Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond your reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See 40 CFR 122.41(n)(1).

B. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements

of Appendix B, Subsection 14.C are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. See 40 CFR 122.41(n)(2).

C. Conditions necessary for a demonstration of upset. See 40 CFR 122.41(n)(3). A permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and that you can identify the cause(s) of the upset;

2. The permitted facility was at the time being properly operated; and

3. You submitted notice of the upset as required in Appendix B, Subsection 12.F.2.b (24 hour notice).

4. You complied with any remedial measures required under Appendix B, Subsection 4.

D. Burden of proof. In any enforcement proceeding, you, as the one seeking to establish the occurrence of an upset, have the burden of proof. See 40 CFR 122.41(n)(4).

B.15 Retention of Records.

Copies of the SWPPP and all documentation required by this permit, including records of all data used to complete the NOI to be covered by this permit, must be retained for at least three years from the date that permit coverage expires or is terminated. This period may be extended by request of EPA at any time.

B.16 Reopener Clause.

A. Procedures for modification or revocation. Permit modification or revocation will be conducted according to 40 CFR §122.62, §122.63, §122.64 and §124.5.

B. Water quality protection. If there is evidence indicating that the stormwater discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, you may be required to obtain an individual permit in accordance with Part 1.3.3 of this permit, or the permit may be modified to include different limitations and/or requirements.

C. Timing of permit modification. EPA may elect to modify the permit prior to its expiration (rather than waiting for the new permit cycle) to comply with any new statutory or regulatory requirements, such as for effluent limitation guidelines that may be promulgated in the course of the current permit cycle.

Appendix C - Permit Areas Eligible for Coverage.

EPA can only provide permit coverage in these areas and for classes of discharges that are outside the scope of a state's NPDES program authorization.

C.1 EPA Region 1: Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 1:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
CTR05I000	Indian Country within the State of Connecticut
MAR050000	Commonwealth of Massachusetts, except Indian country
MAR05I000	Indian country within the Commonwealth of Massachusetts
NHR050000	State of New Hampshire
RIR05I000	Indian country within the State of Rhode Island
VTR05F000	Areas in the State of Vermont subject to industrial activity by a Federal Operator

For stormwater discharges in EPA Region 1 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.2 EPA Region 2: New Jersey, New York, Puerto Rico, Virgin Islands.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 2:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
PRR050000	Commonwealth of Puerto Rico

For stormwater discharges in EPA Region 2 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.3 EPA Region 3: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 3:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
DCR050000	District of Columbia
DER05F000	Areas in the State of Delaware subject to industrial activity by a Federal Operator

For stormwater discharges in EPA Region 3 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.4 EPA Region 4: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee (Coverage not available under this permit).

For stormwater discharges in EPA Region 4, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.5 EPA Region 5: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 5:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
MIR05I000	Indian country within the State of Michigan
MNR05I000	Indian country within the State of Minnesota
WIR05I000	Indian country within the State of Wisconsin (except for facilities on Sokaogon Chippewa Community lands and Bad River Band of Lake Superior Tribe of Chippewa Indians lands, see EPA Region 5 for an individual permit application).

For stormwater discharges in EPA Region 5 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

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

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 6:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
LAR05I000	Indian country within the State of Louisiana
NMR050000	The State of New Mexico, except Indian country
NMR05I000	Indian country within the State of New Mexico, except Ute Mountain Reservation lands that are covered under Colorado permit COR05I000 and Navajo Reservation lands that are covered under Arizona permit AZR05I000
OKR05I000	Indian country within the State of Oklahoma
OKR05F000	Facilities in the State of Oklahoma not under the jurisdiction of the Oklahoma Department of Environmental Quality or the Oklahoma Department of Agriculture, Food and Forestry, except those on Indian Country. EPA jurisdiction facilities include SIC Codes 1311, 1381, 1382, 1389, and 5171.

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
TXR05F000	Facilities in the State of Texas not under the jurisdiction of the Texas Commission on Environmental Quality, except those on Indian Country. EPA-jurisdiction facilities include SIC Codes 1311, 1321, 1381, 1382, 1389, and 5171 (other than oil field service company "home base" facilities).
TXR05I000	Indian country within the State of Texas

For stormwater discharges in EPA Region 6 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.7 EPA Region 7: Iowa, Kansas, Missouri, Nebraska (except see Region 8 for Pine Ridge Reservation Lands).

This permit offer NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 7:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
IAR05I000	Indian country within the State of Iowa
KSR05I000	Indian country within the State of Kansas
NER05I000	Indian country within the State of Nebraska, except Pine Ridge Reservation lands (see Region 8)

For stormwater discharges in EPA Region 7 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.8 EPA Region 8: Colorado, Montana, North Dakota, South Dakota, Wyoming, Utah (except see Region 9 for Goshute Reservation and Navajo Reservation Lands), the Ute Mountain Reservation in NM, and the Pine Ridge Reservation in NE.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 8:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
COR05F000	Areas in the State of Colorado, except those located on Indian country, subject to industrial activity by a Federal Operator
COR05I000	Indian country within the State of Colorado, as well as the portion of the Ute Mountain Reservation located in New Mexico
MTR05I000	Indian country within the State of Montana
NDR05I000	Indian country within the State of North Dakota, as well as that portion of the Standing Rock Reservation located in South Dakota (except for the portion of the lands within the former boundaries of the Lake Traverse Reservation, which is covered under South Dakota permit SDR05I000 listed below)

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
SDR05I000	Indian country within the State of South Dakota, as well as the portion of the Pine Ridge Reservation located in Nebraska and the portion of the lands within the former boundaries of the Lake Traverse Reservation located in North Dakota (except for the Standing Rock Reservation, which is covered under North Dakota permit NDR05I000 listed above)
UTR05I000	Indian country within the State of Utah, except Goshute and Navajo Reservation lands (see Region 9)
WYR05I000	Indian country within the State of Wyoming

For stormwater discharges in EPA Region 8 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.9 EPA Region 9: California, Hawaii, Nevada, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Confederated Tribes of the Goshute Reservation in Utah and Nevada, Indian Country within the State of Arizona including the Navajo Reservation in Utah and New Mexico and Arizona, the Duck Valley Reservation in Idaho, and the Fort McDermitt Reservation in Oregon.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 9:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
ASR050000	American Samoa
AZR05I000	Indian country within the State of Arizona, including Navajo Reservation lands in New Mexico and Utah
CAR05I000	Indian country within the State of California
GUR050000	Island of Guam
JAR050000	Johnston Atoll
MWR050000	Midway Island and Wake Island
MPR050000	Commonwealth of the Northern Mariana Islands
NVR05I000	Indian country within the State of Nevada, including the Duck Valley Reservation in Idaho, the Fort McDermitt Reservation in Oregon and the Confederated Tribes of the Goshute Reservation in Utah

For stormwater discharges in EPA Region 9 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

C.10 Region 10: Alaska, Idaho (except see Region 9 for Duck Valley Reservation lands), Oregon (except see Region 9 for Fort McDermitt Reservation), Washington.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 10:

Master Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
AKR05F000	Denali National Park and Preserve
AKR05I000	Indian country lands as defined in 18 U.S.C. 1151 within the State of Alaska
IDR050000	The State of Idaho, except Indian country lands **[PERMIT COVERAGE NOT AVAILABLE UNTIL CWA 401 CERTIFICATION IS RECEIVED]**
IDR05I000	Indian country lands within the State of Idaho, except Duck Valley Reservation lands, which are covered under Nevada permit NVR05I000
ORR05I000	Indian country lands within the State of Oregon, except Fort McDermitt Reservation lands, which are covered under Nevada permit NVR05I000
WAR05I000	Indian country lands within the State of Washington **[EXCEPT FOR FACILITIES LOCATED ON SPOKANE TRIBE OF INDIANS LANDS (PERMIT COVERAGE NOT AVAILABLE UNTIL CWA 401 CERTIFICATION IS RECEIVED)]**
WAR05F000	Areas in the State of Washington, except those located on Indian country lands, subject to industrial activity by a Federal Operator **[PERMIT COVERAGE NOT AVAILABLE UNTIL CWA 401 CERTIFICATION IS RECEIVED]**

For stormwater discharges in EPA Region 10 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

Appendix D - Facilities and Activities Covered

Your permit eligibility is limited to discharges from facilities in the "sectors" of industrial activity summarized in Table D-1. These sector descriptions are based on Standard Industrial Classification (SIC) Codes and Industrial Activity Codes. References to "sectors" in this permit (e.g., sector-specific monitoring requirements) refer to these groupings.

Table D-1. Sectors of Industrial Activity Covered by This Permit

Subsector (May be subject to more than one sector/subsector)	SIC Code or Activity Code[1]	Activity Represented
SECTOR A: TIMBER PRODUCTS		
A1	2421	General Sawmills and Planing Mills
A2	2491	Wood Preserving
A3	2411	Log Storage and Handling
A4	2426	Hardwood Dimension and Flooring Mills
	2429	Special Product Sawmills, Not Elsewhere Classified
	2431-2439 (except 2434)	Millwork, Veneer, Plywood, and Structural Wood (see Sector W)
	2448	Wood Pallets and Skids
	2449	Wood Containers, Not Elsewhere Classified
	2451, 2452	Wood Buildings and Mobile Homes
	2493	Reconstituted Wood Products
	2499	Wood Products, Not Elsewhere Classified
	2441	Nailed and Lock Corner Wood Boxes and Shook
SECTOR B: PAPER AND ALLIED PRODUCTS		
B1	2631	Paperboard Mills
B2	2611	Pulp Mills
	2621	Paper Mills
	2652-2657	Paperboard Containers and Boxes
	2671-2679	Converted Paper and Paperboard Products, Except Containers and Boxes
SECTOR C: CHEMICALS AND ALLIED PRODUCTS		
C1	2873-2879	Agricultural Chemicals
C2	2812-2819	Industrial Inorganic Chemicals
C3	2841-2844	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations
C4	2821-2824	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass

Table D-1. Sectors of Industrial Activity Covered by This Permit		
Subsector (May be subject to more than one sector/subsector)	**SIC Code or Activity Code[1]**	**Activity Represented**
C5	2833-2836	Medicinal Chemicals and Botanical Products; Pharmaceutical Preparations; in vitro and in vivo Diagnostic Substances; and Biological Products, Except Diagnostic Substances
	2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products
	2861-2869	Industrial Organic Chemicals
	2891-2899	Miscellaneous Chemical Products
	3952 (limited to list of inks and paints)	Inks and Paints, Including China Painting Enamels, India Ink, Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints and Artist's Watercolors
	2911	Petroleum Refining
SECTOR D: ASPHALT PAVING AND ROOFING MATERIALS AND LUBRICANTS		
D1	2951, 2952	Asphalt Paving and Roofing Materials
D2	2992, 2999	Miscellaneous Products of Petroleum and Coal
SECTOR E: GLASS, CLAY, CEMENT, CONCRETE, AND GYPSUM PRODUCTS		
E1	3251-3259	Structural Clay Products
	3261-3269	Pottery and Related Products
E2	3271-3275	Concrete, Gypsum, and Plaster Products
E3	3211	Flat Glass
	3221, 3229	Glass and Glassware, Pressed or Blown
	3231	Glass Products Made of Purchased Glass
	3241	Hydraulic Cement
	3281	Cut Stone and Stone Products
	3291-3299	Abrasive, Asbestos, and Miscellaneous Nonmetallic Mineral Products
SECTOR F: PRIMARY METALS		
F1	3312-3317	Steel Works, Blast Furnaces, and Rolling and Finishing Mills
F2	3321-3325	Iron and Steel Foundries
F3	3351-3357	Rolling, Drawing, and Extruding of Nonferrous Metals
F4	3363-3369	Nonferrous Foundries (Castings)
F5	3331-3339	Primary Smelting and Refining of Nonferrous Metals
	3341	Secondary Smelting and Refining of Nonferrous Metals
	3398, 3399	Miscellaneous Primary Metal Products

Table D-1. Sectors of Industrial Activity Covered by This Permit		
Subsector (May be subject to more than one sector/subsector)	**SIC Code or Activity Code[1]**	**Activity Represented**
SECTOR G: METAL MINING (ORE MINING AND DRESSING)		
G1	1021	Copper Ore and Mining Dressing Facilities
G2	1011	Iron Ores
	1021	Copper Ores
	1031	Lead and Zinc Ores
	1041, 1044	Gold and Silver Ores
	1061	Ferroalloy Ores, Except Vanadium
	1081	Metal Mining Services
	1094, 1099	Miscellaneous Metal Ores
SECTOR H: COAL MINES AND COAL MINING-RELATED FACILITIES		
H1	1221-1241	Coal Mines and Coal Mining-Related Facilities
SECTOR I: OIL AND GAS EXTRACTION		
I1	1311	Crude Petroleum and Natural Gas
	1321	Natural Gas Liquids
	1381-1389	Oil and Gas Field Services
SECTOR J: MINERAL MINING AND DRESSING		
J1	1442	Construction Sand and Gravel
	1446	Industrial Sand
J2	1411	Dimension Stone
	1422-1429	Crushed and Broken Stone, Including Rip Rap
	1481	Nonmetallic Minerals Services, Except Fuels
	1499	Miscellaneous Nonmetallic Minerals, Except Fuels
J3	1455, 1459	Clay, Ceramic, and Refractory Materials
	1474-1479	Chemical and Fertilizer Mineral Mining
SECTOR K: HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES		
K1	HZ	Hazardous Waste Treatment, Storage, or Disposal Facilities, including those that are operating under interim status or a permit under subtitle C of RCRA
SECTOR L: LANDFILLS, LAND APPLICATION SITES, AND OPEN DUMPS		
L1	LF	All Landfill, Land Application Sites and Open Dumps
L2	LF	All Landfill, Land Application Sites and Open Dumps, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.60
SECTOR M: AUTOMOBILE SALVAGE YARDS		
M1	5015	Automobile Salvage Yards

Table D-1. Sectors of Industrial Activity Covered by This Permit		
Subsector (May be subject to more than one sector/subsector)	**SIC Code or Activity Code[1]**	**Activity Represented**
SECTOR N: SCRAP RECYCLING FACILITIES		
N1	5093	Scrap Recycling and Waste Recycling Facilities except Source-Separated Recycling
N2	5093	Source-separated Recycling Facility
SECTOR O: STEAM ELECTRIC GENERATING FACILITIES		
O1	SE	Steam Electric Generating Facilities, including coal handling sites
SECTOR P: LAND TRANSPORTATION AND WAREHOUSING		
P1	4011, 4013	Railroad Transportation
	4111-4173	Local and Highway Passenger Transportation
	4212-4231	Motor Freight Transportation and Warehousing
	4311	United States Postal Service
	5171	Petroleum Bulk Stations and Terminals
SECTOR Q: WATER TRANSPORTATION		
Q1	4412-4499	Water Transportation Facilities
SECTOR R: SHIP AND BOAT BUILDING AND REPAIRING YARDS		
R1	3731, 3732	Ship and Boat Building or Repairing Yards
SECTOR S: AIR TRANSPORTATION FACILITIES		
S1	4512-4581	Air Transportation Facilities
SECTOR T: TREATMENT WORKS		
T1	TW	Treatment Works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR Part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the CWA
SECTOR U: FOOD AND KINDRED PRODUCTS		
U1	2041-2048	Grain Mill Products
U2	2074-2079	Fats and Oils Products
U3	2011-2015	Meat Products
	2021-2026	Dairy Products

Table D-1. Sectors of Industrial Activity Covered by This Permit		
Subsector (May be subject to more than one sector/subsector)	**SIC Code or Activity Code[1]**	**Activity Represented**
	2032-2038	Canned, Frozen, and Preserved Fruits, Vegetables, and Food Specialties
	2051-2053	Bakery Products
	2061-2068	Sugar and Confectionery Products
	2082-2087	Beverages
	2091-2099	Miscellaneous Food Preparations and Kindred Products
	2111-2141	Tobacco Products
SECTOR V: TEXTILE MILLS, APPAREL, AND OTHER FABRIC PRODUCT MANUFACTURING; LEATHER AND LEATHER PRODUCTS		
V1	2211-2299	Textile Mill Products
	2311-2399	Apparel and Other Finished Products Made from Fabrics and Similar Materials
	3131-3199	Leather and Leather Products (note: see Sector Z1 for Leather Tanning and Finishing)
SECTOR W: FURNITURE AND FIXTURES		
W1	2434	Wood Kitchen Cabinets
	2511-2599	Furniture and Fixtures
SECTOR X: PRINTING AND PUBLISHING		
X1	2711-2796	Printing, Publishing, and Allied Industries
SECTOR Y: RUBBER, MISCELLANEOUS PLASTIC PRODUCTS, AND MISCELLANEOUS MANUFACTURING INDUSTRIES		
Y1	3011	Tires and Inner Tubes
	3021	Rubber and Plastics Footwear
	3052, 3053	Gaskets, Packing and Sealing Devices, and Rubber and Plastic Hoses and Belting
	3061, 3069	Fabricated Rubber Products, Not Elsewhere Classified
Y2	3081-3089	Miscellaneous Plastics Products
	3931	Musical Instruments
	3942-3949	Dolls, Toys, Games, and Sporting and Athletic Goods
	3951-3955 (except 3952 – see Sector C)	Pens, Pencils, and Other Artists' Materials
	3961, 3965	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal
	3991-3999	Miscellaneous Manufacturing Industries
SECTOR Z: LEATHER TANNING AND FINISHING		
Z1	3111	Leather Tanning and Finishing

Table D-1. Sectors of Industrial Activity Covered by This Permit		
Subsector (May be subject to more than one sector/subsector)	**SIC Code or Activity Code[1]**	**Activity Represented**
SECTOR AA: FABRICATED METAL PRODUCTS		
AA1	3411-3499 (except 3479)	Fabricated Metal Products, Except Machinery and Transportation Equipment, and Coating, Engraving, and Allied Services.
	3911-3915	Jewelry, Silverware, and Plated Ware
AA2	3479	Fabricated Metal Coating and Engraving
SECTOR AB: TRANSPORTATION EQUIPMENT, INDUSTRIAL OR COMMERCIAL MACHINERY		
AB1	3511-3599 (except 3571-3579)	Industrial and Commercial Machinery, Except Computer and Office Equipment (see Sector AC)
	3711-3799 (except 3731, 3732)	Transportation Equipment Except Ship and Boat Building and Repairing (see Sector R)
SECTOR AC: ELECTRONIC, ELECTRICAL, PHOTOGRAPHIC, AND OPTICAL GOODS		
AC1	3571-3579	Computer and Office Equipment
	3812-3873	Measuring, Analyzing, and Controlling Instruments; Photographic and Optical Goods, Watches, and Clocks
	3612-3699	Electronic and Electrical Equipment and Components, Except Computer Equipment
SECTOR AD: NON-CLASSIFIED FACILITIES		
AD1	Other stormwater discharges designated by the Director as needing a permit (see 40 CFR 122.26(a)(9)(i)(C) & (D)) or any facility discharging stormwater associated with industrial activity not described by any of Sectors A-AC. NOTE: Facilities may not elect to be covered under Sector AD. Only the Director may assign a facility to Sector AD.	

[1] A complete list of SIC Codes (and conversions from the newer North American Industry Classification System" (NAICS)) can be obtained from the Internet at www.census.gov/epcd/www/naics.html or in paper form from various locations in the document titled *Handbook of Standard Industrial Classifications*, Office of Management and Budget, 1987.

Appendix E - Procedures Relating to Endangered Species Protection

E.1 Assessing the Effects of Your Discharges and Discharge-Related Activities

You must follow the procedures in this appendix to determine which of the eligibility criteria in Part 1.1.4.5 (i.e., criterion A - E), if any, you qualify under, by assessing the potential effects of applicable stormwater discharges, discharge-related activities, and allowable non-stormwater discharges on listed threatened and endangered species and their designated critical habitat. In accordance with Part 5.2.6.1 of this permit, you must keep any documentation that supports your eligibilty determination, including the completed *Criterion Selection Worksheet* in Part E.4 of this appendix, with your Stormwater Pollution Prevention Plan (SWPPP). You must complete your eligibility determination prior to submitting your Notice of Intent (NOI) for coverage under the MSGP, and must provide all information as required on your NOI form that supports the Part 1.1.4.5 eligibility criterion you qualify under. **Note that if you have determined that you may be eligible under criterion C, you must submit a completed *Criterion C Eligibility Form* to EPA a minimum of 30 days prior to submitting your NOI for permit coverage.**

When evaluating the potential effects of your activities, you must consider effects to listed species or critical habitats within the "action area" of your industrial activity. Action area is defined in Appendix A of the MSGP as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. This includes areas beyond the footprint of the facility that are likely to be affected by stormwater discharges, discharge-related activities, and allowable non-stormwater discharges. For example, discharges of pollutants into downstream areas can increase the "action area" beyond the footprint of the facility.

E.2 Eligibility Criterion

As required by Part 1.1.4.5, you must meet one or more of the following five criteria (A - E) to be eligible for coverage under the permit:

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

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

other operator's certification. You must also provide any documentation in your SWPPP that supports the other operator's eligibility determination, including any additional measures that formed the basis of the other operator's eligibility determination.

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

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

i. A biological opinion that concludes that the action in question (taking into account the effects of your facility's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat;

ii. A biological opinion that concludes that the action is likely to jeopardize listed species or to result in the destruction or adverse modification of critical habitat, and any recommended reasonable and prudent alternatives or reasonable and prudent measures are being implemented; or

iii. Written concurrence from the applicable Service(s) with a finding that your facility's discharges and discharge-related activities are not likely to adversely affect listed species or critical habitat.

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

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

Criterion E. Your industrial activities are the subject of a permit under section 10 of the ESA, and this authorization addresses the effects of your facility's discharges and discharge-related activities on federally listed species and designated critical habitat. To certify your eligibility under this criterion, you must use the *Criterion Selection Worksheet* in Part E.4 of Appendix E. You must also provide supporting documentation for your determination in your NOI and SWPPP, including a copy of the permit from the Services.

E.3 Eligibility Compliance

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

E.4 Criterion Selection Worksheet

Instructions:

You must follow the step-by-step instructions in this worksheet in order to determine your eligibility under the Part 1.1.4.5 criteria. Alternatively, if you prefer to use a Biological Evaluation (or its equivalent) in making a determination of your eligibility, you should ensure all of the information requested below for the criterion you are selecting is fully addressed in such a document. You must attach this completed document or Biological Evaluation (or equivalent) to your SWPPP to support your Part 1.1.4.5 eligibility determination.

You may need the following information in order to determine your eligibility:

1) Your facility's draft Stormwater Pollution Prevention Plan (SWPPP), including information on receiving waters.
2) Any additional site-specific information related to your facility's discharges and discharge-related activities.
3) The list(s) of endangered and threatened species and any designated critical habitat in your action area, as acquired from the Fish and Wildlife Service and/or the National Marine Fisheries Services. Directions on how to acquire species lists is described in a subsequent section below.

Note that much of the information needed to complete this worksheet is also needed in order to prepare your NOI for permit coverage, and is also information that you must develop as part of your SWPPP. You may copy and paste any information that is already required and completed in your SWPPP into this worksheet. (*You may also decide to make minor changes or additions to your SWPPP while filling out the worksheet for clarification purposes or to address any concerns that are identified below.)*

STEP 1: DETERMINE IF THE ELIGIBILITY REQUIREMENTS OF CRITERION B, D, OR E CAN BE MET.

A. You should first determine whether you are eligible under criterion B (because another operator has accounted for your action area in their valid certification of eligibility under the 2015 MSGP), criterion D (because of a previously completed ESA section 7 consultation), or criterion E (because of a previously issued ESA section 10 permit).

B. If your facility is likely to be eligible under criterion B, D or E, you may skip ahead to the applicable criterion's requirements to determine if you are eligible. If after completing the relevant section you find that your facility does not in fact meet criteria B, D, or E (e.g., due to difference in action area described, lack of analysis of appropriate effects, new listings or designation of critical habitat), proceed to Step 2 below.

C. If your facility is not likely to be eligible under criterion B, D or E, you may proceed directly to Step 2.

Criterion B Eligibility Requirements

If your industrial activities were already addressed in another operator's valid certification of eligibility under the current 2015 MSGP, you may be eligible for coverage under criterion B. In order to be eligible for coverage under criterion B, you must confirm that all the following are true:

☐ You have confirmed that the other operator's certification of eligibility accounted for your action area and that the eligibility determination was valid.

☐ There has been no lapse of NPDES permit coverage in the other operator's certification.

☐ You will comply with all measures that formed the basis of the other operator's valid certification of eligibility. List any measures here (or enter "N/A" if none exist):

- **If all of the above are true, you may select criterion B on your NOI.** You must include in your NOI the NPDES ID assigned to the other operator's authorization under this permit, and a description of the basis for the criterion selected on your NOI form, including the eligibility criterion selected by the other operator's certification. You must include this completed worksheet in your SWPPP.
- **If any of the above are not true, you may not select criterion B and must proceed to Step 2.** For example, if there are any listed species in your action area that were not addressed in the other operator's certification, you are not eligible under criterion B.

Criterion D Eligibility Requirements

If consultation under section 7 of the ESA has been concluded, you may be eligible for coverage under criterion D. In order to be eligible or coverage under criterion D, you must confirm that all the following are true:

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

i. A biological opinion that concludes that the action in question (taking into account the effects of your facility's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat. The biological opinion must have included the effects of your facility's discharges[a] and discharge-related activities on all the listed species and designated critical habitat in your action area;

ii. A biological opinion that concludes that the action is likely to jeopardize listed species or to result in the destruction or adverse modification of critical habitat, and any recommended reasonable and prudent alternatives or reasonable and prudent measures are being implemented; or

iii. Written concurrence (e.g., letter of concurrence) from the applicable Service(s) with a finding that concludes that your facility's discharges and discharge-related activities are not likely to adversely affect listed species or designated critical habitat. The concurrence letter must have included the effects of your facility's discharges and discharge-related activities on all the listed species and designated critical habitat on your species list(s) acquired from the Service(s) as part of this worksheet.

☐ The consultation does not warrant reinitiation under 50 CFR §402.16; or, if reinitiation of consultation is required (e.g., due to a new species listing or critical habitat designation; new information), you have reinitiated the cosultation and the result of the consultation is consistent with the statements above. Attach a copy of any reinitiation documentation from the Services or other consulting federal agency.

- **If all of the above are true, you may select criterion D on your NOI.** You must also provide a description of the basis for the criterion selected on your NOI form and you must include this completed worksheet in your SWPPP. In both your SWPPP and NOI you must also provide the Biological Opinion (or PCTS tracking number) or concurrence letter and any other documentation supporting your eligibility determination.
- **If any of the above are not true, you may not select criterion D and must proceed to Step 2.** For example, if the biological opinion or written concurrence did not include the effects of the discharge or discharge-related activities as described above (e.g., the previous consultation covered some but not all of the species or critical habitat in your action area as shown on your species list), or if the consultation is no longer valid (e.g., due to new species listings), you are not eligible under criterion D.

Criterion E Eligibility Requirements

If your industrial activities are the subject of a permit under section 10 of the ESA, and this authorization addresses the effects of your facility's discharges and discharge-related activities on federally listed species and designated critical habitat in your action area, you may be eligible for coverage under criterion E. In order to be eligible or coverage under criterion E, you must confirm that the following is true:

☐ A permit has been issued under section 10 of the ESA. The permit authorization specifically addresses the effects of your facility's discharges and discharge-related activities (if applicable) on all federally-listed species and designated critical habitat in your action area.

[a] Effects of discharge includes, but is not limited to, the analysis of the hydrological, chemical, and biological effects of the discharge on listed species, their prey, and their habitat, as well as critical habitat, where designated. For example, the effects analysis would have evaluated whether the various pollutants in the discharge (e.g., TSS, metals) would adversely affect listed species through exposure to the pollutants, or to their prey or habitat. Effects that look only at short-term effects unrelated to the stormwater discharge effects to listed species are not sufficient for these purposes.

- **If the above is true, you may select criterion E on your NOI.** You must also provide a description of the basis for the criterion selected on your NOI form and must include this completed worksheet in your SWPPP. In both your SWPPP and your NOI you must provide a copy of the section 10 permit issued by the Services.
- **If the above is not true, you may not select criterion E and must proceed to Step 2.** For example, if a permit has been issued under section 10 of the ESA, but the permit authorization did not address the effects of your facility's discharges and/or discharge-related activities on all federally-listed species and designated critical habitat in your action area, you are not eligible under criterion E, but you should attach a copy of the permit to the SWPPP for reference.

STEP 2: DETERMINE THE EXTENT OF YOUR ACTION AREA

You must determine whether species listed as either threatened or endangered, or their critical habitat(s) (see definitions of these terms in Appendix A), are located in your facility's action area (i.e., all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action, including areas beyond the footprint of the facility that are likely to be affected by stormwater discharges, discharge-related activities, and allowable non-stormwater discharges). Consider the following in determining the action area for your facility:

- Discharges of pollutants into downstream areas can expand the action area well beyond the footprint of your facility and the discharge point(s). Take into account the controls you will be implementing to minimize pollutants and the receiving waterbody characteristics (e.g., perennial, intermittent, ephemeral) in determining the extent of physical, chemical, and/or biotic effects of the discharges. All receiving waterbodies that could receive pollutants from your facility must be included in your action area.
- Discharge-related activities must also be accounted for in determining your action area. Discharge-related activities are any activities that cause, contribute to, or result in stormwater and allowable non-stormwater point source discharges, and measures such as the siting, construction, and operation of stormwater controls to control, reduce, or prevent pollutants from being discharged. For example, any new or modified stormwater controls that will have noise or other similar effects, and any disturbances associated with construction of controls, are part of your action area.

If you have any questions about determining the extent of your action area, you may contact EPA or the Services for assistance.

You must include a map **and a written description of** the action area of your facility in Attachment 1 of this appendix. You may choose to include the map that is generated from the FWS' on-line mapping tool IPaC (the *Information, Planning, and Consultation System*) located at http://ecos.fws.gov/ipac/ (see Step 3 for information about using this tool).

You must proceed to Step 3 below.

STEP 3: DETERMINE IF LISTED THREATENED OR ENDANGERED SPECIES AND/OR CRITICAL HABITAT ARE PRESENT IN YOUR ACTION AREA.

You must determine whether species listed as either threatened or endangered under the Endangered Species Act (ESA), and/or their designated critical habitat(s)[b], are located in your facility's action area. Federally listed species and designated critical habitat are under the purview of the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS) (together, "Services"), and in many cases, species and critical habitat lists will need to be acquired from both Services.

[b] See definitions of these terms in Appendix A of the MSGP.

- For NMFS species and critical habitat information, use the following webpages, which provide up-to-date information on listed species (http://www.nmfs.noaa.gov/pr/species/esa/) and critical habitat (http://www.nmfs.noaa.gov/pr/species/criticalhabitat.htm). To determine the field office that corresponds to your facility, go to http://www.nmfs.noaa.gov/ (under the left tab for "Regions"). For NMFS species in the Greater Atlantic Region, go to http://www.greateratlantic.fisheries.noaa.gov/protected/section7/guidence/maps/index.html.
- For FWS species information, use the on-line mapping tool IPaC (the *Information, Planning, and Consultation System*) located at http://ecos.fws.gov/ipac/, and follow these steps:
  - *Select Get Started*.
  - Select Enter Project Location
  - Use an address, city name or other location to zoom into your project area
  - Use the zoom feature to see the entire extent of your action area on the screen.
  - Use one of the mapping features (e.g., Polygon or line feature) to draw your action.
    - For the aquatic portion of your action area, trace the waterbody(ies) with the tool to characterize your action area.
    - If your proposal will include any upland activities (i.e., discharge-related activities), or if there is some aspect of your discharge that would potentially result in effects to terrestrial species, include the corresponding upland areas within your action area.
    - When you are done, press *Continue*.
  - Select Request an Official Species List
  - Complete the fields on the Official Species List Request page, and include "(MSGP)" at the end of the project description.
    - For Classification, select "Water Quality Modification".
    - Select the appropriate requesting agency/organization type (for most applicants, this should be "Other").
  - Submit the request to acquire an Official Species List, which should show both listed species as well as any designated critical habitat that are present in the action area in the previous step.
  - Note: *If a link to an Official Species List is not available on the page, follow the web link of the office(s) indicated, or contact the office directly by mail or phone if a web link is not shown*.

The principle authority for critical habitat designations and associated requirementsis found at 50 CFR Parts 17 and 226. See http://www.access.gpo.gov.

Attach a copy of the species and critical habitat list(s) from the Service(s) to Attachment 2 of this appendix and use the list(s) to complete the rest of this worksheet. For FWS species, include the full printout from your IPaC query/Official Species List in Attachment 2. You can include the map from your IPaC query in Attachment 1.

If after following the steps you have determined that there are no listed species and/or designated critical habitat in your action area, you may be eligible for coverage under criterion A.

If you have determined that there are or may be listed species and/or designated critical habitat in your action area, you are not eligible under criterion A and must proceed to Step 4 below.

Criterion A Eligibility Requirements

In order to be eligible for coverage under criterion A, you must confirm that the following is true:

☐ I have confirmed there to be no listed species and no critical habitat in my action area.

- **If the above is true, you may select criterion A on your NOI form.** You must also provide a description of the basis for the criterion selected on your NOI form. You must include this completed worksheet in your SWPPP. *Note: If your Official Species List from the USFWS indicated no species or critical habitat were present in your action area, include the full consultation tracking code at the top of your Official Species List in your NOI submittal in the question "Provide a brief summary of the basis for the criterion selected in Appendix E." If an Official Species List was not available on IPaC, list the contact date and name of the Service staff with whom you corresponded to verify no USFWS species or critical habitat were present in your action area.*
- If the above is not true, you may not select criterion A and must proceed to **Step 4** to determine if you can become eligible under criterion C.

Note: For existing dischargers that have previously obtained coverage under criterion A, you must verify whether listed species and/or critical habitat are expected to exist in your action area, as described above. Please note that if you now find that your action area overlaps with listed species or critical habitat, you must proceed to Step 4.

STEP 4: DETERMINE IF YOUR INDUSTRIAL FACILITY'S DISCHARGES OR DISCHARGE-RELATED ACTIVITIES ARE LIKELY TO ADVERSELY AFFECT LISTED THREATENED OR ENDANGERED SPECIES OR DESIGNATED CRITICAL HABITAT AND ANY MEASURES THAT MUST BE IMPLEMENTED TO AVOID ADVERSE EFFECTS

If in Step 3 you determined that listed species and/or designated critical habitat could exist in your action area, you must next assess whether your discharges and discharge-related activities are likely to adversely affect listed threatened or endangered species or designated critical habitat, and whether any additional measures are necessary to ensure no likely adverse effects. In order to make a determination of your facility's likelihood of adverse effects, you must complete the attached *Criterion C Eligibility Form* and must submit this form to EPA a minimum of 30 days prior to filing your NOI for permit coverage. After you submit your *Criterion C Eligibility Form*, you may be contacted by EPA with additional measures that you must implement in order to ensure your eligibililty under criterion C.

Criterion C Eligibility Form

Instructions:

In order to be eligible for coverage under criterion C, you must complete the following form and you must submit it to EPA following the instructions in Section VII a **minimum of 30 days prior to filing your NOI for permit coverage.** After you submit your form, you may be contacted by EPA with additional measures (e.g., additional stormwater controls or modifications to your discharge-related activities) that you must implement in order to ensure your eligibility under criterion C.

If after completing this worksheet you cannot make a determination that your discharges and discharge-related activities are not likely to adversely affect listed threatened or endangered species or designated critical habitat, you must submit this completed worksheet to EPA, and you may not file your NOI for permit coverage until you receive a determination from EPA that your discharges and/or discharge-related activities are not likely to adversely affect listed species and critical habitat.

Note: Much of the information needed for this form can be obtained from your draft SWPPP which will be needed when you file your NOI.

SECTION I. OPERATOR, FACILITY, AND SITE LOCATION INFORMATION.

1) **Operator Information**

   a) **Operator Name:** _____

   b) **Point of Contact**

   First Name: _____ **Last Name:** _____

   Phone Number: _____

   E-mail: _____

2) **Facility Information**

   a) **Facility Name:** _____

   b) **Check which of the following applies:**

   ☐ I am seeking coverage under the MSGP as a new discharger or as a new source

   ☐ I am seeking coverage under the MSGP as an existing discharger and my facility has modifications to its discharge characteristics (e.g., changes in discharge flow or area drained, different pollutants) and/or discharge-related activities (e.g., stormwater controls)

   Indicate the number of years the facility has been in operation: _____ years

   Provide your NPDES ID (i.e., permit tracking number) from your previous MSGP coverage: _____

   ☐ I am seeking coverage under the MSGP as an existing discharger and there are no modifications to my facility.

   Indicate the number of year the facility has been in operation: _____ years

   Provide your NPDES ID (i.e., permit tracking number) from your previous MSGP coverage: _____

c) Facility Address:

Address 1: _____

Address 2: _____

City: _____ **State:** _____ **Zip Code:** _____

d) Identify the primary industrial sector to be covered under the 2015 MSGP:

SIC Code _____ or Primary Activity Code _____

Sector _____ and Subsector _____

e) Identify the sectors of any co-located activities to be covered under the 201r MSGP:

Sector _____ Subsector _____

Sector _____ Subsector _____

Sector _____ Subsector _____

Sector _____ Subsector _____

Sector _____ Subsector _____

Sector _____ Subsector _____

f) Estimated area of industrial activity exposed to stormwater: _____ **acres**

g) Provide a general description of the industrial activities that are taking place at this facility:

3) <u>Receiving Waters Information</u>

List all the stormwater outfalls from your facility.				**For each outfall, provide the following receiving water information:**	
Outfall ID	**Design Capacity (if known)**	**Latitude (decimal degrees)**	**Longitude (decimal degrees)**	**Name of the receiving water that receives stormwater from the outfall and/or from the MS4 that the outfall discharges to**	**Type of Waterbody (e.g., lake, pond, river/stream/creek, estuarine/marine water)**
		_ _ _ . _ _ _ _	_ _ _ . _ _ _ _		
		_ _ _ . _ _ _ _	_ _ _ . _ _ _ _		
		_ _ _ . _ _ _ _	_ _ _ . _ _ _ _		
		_ _ _ . _ _ _ _	_ _ _ . _ _ _ _		
		_ _ _ . _ _ _ _	_ _ _ . _ _ _ _		

SECTION II. ACTION AREA

Ensure that your action area is described in Attachment 1, as required in Step 2.

SECTION III. LISTED SPECIES AND CRITICAL HABITAT LIST

Ensure that the listed species and critical habitat list is included in Attachment 2, as required in Step 3.

Review your species list in Attachment 2, choose one of the following three statements, and follow the corresponding instructions:

> ***Note:*** For the purposes of this permit, "terrestrial species" would not include animal or plant species that 1) spends any portion of its life cycle in a waterbody or wetland, or 2) if an animal, depends on prey or habitat that occurs in a waterbody or wetland. For example, shorebirds, wading birds, amphibians, and certain reptiles would not be considered terrestrial species under this definition. Please also be aware that some terrestrial animals (e.g., certain insects, amphibians) may have an aquatic egg or larval/juvenile phase.

☐ The species list includes only terrestrial species and/or their designated critical habitat. No aquatic or aquatic-dependent species or their critical habitat are present in the action area. **You may skip to Section IV of this form. You are not required to fill out Section V.**

☐ The species list includes only aquatic and/or aquatic-dependent species and/or their designated critical habitat. No terrestrial species or their critical habitat are present in the action area. **You may skip to Section V of this form and are not required to fill out Section IV.**

☐ The species list includes both terrestrial and aquatic or aquatic-dependent species and/or their designated critical habitat. **You must fill out both Sections IV and V of this form.**

SECTION IV. EVALUATION OF DISCHARGE-RELATED ACTIVITIES EFFECTS

Note: You are only required to fill out this section if your facility's action area contains terrestrial species and/or their designated critical habitat. If your action area only contains aquatic and/or aquatic-dependent species and/or their designated critical habitat, you can skip directly to Section V.

Most of the potential effects related to coverage under the MSGP are assumed to occur to aquatic and/or aquatic-dependent species. However, in some cases, potential effects to terrestrial species and/or their critical habitat should be considered as well from any discharge-related activities that occur during coverage under the MSGP. Examples of discharge-related activities that could have potential effects on listed terrestrial species or their critical habitat include the storage of materials and land disturbances associated with stormwater management-related activities (e.g., the installation or placement of stormwater control measures).

A. Select the applicable statement(s) below and follow the corresponding instructions:

☐ There are no discharge-related activities that are planned to occur during my coverage under the MSGP. You can conclude that your discharge-related activities will have no likely adverse effects, and:

- If there are any aquatic or aquatic-dependent species and/or their critical habitat in your action area, you must skip to Section V, *Evaluation of Discharge Effects,* below.
- If there are no aquatic or aquatic-dependent species you may skip to Section VI and verify that your activities will have no likely adverse effects. You must submit this form to EPA as specified in Section VII of this form. You may select criterion C on your NOI form and may submit your NOI for permit coverage 30 days after you have submitted this *Criterion C Eligibility Form*. You must also provide a description of the basis for the criterion you selected on your NOI form, **including the species and critical habitat list(s) in your action area**, as well as any other documentation supporting your eligibility. You must also include this completed *Criterion C Eligiblity Form* in your SWPPP.

☐ There are discharge-related activities planned as part of the proposal. Describe your discharge-related activities in the following box and continue to (b) below.

Describe discharge-related activities:

B. In order to ensure any discharge-related activities will have no likely adverse effects on listed species and/or their designated critical habitat, you must certify that all the following are true:

☐ Discharge-related activities will occur:

- on previously cleared/developed areas of the site where maintenance and operation of the facility are currently occurring or where existing conditions of the area(s) in which the discharge-related activities will occur precludes its use by listed species (e.g., work on existing impervious surfaces, work occurring inside buildings, area is not used by species), and
- if discharge-related activities will include the establishment of structures (including, but not limited to, infiltration ponds and other controls) or any related disturbances, these structures and/or disturbances will be sited in areas that will not result in isolation or degradation of nesting, breeding, or foraging habitat or other habitat functions for listed animal species (or their designated critical habitat), and will avoid the destruction of native vegetation (including listed plant species).

☐ If vegetation removal (e.g., brush clearing) or other similar activities will occur, no terrestrial listed species that use these areas for habitat would be expected to be present during vegetation removal.

If all the above are true, you can conclude that your discharge-related activities will have no likely adverse effects, and:

- If there are any aquatic or aquatic-dependent species and/or critical habitat in your action area, you must skip to Section V, *Evaluation of Discharge Effects,* below.
- If there are no aquatic or aquatic-dependent species you may skip to Section VI and verify that your activities will have no likely adverse effects. You must submit this form to EPA as specified in Section VII of this form. You may select criterion C on your NOI and may submit your NOI for permit coverage 30 days after you have submitted this completed form. You must also provide a description of the basis for the criterion you selected on your NOI form, **including the species and critical habitat list(s)**, and any other documentation supporting your eligibility. You must also include this completed *Criterion C Eligibility Form* in your SWPPP.
- **If any of the above are not true**, you cannot conclude that your discharge-related activities will have no likely adverse effects. You must complete the rest of this form (if applicable), and must submit the form to EPA for assistance in determining your eligibility for coverage.

SECTION V. EVALUATION OF DISCHARGE EFFECTS

Note: *You are only required to fill out this section if your facility's action area includes aquatic and/or aquatic-dependent species and/or their critical habitat.*

In this section, you will evaluate the likelihood of adverse effects from your facility's discharges. The scope of effects to consider will vary with each facility and species/critical habitat characteristics. The following are examples of discharge effects you should consider:

- *Hydrological Effects.* Stormwater discharges may adversely affect receiving waters from pollutant parameters such as turbidity, temperature, salinity, or pH. These effects will vary with the amount of stormwater discharged and the volume and condition of the receiving water. Where a stormwater discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely.
- *Toxicity of Pollutants.* Pollutants in stormwater may have toxic effects on listed species and may adversely affect critical habitat. Exceedances of benchmarks, effluent limitation guidelines, or state or tribal water quality requirements may be indicative of potential adverse effects on listed species or critical habitat. However, some listed species may be adversely affected at pollutant concentrations below benchmarks, effluent limitation guidelines, and state or tribal water quality standards. In addition, stormwater pollutants identified in Part 5.2.3.2 of your SWPPP, but not monitored as benchmarks or effluent limitation guidelines, may also adversely affect listed species and critical habitat.

As these effects are difficult to analyze for listed species, their prey, habitat, and designated critical habitat, this form helps you to analyze your discharges and make a determination of whether your discharges will have likely adverse effects and whether there are any additional controls you can implement to ensure no likely adverse effects.

A. Evaluation of Pollutants and Controls to Avoid Adverse Effects. In this section, you must document all of your pollutant sources and pollutants expected to be discharged in stormwater. You must also document the controls you will implement to avoid adverse effects on listed aquatic and aquatic-dependent species. You must include specific details about the expected effectiveness of the controls in avoiding adverse effects to the listed aquatic-and aquatic-dependent species. Attach additional pages if needed.

Potential Pollutant Source	Potential Pollutants	**Controls to Avoid Adverse Effects on Listed Aquatic and Aquatic-Dependent Species.** Include information supporting why the control(s) will ensure no adverse effects, including any data you have about the effectiveness of the control(s) in reducing pollutant concentrations. You may also attach photos of your controls to this form.
e.g., **vehicle and equipment fueling**	***e.g.,*** • **Oil & grease** • **Diesel** • **Gasoline** • **TSS** • **Antifreeze**	***e.g.,*** • **Fueling operators (including the transfer of fuel from tank trucks) will be conducted on an impervious or contained pad or under cover** • **Drip pans will be used where leaks or spills of fuel can occur and where making and breaking hose connections** • **Spill kit will be kept on-site in close proximity to potential spill areas** • **Any spills will be cleaned-up immediately using dry clean up methods** • **Stormwater runoff will be diverted around fueling areas using diversion dikes and curbing**

Potential Pollutant Source	Potential Pollutants	Controls to Avoid Adverse Effects on Listed Aquatic and Aquatic-Dependent Species.

Potential Pollutant Source	Potential Pollutants	Controls to Avoid Adverse Effects on Listed Aquatic and Aquatic-Dependent Species.

☐ Check if you are not able to make a preliminary determination that any of your pollutants will be controlled to a level necessary to avoid adverse effects on aquatic and/or aquatic-dependent listed species and their designated critical habitat. You must check in Section VI that you are unable to make a determination of no likely adverse effects, and must complete the rest of the form. You must submit your completed form to EPA for assistance in determining your eligibility for coverage.

B. Analysis of Effects Based on Past Monitoring Data. Select which of the following applies to your facility:

☐ I have no previous monitoring data for my facility because there are no applicable monitoring requirements for my facility's sector(s).

☐ I have no previous monitoring data for my facility because I am a new discharger or a new source, but I am subject to monitoring under the 2015 MSGP. You must provide information to support a conclusion that your facility's discharges are not expected to result in benchmark or numeric effluent limit exceedances that will adversely affect listed species or their critical habitat:

☐ My facility has not had any exceedances under the 2008 MSGP of any required benchmark(s) or numeric effluent limits.

☐ My facility has had exceedances of one or more benchmark(s) or numeric effluent limits under the 2008 MSGP, but I have addressed them during my coverage under the 2008 MSGP, or in my evaluation of controls to avoid adverse effects in (A) above. Describe all actions (including specific controls) that you will implement to ensure that the pollutants in your discharge(s) will not result in likely adverse effects from future exceedances.

☐ Check if your facility has had exceedances of one or more benchmarks or numeric effluent limits under the 2008 MSGP and you have not been able to address them to avoid adverse effects from future exceedances, or if you are a new discharger or a new source but you are not sure if you can avoid adverse effects from possible exceedances. You must check in Section VI that you are unable to make a determination of no likely adverse effects. You must submit your completed form to EPA for assistance in determining your eligibility for coverage. You may not file your NOI for permit coverage until you are able to make a determination that your discharges will avoid adverse effects on listed species and designated critical habitat.

SECTION VI VERIFICATION OF PRELIMINARY EFFECTS DETERMINATION

Based on Steps I – V of this form, you must verify your preliminary determination of effects on listed species and designated critical habitat from your discharges and/or discharge-related activities :

☐ Following the applicable Steps in I – V above, I have made a preliminary determination that my discharges and/or discharge-related activities are not likely to adversely affect listed species and designated critical habitats.

☐ Following the applicable Steps in I – V above, I am **not** able to make a preliminary determination that my discharges and/or discharge-related activities are not likely to adversely affect listed species and designated critical habitats.

Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name:

Title:

Signature: _____ Date: / /

E-mail:

SECTION VII CRITERION C ELIGIBILITY FORM SUBMISSION INSTRUCTIONS

You must submit this completed form to EPA at msgpesa@epa.gov, including any attachments and any additional information that demonstrates how you will avoid or eliminate adverse effects to listed species or critical habitat (e.g., specific controls you will implement to avoid or eliminate adverse effects). **Any missing or incomplete information may result in a delay of your coverage under the permit**.

If you have made a preliminary determination that your discharges and/or discharge-related activities are not likely to adversely affect listed species and critical habitat, this form must be submitted a minimum of 30 days prior to submitting your NOI for permit coverage under criterion C. Please note that during either the 30-day *Criterion C Eligibility Form* review period prior to your NOI submission, or within 30 days after your NOI submission and before you have been authorized for permit coverage, EPA may advise you that additional information is needed, or that there are additional measures you must implement to avoid likely adverse effects.

If you are unable to make a preliminary determination that your discharges and/or discharge-related activities are not likely to adversely affect listed species and critical habitat, this worksheet must be submitted to EPA, but you may not file your NOI for permit coverage until you have received a determination from EPA that your discharges and/or discharge-related activities are not likely to adversely affect listed species and critical habitat.

Attachment 1

Include a map **and a written description** of the action area of your facility, as required in Step 2. You may choose to include the map that is generated from the FWS' on-line mapping tool IPaC (the *Information, Planning, and Consultation System*) located at http://ecos.fws.gov/ipac/.

The written description of your action area that accompanies your action area map must explain your rationale for the extant of the action area drawn on your map. For example, your action area written description may look something like this:

> *The action area for the (name of your facility)'s stormwater discharges extends downstream from the outfall(s) in (name of receiving waterbody) (# of meters/feet/kilometers/miles). The downstream limit of the action area reflects the approximate distance at which the discharge waters and any pollutants would be expected to cause potential adverse effects to listed species and/or critical habitat because (insert rationale). The action area does/does not extend to the (name of receiving waterbody)'s confluence with (name of confluence waterbody) because (insert rationale).*

Note that you action area written description will be highly site-specific, depending on the expected effects of your facility's dishcarges and discharge-related activities, receiving waterbody characteristics, etc.

Attachment 2

List or attach the listed species and critical habitat in your action area on this sheet, as required in Step 3. You must include a list for applicable listed NMFS and FWS species and critical habitat. If there are listed species and/or critical habitat for only one Service, you must include a statement confirming there are no listed species and/or critical habitat for the other Service. For FWS species, include the full printout from your IPaC query. *Note: If your Official Species List from the USFWS indicated no species or critical habitat were present in your action area, include the full consultation tracking code at the top of your Official Species List in your NOI submittal in the question "Provide a brief summary of the basis for the criterion selected in Appendix E." If an Official Species List was not available on IPaC, list the contact date and name of the Service staff with whom you corresponded to identify the existence of any USFWS species or critical habitat present in your action area.*

Appendix F - Procedures Relating to Historic Properties Preservation

F.1 Background

Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects of Federal "undertakings", such as the issuance of this permit, on historic properties that are either listed or eligible for listing on the National Register of Historic Places. To address any issues relating to historic properties in connection with the issuance of this permit, EPA has developed the screening process in this appendix that enables facility operators to appropriately consider the potential impacts, if any, from the installation of stormwater controls that involve subsurface disturbance, on historic properties and to determine whether actions can be taken, if applicable, to mitigate any such impacts. Although the coverage of individual industrial facilities under this permit does not constitute separate Federal undertakings, the screening process in this appendix provides an appropriate site-specific means of addressing historic property issues in connection with EPA's issuance of the permit.

Before an operator is eligible for coverage under the 2015 MSGP (unless otherwise noted, all references to "eligible" or "eligibility" refer only to coverage under the 2015 MSGP), the operator must meet one of the certification criteria related to historic properties included in the permit. In the event an operator cannot meet any of the certification criteria included in the permit relating to historic properties, the operator must apply for an individual permit.

Key Terms

Historic Property – Prehistoric or historic districts, sites, buildings, structures, or objects that are included in or eligible for inclusion in the National Register of Historic Places, including artifacts, records, and remains that are related to and located within such properties.

ACHP – **Advisory Council on Historic Preservation**; an independent Federal agency.

SHPO – The State Historic Preservation Officer for a particular state.

THPO or Authorized Tribal Representative – The Tribal Historic Preservation Officer for a particular Tribe, or if there is no THPO, the representative designated by such Tribe for NHPA purposes. Historic properties could have significance to more than one Indian tribe; therefore, all Indian tribes that attach religious and cultural significance to a historic property must be identified and included in the historic properties screening process.

Area of Potential Effects (APE) – The geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

You must meet one or more of the four criteria (A-D), which are also included in Part 1.1.4.6, to be eligible for coverage under this permit.

Activities with No Potential to Have an Effect on Historic Properties

A determination that a Federal undertaking has no potential to have an effect on historic properties fulfills an agency's obligations under the NHPA. EPA has reason to believe that the vast majority of activities authorized under the MSGP have no potential to have effects on historic properties. The purpose of this permit is to control pollutants that may be transported in stormwater runoff from industrial facilities. EPA does not anticipate effects on historic properties from the pollutants in the stormwater and allowable non-stormwater discharges from these industrial facilities. Thus, to the extent EPA's issuance of this general permit authorizes discharges of such constituents, confined to existing stormwater channels or natural drainage areas; the permitting action does not have the potential to cause effects on historic properties.

In addition, the overwhelming majority of sources covered under this permit will be facilities that are seeking renewal of previous permit coverage. These existing dischargers should have already addressed NHPA issues in the 2008 MSGP as they were required to certify that they

were either not affecting historic properties or they had obtained written agreement from the applicable State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) regarding methods of mitigating potential impacts. Both existing and new dischargers must follow the historic property screening procedures to determine their eligibility. EPA is not aware of any impacts on historic properties from activities covered under the 2008 MSGP, or, for that matter, any need for a written agreement. Therefore, to the extent this permit authorizes renewal of prior coverage without relevant changes in operations, it has no potential to have an effect on historic properties.

Activities with Potential to Have an Effect on Historic Properties

EPA believes this permit may have some potential to have an effect on historic properties where permittees construct and/or install stormwater control measures that involve subsurface disturbance and impact less than one (1) acre of land to comply with this permit. (Ground disturbances of one (1) acre or more require coverage under a different permit, the Construction General Permit.) Where you have to disturb the land through the construction and/or installation of control measures, there is a possibility that artifacts, records, or remains associated with historic properties could be impacted. Therefore, if you are establishing new or altering existing control measures to manage your stormwater that will involve subsurface ground disturbance of less than one (1) acre, you will need to ensure (1) that historic properties will not be impacted by your activities or (2) that you have consulted with the appropriate SHPO, THPO, or other tribal representative regarding measures that would mitigate or prevent any adverse effects on historic properties.

Examples of Control Measures Which Involve Subsurface Disturbance

EPA reviewed typical control measures currently employed to determine which practices involve some level of earth disturbance. The types of control measures that are presumptively expected to cause subsurface ground disturbance include:

- Dikes
- Berms
- Catch Basins
- Ponds
- Ditches
- Trenches
- Culverts
- Land manipulation: contouring, sloping, and grading
- Channels
- Perimeter Drains
- Swales

EPA cautions dischargers that this list is non-inclusive. Other control measures that involve earth disturbing activities that are not on this list must also be examined for the potential to affect historic properties.

Historic Property Screening Process

You should follow the following screening process in order to certify your compliance with historic property eligibility requirements under this permit (see Part 1.1.4.6). The following four steps describe how applicants can meet the permit eligibility criteria for protection of historic properties under this permit:

Step One: *Are you an existing facility that is reapplying for certification under the 2015 MSGP?*

If you are an existing facility you should have already addressed NHPA issues. To gain coverage under the 2008 MSGP you were required to certify that you were either not affecting historic properties or had obtained written agreement from the relevant SHPO or THPO regarding methods of mitigating potential impacts. As long as you are not constructing or installing any new stormwater control measures then you have met eligibility Criterion A of the MSGP. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

If you are an existing facility and will construct or install stormwater control measures that require subsurface disturbance of less than one (1) acre then you should proceed to Step Three. (Note: Construction activities disturbing one (1) acre or more are not eligible for coverage under this permit.)

If you are a new facility then you should proceed to Step Two.

Step Two: *Are you constructing or installing any stormwater control measures that require subsurface disturbance of less than one (1) acre?*

If, as part of your coverage under this permit, you are not building or installing control measures on your site that cause less than one (1) acre of subsurface disturbance, then your discharge-related activities do not have the potential to have an effect on historic properties. You have no further obligations relating to historic properties. You have met eligibility Criterion A of the MSGP. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

If the answer to the Step Two question is yes, then you should proceed to Step Three.

Step Three: *Have prior earth disturbances determined that historic properties do not exist, or have prior disturbances precluded the existence of historic properties?*

If previous construction either revealed the absence of historic properties or prior disturbances preclude the existence of historic properties, then you have no further obligations relating to historic properties. You have met eligibility Criterion B of the MSGP. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

If the answer to the Step Three question is no, then you should proceed to Step Four.

Step Four: *Contact the appropriate historic preservation authorities*

Where you are building and/or installing control measures affecting less than one (1) acre of land to control stormwater or allowable non-stormwater discharges associated with this

permit, and the answer to Step Three is no, then you should contact the relevant SHPO, THPO, or other tribal representative to determine the likelihood that artifacts, records, or remains are potentially present on your site. This may involve examining local records to determine if historic artifacts have been found in nearby areas, as well as limited surface and subsurface examination carried out by qualified professionals.

If through this process it is determined that such historic properties potentially exist and may be impacted by your construction or installation of control measures, you should contact the relevant SHPO, THPO, or tribal representative in writing and request to discuss mitigation or prevention of any adverse effects. The letter should describe your facility, the nature and location of subsurface disturbance activities that are contemplated, any known or suspected historic properties in the area, and any anticipated effects on such properties. The letter should state that if the SHPO, THPO, or tribal representative does not respond within 30 days of receiving your letter, you may submit your NOI without further consultation. EPA encourages applicants to contact the appropriate authorities as soon as possible in the event of a potential adverse effect to an historic property.

If the SHPO, THPO, or tribal representative sent you a response within 30 days of receiving your letter and you enter into, and comply with, a written agreement with the SHPO, THPO, or other tribal representative regarding how to address any adverse impacts on historic properties, you have met eligibility Criterion C. In this case, you should retain a copy of the written agreement consistent with Part 5.1.6.2 of the MSGP. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA delay authorization based on concerns about potential adverse impacts to historic properties. However, EPA would generally accept any written agreement as fully addressing such concerns unless new information was brought to the Agency's attention that was not considered in your previous discussions with the SHPO, THPO or other tribal representative.

If you receive a response within 30 days after the SHPO, THPO, or tribal representative received your letter and you consult with the SHPO, THPO or tribal representative regarding adverse impacts to historic properties and measures to mitigate them but an agreement cannot be reached between you and the SHPO, THPO, or other tribal representative, you have still met the eligibility for Criterion C. In this case you should include in your SWPPP a brief description of potential effects to historic properties, the consultation process, any measures you will adopt to address the potential adverse impacts, and any significant remaining disagreements between you and the SHPO, THPO or other tribal representative. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA delay authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

If you have contacted the SHPO, THPO, or tribal representative in writing regarding your potential to have an effect on historic properties and the SHPO, THPO, or tribal representative did not respond within 30 days of receiving your letter, you have met eligibility Criterion D. You are advised to get a receipt from the post office or other carrier confirming the date on which your letter was received. In this case, you should submit a copy of your letter notifying the SHPO, THPO or tribal representative of potential impacts with your NOI. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will

evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

Addresses for State Historic Preservation Officers and Tribal Historic Preservation Officers may be found on the Advisory Council on Historic Preservation's website (www.achp.gov/programs.html). In instances where a Tribe does not have a Tribal Historic Preservation Officer, you should contact the appropriate Tribal government office when responding to this permit eligibility condition.

Appendix G - Notice of Intent (NOI) Form

Part 7.1 requires you to use the NPDES eReporting Tool, or "NeT", to prepare and submit your NOI. However, if you are given a waiver by the EPA Regional Office to use a paper NOI form, and you elect to use it, you must complete and submit the following form.

NPDES FORM 3510-6	EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 NOTICE OF INTENT (NOI) FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY UNDER THE NPDES MULTI-SECTOR GENERAL PERMIT	Form Approved. OMB No. 2040-0004

Submission of this Notice of Intent (NOI) constitutes notice that the operator identified in Section C of this form requests authorization to discharge pursuant to the NPDES Stormwater Multi-Sector General Permit (MSGP) permit number identified in Section B of this form. Submission of this NOI also constitutes notice that the operator identified in Section C of this form meets the eligibility conditions of Part 1.1 of the MSGP for the facility identified in Section D of this form. To obtain authorization, you must submit a complete and accurate NOI form. Discharges are not authorized if your NOI is incomplete or inaccurate or if you were never eligible for permit coverage. Refer to the instructions at the end of this form to complete your NOI.

A. Approval to Use Paper NOI Form

1. Have you been granted a waiver from electronic reporting from the EPA Regional Office*? ☐ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted:
- ☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.
- ☐ The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver:

Date approval obtained: / /

*** Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper NOI form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (NeT) at http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm**

B. Permit Information

NPDES ID (EPA Use Only):

1. Master Permit Number: (see Appendix C of the MSGP for the list of eligible master permit numbers)

2. Are you a new discharger or a new source as defined in Appendix A? ☐ YES ☐ NO (If yes, skip to Part C of this form).

3. If you are not a new discharger or a new source, have stormwater discharges from your facility been covered previously under an NPDES permit?

☐ YES ☐ NO

If yes, provide the NPDES ID if you had coverage under EPA's 2008 MSGP or the NPDES ID if you had coverage under an EPA individual permit:

C. Facility Operator Information

1. Operator Information:

Operator Name:

Mailing Address:

Street:

City: State: ZIP Code: -

County or Similar Government Subdivision:

Phone: - - Ext.

E-mail:

2. Operator Point of Contact Information:

First Name, Middle Initial, Last Name:

Title:

3. NOI Preparer Information (Complete if NOI was prepared by someone other than the certifier):

First Name, Middle Initial, Last Name:

Organization:

Phone: - - Ext.

E-mail:

D. Facility Information

1. Facility Name:

2. Facility Address:

Street/Location:

City: State: ZIP Code: -

County or Similar Government Subdivision:

3. Latitude/Longitude for the facility:

Latitude: __ __. __ __ __ __° N (decimal degrees) Longitude: __ __ __. __ __ __ __° W (decimal degrees)

Latitude/Longitude Data Source: ☐ Map ☐ GPS ☐ Other

If you used a USGS topographic map, what was the scale? _____

Horizontal Reference Datum: ☐ NAD 27 ☐ NAD 83 ☐ WGS 84

4. Is your facility located on Indian Country lands? ☐ YES ☐ NO

If yes, provide the name of the Indian tribe associated with the area of Indian country (including name of Indian reservation, if applicable):

_____

5. Are you requesting coverage under this NOI as a "federal operator" as defined in Appendix A? ☐ YES ☐ NO

6. What is the ownership type of the facility? ☐ 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: _____ (to the nearest quarter acre)

8. Sector-Specific Information

Identify the 4-digit Standard Industrial Classification (SIC) code or 2-letter Activity Code that best represents the products produced or services rendered for which your facility is primarily engaged, as defined in the MSGP, and the applicable sector and subsector of your primary industrial activity (See Appendix D):

Primary SIC Code: OR **Primary Activity Code:**

Sector: **Subsector:**

Identify the applicable sector(s) and subsector(s) of any co-located industrial activity for which you are requesting permit coverage:

Sector: **Subsector:** **Sector:** **Subsector:** **Sector:** **Subsector:**

Sector: **Subsector:** **Sector:** **Subsector:** **Sector:** **Subsector:**

If you are a Sector S (Air Transportation) facility, do you anticipate using more than 100,000 gallons of pure glycol in glycol-based deicing fluids and/or 100 tons or more of urea on an average annual basis? ☐ YES ☐ NO

If you are a Sector G (Metal Mining) facility, do you have discharges from waste rock and overburden piles? ☐ YES ☐ NO

Check the type of ore you mine at your facility: ☐ Tungsten Ore ☐ Nickel Ore ☐ Aluminum Ore

☐ Mercury Ore ☐ Iron Ore ☐ Platinum Ore ☐ Titanium Ore ☐ Vanadium Ore ☐ Molybdenum ☐ Uranium, Radium, and/or Vanadium Ore

9. Is your facility presently inactive and unstaffed?* ☐ YES ☐ NO

* Note that if your facility becomes inactive and unstaffed during the permit term, you must submit an NOI modification to reflect the change.

E. Discharge Information

1. By indicating "Yes" below, I confirm that I understand that the MSGP only authorizes the allowable stormwater discharges in Part 1.1.2 and the allowable non-stormwater discharges listed in Part 1.1.3. Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the Stormwater Pollution Prevention Plan (SWPPP), during an inspection, etc. If any discharges requiring NPDES permit coverage other than the allowable stormwater and non-stormwater discharges listed in Parts 1.1.2 and 1.1.3 will be discharged, they must be covered under another NPDES permit. ☐ YES

2. Federal Effluent Limitation Guidelines

Are you requesting permit coverage for any stormwater discharges subject to effluent limitation guidelines? ☐ YES ☐ NO

If yes, which effluent limitation guidelines apply to your stormwater discharges?

40 CFR Part/Subpart	Eligible Discharges	Affected MSGP Sector	New Source Date	Check if Applicable
Part 411, Subpart C	Runoff from material storage piles at cement manufacturing facilities	E	2/20/1974	☐
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	☐
Part 423	Coal pile runoff at steam electric generating facilities	O	11/19/1982 10/8/1974[1]	☐
Part 429, Subpart I	Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	A	1/26/1981	☐
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	☐
Part 443, Subpart A	Runoff from asphalt emulsion facilities	D	7/28/1975	☐
Part 445, Subparts A & B	Runoff from hazardous waste and non-hazardous waste landfills	K, L	2/2/2000	☐
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	☐

[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.

3. Receiving Waters Information: (Attach a separate list if necessary)

List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002). Also provide the latitude and longitude in degrees decimal for each outfall.		**For each outfall, provide the following receiving water information:**		
		Provide the name of the first water of the U.S. that receives stormwater directly from the outfall and/or from the MS4 that the outfall discharges to:	**If the receiving water is impaired (on the CWA 303(d) list), list the pollutants that are causing the impairment:**	**If a TMDL been completed for this receiving waterbody, providing the following information:**
Outfall ID				**TMDL Name and ID:**
Latitude				**Pollutant(s) for which there is a TMDL:**
Longitude				
Outfall ID				**TMDL Name and ID:**
Latitude				**Pollutant(s) for which there is a TMDL:**
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				

Outfall ID				**TMDL Name and ID:**
Latitude				**Pollutant(s) for which there is a TMDL:**
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID				**TMDL Name and ID:**
Latitude				**Pollutant(s) for which there is a TMDL:**
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID				**TMDL Name and ID:**
Latitude				**Pollutant(s) for which there is a TMDL:**
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID				**TMDL Name and ID:**
Latitude				**Pollutant(s) for which there is a TMDL:**
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				

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 Muncipal Separate Storm Sewer System (MS4)? ☐ YES ☐ NO

If yes, provide the name of the MS4 operator:_____

6. Check if you discharge to any of the waters of the U.S. that are designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water) or as a Tier 3 water (Outstanding National Resource Water)? (See Appendix L).

☐ Tier 2/2.5. Provide the name(s) of receiving water(s):_____

☐ Tier 3 (Outstanding National Resource Waters)*

*** Note: You are ineligible for coverage if you are a new discharger or new source to waters designated as Tier 3 (outstanding national resource waters) for antidegradation purposes under 40 CFR 131.13(a)(3).**

7. If you are subject to benchmark monitoring requirements for a hardness-dependent metal, what is the hardness of your receiving water(s) (see Appendix J)?

_____ (mg/L)

8. If you are subject to benchmark monitoring requirements for a hardness-dependent metal, does your facility discharge into any saltwater receiving waters? ☐ YES ☐ NO

9. Does your facility discharge to a federal CERCLA site listed in Appendix P? ☐ YES ☐ NO

If yes, did you notify the EPA Regional Office in advance of filing your NOI, and did the EPA Regional Office determine that you are eligible for permit coverage pursuant to Part 1.1.4.10*? ☐ YES ☐ NO

*** Note: If you discharge to a federal CERCLA site listed in Appendix P, you are ineligible for coverage under this permit unless you notify the EPA Regional Office in advance and the EPA Regional Office determines you are eligible coverage under this permit. In determining your eligibility for coverage under this Part, the EPA Regional Office may evaluate whether you have included adequate controls and/or procedures to ensure that your discharges will not lead to recontamination of aquatic media at the CERCLA Site such that it will to cause or contribute to an exceedance of a water quality standard.**

F. Stormwater Pollution Prevention Plan (SWPPP) Information

1. Has the SWPPP been prepared in advance of filing this NOI, as required? ☐ YES ☐ NO

2. SWPPP Contact Information:

First Name, Middle Initial, Last Name:

Professional Title:

Phone: - - Ext.

E-mail:

3. SWPPP Availability:

Your current SWPPP or certain information from your SWPPP must be made available through one of the following two options. Select one of the options and provide the required information*:

*** Note: You are not required to post any confidential business information (CBI) or restricted information (as defined in Appendix A) (such information may be redacted), but you must clearly identify those portions of the SWPPP that are being withheld from public access.**

☐ **Option 1**: Maintain a current copy of your SWPPP on an Internet page (Universal Resource Locator or URL).

Provide the web address URL:_____

☐ **Option 2**: Provide the following information from your SWPPP:

A. Describe your onsite industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams), and potential spill and leak areas:

B. List the pollutant(s) or pollutant constituent(s) associated with each industrial activity exposed to stormwater that could be discharged in stormwater and any authorized non-stormwater discharges listed in Part 1.1.3:

C. Describe the control measures you will employ to comply with the non-numeric technology-based effluent limits required in Part 2.1.2 and Part 8, and any other measures taken to comply with the requirements in Part 2.2 Water Quality-Based Effluent Limitations (see Part 5.2.4):

D. Provide a schedule for good housekeeping and maintenance (see Part 5.2.5.1) and a schedule for all inspections required in Part 4 (see Part 5.2.5.2):

G. Endangered Species Protection

1. Using the instructions in Appendix E of the MSGP, under which endangered species criterion listed in Part 1.1.4.5 are you eligible for coverage under this permit (only check 1 box)?*

☐ A ☐ B ☐ C ☐ D ☐ E

*** Note: After you submit your NOI and before your NOI is authorized, EPA may notify you if any additional controls are necessary to ensure your discharges have no likely adverse affects on listed species and critical habitat.**

2. Provide a brief summary of the basis for the criterion selected in Appendix E (e.g., communication with U.S. Fish and Wildlife Service or National Marine Fisheries Service to determine no species in action area; implementation of controls approved by EPA and the Services):

3. If you select criterion B, provide the NPDES ID from the other operator's NOI authorized under this permit: ☐☐☐☐☐☐☐☐☐

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 affects on listed species and critical habitat.

Date your *Criterion C Eligibilty Form* was sent to EPA: ☐☐ / ☐☐ / ☐☐☐☐

Describe any EPA-approved measures you will implement to ensure no likely adverse affects 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 affects on listed species and critical habitat.

Date your *Criterion C Eligibility Form* was sent to EPA: ☐☐ / ☐☐ / ☐☐☐☐

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:_____

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:

Title:

Signature: Date: / /

E-mail:

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 From 3510-6 (09/08) Form Approved OMB No. 2040-0004

Who Must File an NOI Form

Under section 402(p) of the Clean Water Act (CWA) and regulations at 40 CFR Part 122, stormwater discharges associated with industrial activity are prohibited to waters of the United States unless authorized under a National Pollutant Discharge Elimination System (NPDES) permit. You can obtain coverage under the MSGP by submitting a completed Notice of Intent (NOI) if you are an operator a facility:

- that is located in a jurisdiction where EPA is the permitting authority, listed in Appendix C of the MSGP,
- that discharges stormwater associated with industrial activities, identified in Appendix D of the MSGP,
- that meets the eligibility requirements in Part 1.1 of the permit,
- that has developed a stormwater pollution prevention plan (SWPPP) in accordance with Part 5 of the MSGP; and
- that installs and implements control measures in accordance with Part 2 and Part 8 to meet numeric and non-numeric effluent limits.

Completing the Form

Obtain and read a copy of the 2015 MSGP, viewable at http://water.epa.gov/polwaste/npdes/stormwater/EPA-Multi-Sector-General-Permit-MSGP.cfm. To complete this form, type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. **Please submit original document with signature in ink - do not send a photocopied signature.**

Section A. Approval to Use Paper NOI Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper NOI form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA staff person who granted the waiver, and the date that approval was provided.

See http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-Contacts.cfm for a list of EPA Regional Office contacts.

Section B. Permit Information

Provide the master permit number of the permit under which you are applying for coverage (see Appendix C of the general permit for the list of eligible master permit numbers).

You must indicate whether you are a new discharger or a new source (see Appendix A for the definitions). If you are not a new discharger or a new source, you must indicate whether stormwater discharges from your facility have been previously covered under another NPDES permit. If yes, you must provide the unique NPDES ID (i.e., permit tracking number) for the previous permit your facility was covered under.

Section C. Facility Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the facility described in this NOI. An operator of a facility is the legal entity that controls the operation of the facility. Refer to Appendix A of the permit for the definition of "operator". Provide the operator's mailing address, phone number, and e-mail. Correspondence for the NOI will be sent to this address. Also provide the name and title for the operator point of contact (note that the point of contact name may be the same as the operator name).

If the NOI was prepared by someone other than the certifier (for example, if the NOI was prepared by the facility SWPPP contact or a consultant for the certifier's signature), include the full name, organization, phone number, and email address of the NOI preparer.

Section D. Facility Information

Enter the official or legal name and complete address, including city, state, ZIP code, and county or similar government subdivision of the facility. If the facility lacks a street address, indicate the general location of the facility (e.g., Intersection of State Highways 61 and 34). Complete facility information must be provided for permit coverage to be granted.

Provide the latitude and longitude of your facility in decimal degrees format. The latitude and longitude of your facility can be determined in several different ways, including through the use of global positioning system (GPS) receivers, U.S. Geological Survey (U.S.G.S.) topographic or quadrangle maps. Refer to http://transition.fcc.gov/mb/audio/bickel/DDDMMSS-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 stormwaterto the nearest quarter acre.

List the four-digit Standard Industrial Classification (SIC) code or two character activity code that best describes the primary industrial activities performed by your facility under which you are required to obtain permit coverage. Your primary industrial activity includes any activities performed on-site which are (1) identified by the facility's primary SIC code and included in the descriptions of 40 CFR 122.26(b)(14)(ii), (iii), (vi), or (viii); or (2) included in the narrative descriptions of 40 CFR 122.26(b)(14)(i), (iv), (v), (vii), or (ix). See Appendix D of the MSGP for a complete list of SIC codes and activities codes covered under the MSGP. Also provide the applicable sector and subsector associated with the SIC code or activity code for your primary industrial activities. For a complete list of sector and subsector codes, see Appendix D of the MSGP.

If your facility has co-located industrial activities that are not identified as your primary industrial activity, identify the sector and subsector codes that describe these other industrial activities.

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 overage under this permit after you have included adequate controls and/or procedures designed to ensure that discharges will not lead to recontamination of aquatic media at the CERCLA site such that your discharge will cause or contribute to an exceedance of a water quality standard.

Section F. Stormwater Pollution Prevention Plan (SWPPP) Information

All facilities eligible for coverage under this permit are required to prepare a SWPPP in advance of filing the NOI, in accordance with Part 5. Indicate whether the SWPPP has been prepared in advance of filing the NOI.

Indicate the contact information (name, phone, and email) for the person who developed the SWPPP for this facility.

You identify how your SWPPP information will be made available, consistent with Part 5.4 and 7.3 of the permit. If you are making your SWPPP publicly available on a web site, check Option 1 and provide the appropriate Internet URL address. If you are not providing a URL, check Option 2 and provide the selected SWPPP information on this NOI form. You may copy and paste this information directly from your SWPPP.

Section G. Endangered Species Protection

Using the instructions in Appendix E, indicate the Part 1.1.4.5 criterion (i.e., A, B, C, D, or E) you are eligible under with regard to the protection of federally listed endangered and threatened species and designated critical habitat. A description of the basis for the criterion selected must also be provided.

If criterion B is selected, provide the NPDES ID (i.e., permit tracking number) for the other operator who has certified their eligibility under this permit. The NPDES ID was assigned when the operator received coverage under this permit.

If criterion C is selected, you must specify the federally-listed species or designated critical habitat that are located in the "action area" of the facility. You must also indicate under which scenario you determined you were eligible to submit your NOI under criterion C using Appendix E, and answer any corresponding questions.

If criterion D or E is selected, attach copies of any communications between you and the U.S. Fish and Wildlife Service and National Marine Fisheries Service to this NOI.

Section H. Historic Preservation

If the project is not located in Indian country lands, indicate whether the project is located on a property of religious or cultural significance to an Indian tribe, and if so, provide the name of the Indian tribe associated with the property. Use the instructions in Appendix F to complete the questions on the NOI form regarding historic preservation.

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing.

An unsigned or undated NOI form will not be considered eligible for permit coverage.

Modifying Your NOI

If you have been granted a waiver from your Regional Office from electronic reporting, and if after submitting your NOI you need to correct or update any fields on this NOI form, you may do so by indicating changes on this same form.

Paperwork Reduction Act Notice

Public reporting burden for this NOI is estimated to average 3.7 hours, plus an additional 2 hours for certain respondents required to gather hardness data. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number on any correspondence. Do not send the completed form to this address.

Submitting Your Form

If you have been granted a waiver from your Regional Office to submit a paper NOI form, you must send your NOI by mail to one of the following addresses:

For Regular U.S. Mail Delivery:
Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2015 MSGP Reports
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:
Stormwater Notice Processing Center
William Jefferson Clinton East Building - Room 7420
ATTN: 2015 MSGP Reports
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Visit this website for instructions on how to submit electronically:
http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm

Appendix H - Notice of Termination (NOT) Form

Part 7.1 requires you to use the NPDES eReporting Tool, or "NeT", to prepare and submit your Notice of Termination (NOT). However, if you are given a waiver by the EPA Regional Office to use a paper NOT form, and you elect to use it, you must complete and submit the following form.

NPDES FORM 3510-7	EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 NOTICE OF TERMINATION (NOT) FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY UNDER THE NPDES MULTI-SECTOR GENERAL PERMIT	Form Approved. OMB No. 2040-0004

Submission of this Notice of Termination constitutes notice that the operator identified in Section C of this form is no longer authorized to discharge pursuant to the NPDES Multi-Sector General Permit (MSGP) from the facility identified in Section D of this form. All necessary information must be included on this form. Refer to the instructions at the end of this form.

A. Approval to use Paper NOT Form

1. Have you been granted a waiver from electronic reporting from the Regional Office*? ☐ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted:
- ☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.
- ☐ The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver:

Date approval obtained: / /

*** Note: You are required to obtain approval from the applicable Regional Office prior to using this paper NOT form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (NeT) at http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm**

B. Permit Information

1. NPDES ID:

2. Reason for Termination (check one only):

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

C. Facility Operator Information

1. Operator Name:

2. Mailing Address:

Street:

City: State: ZIP Code: -

3. Phone: - - Ext.

4. E-mail:

D. Facility Information

1. Facility Name:

2. Facility Address:

Street:

City: State: ZIP Code: -

County or similar government subdivision:

E. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name:

Title:

Signature: _____ Date: / /

E-mail:

Instructions for Completing EPA Form 3510-7

Notice of Termination for Stormwater Discharges Associated with Industrial Activity Under the NPDES Multi-Sector General Permit

NPDES Form Date (06/15) This Form Replaces From 3510-7 (09/08) Form Approved OMB No. 2040-0004

Who May File Notice of Termination (NOT) Form

Permittees currently covered by EPA's NPDES Stormwater Multi-Sector General must submit a Notice of Termination (NOT) within 30 days after one or more of the following conditions have been met:

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

See the MSGP Part 1.3.3 for more information.

Completing the Form

To complete this form, type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. Please submit original document with signature in ink - do not send a photocopied signature.

Section A. Approval to Use Paper NOT Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper NOT form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date that approval was provided. See http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-Contacts.cfm for a list of EPA Regional Office contacts.

Section B. Permit Information

Enter the existing NPDES ID (i.e., NOI tracking number) assigned to your permit authorization.

Indicate your reason for submitting this Notice of Termination by checking the appropriate box. Check only one box (see MSGP Part 1.3.3 for more information).

Section C. Facility Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the facility described in this NOT. An operator of a facility is the legal entity that controls the operation of the facility. Refer to Appendix A of the permit for the definition of "operator". Provide the operator's mailing address, phone number, and e-mail.

Section D. Facility Information

Enter the official or legal name and complete street address, including city, state, ZIP code, and county or similar government subdivision of the facility. If the facility lacks a street address, indicate the general location of the facility (e.g., Intersection of State Highways 61 and 34). Complete facility information must be provided for termination of permit coverage to be valid.

Section E. Certification Information

All NOTs must be signed as follows:

For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means: (i)a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing.

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated NOT form will not be considered valid termination of permit coverage.

Paperwork Reduction Act Notice

Public reporting burden for this Notice of Termination is estimated to average 0.5 hours, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number of this form on any correspondence. Do not send the completed NOT form to this address.

Instructions for Completing EPA Form 3510-7

Notice of Termination for Stormwater Discharges Associated with Industrial Activity Under the NPDES Multi-Sector General Permit

NPDES Form Date (06/15) This Form Replaces From 3510-7 (09/08) Form Approved OMB No. 2040-0004

Submitting Your Form

If you have been granted a waiver from your Regional Office to submit a paper NOT form, you must send your NOT by mail to one of the following addresses:

For Regular U.S. Mail Delivery:

Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2015 MSGP Reports
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:

Stormwater Notice Processing Center
William Jefferson Clinton East Building - Room 7420
ATTN: 2015 MSGP Reports
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Visit this website for instructions on how to submit electronically:
http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm

Appendix I - Annual Report Form

Part 7.1 requires you to use the NPDES eReporting Tool, or "NeT", to prepare and submit your Annual Report. However, if you are given a waiver by the EPA Regional Office to use a paper annual report form, and you elect to use it, you must complete and submit the following form.

NPDES FORM 6100-28	EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 ANNUAL REPORT FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY UNDER THE NPDES THE NPDES MULTI-SECTOR GENERAL PERMIT	Form Approved. OMB No. 2040-0004

A. Approval to Use Paper Annual Report Form

1. Have you been granted a waiver from electronic reporting from the EPA Regional Office*? ☐ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted:

☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.

☐ The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver:

Date approval obtained: / /

*** Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper annual report form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (NeT) at http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm**

B. Permit Information

1. NPDES ID:

C. Facility Information

1. Facility Name:

2. Facility Phone: - - Ext.

3. Facility Mailing Address:

Street:

City: State: ZIP Code: -

County or Similar Government Subdivision:

4. Point of Contact:

First Name, Middle Initial, Last Name:

D. General Findings

1. Provide a summary of your past year's routine facility inspection documentation (see Part 3.1.2 of the permit). In addition, if you are an operator of an airport facility (Sector S) that is subject to the airport effluent limitations guidelines, and are complying with the MSGP Part 8.S.8.1 effluent limitation through the use of non-urea-containing deicers, provide a statement certifying that you do not use pavement deicers containing urea (e.g., "Urea was not used at [name of airport] for pavement deicing in the past year and will also not be used in 2015." (Note: Operators of airport facilities that are complying with Part 8.S.8.1 by meeting the numeric effluent limitation for ammonia do not need to include this statement.)

2. Provide a summary of your past year's quarterly visual assessment documentation (see Part 3.2.2 of the permit).

3. For any four-sample (minimum) average benchmark monitoring exceedance, if after reviewing the selection, design, installation, and implementation of your control measures and considering whether any modifications are necessary to meet the effluent limits in the permit, you determine that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice, provide your rationale for why you believe no further reductions are achievable (see Part 6.2.1.2 of the permit). Enter "NA" if not applicable.

4. Provide a summary of your past year's corrective action documentation (See Part 4.4 of the permit). (Note: If corrective action is not yet completed at the time of submission of this annual report, you must describe the status of any outstanding corrective action(s).) Also describe any incidents of noncompliance in the past year or currently ongoing, or if none, provide a statement that you are in compliance with the permit.

E. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name:

Title:

Signature: _____ Date: / /

E-mail:

Instructions for Completing the Annual Report Form

Annual Report for Stormwater Discharges Associated with Industrial Activity Under an NPDES General Permit

Who Must File an Annual Report

Operators must submit an Annual Report to EPA electronically, per Part 7.5, by January 30th for each year of permit coverage containing information generated from the past calendar year.

Completing the Form

To complete this form, type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. Please submit original document with signature in ink - do not send a photocopied signature.

Section A. Approval to Use Paper Annual Report Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA staff person who granted the waiver, and the date that approval was provided. See http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-Contacts.cfm for a list of EPA Regional Office contacts.

Section B. Permit Information

Provide the NPDES ID (i.e., NOI tracking number) assigned to your facility.

Section C. Facility Information

Enter the official or legal name, phone number, and complete street address, including city, state, ZIP code, and county or similar government subdivision, for the facility that is covered by the NPDES ID identified in Section B. If the facility lacks a street address, indicate the general location of the facility (e.g., Intersection of State Highways 61 and 34). Also provide a point of contact name for the facility.

Section D. General Findings

To complete this section you must provide the following information in your annual report:

1. A summary of your past year's routine facility inspection documentation required by Part 3.1.2 of the permit.
2. A summary of your past year's quarterly visual assessment documentation required by Part 3.2.2 of the permit.
3. If, after finding the average of your four monitoring values for any pollutant exceeds the benchmark, you decide no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice, your rationale for why you believe no further reductions are achievable.
4. Information copied or summarized from the corrective action documentation required per Part 4.4 (if applicable). If corrective action is not yet completed at the time of submission of this Annual Report, you must describe the status of any outstanding corrective action(s). You must also describe any incidents of noncompliance in the past year or currently ongoing, or if none, provide a statement that you are in compliance with the permit.

Section E. Certification Information

The Annual Report must be signed by a person described below, or by a duly authorized representative of that person.

For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing.

A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above;

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and

3. The written authorization is submitted to the Director.

An unsigned or undated Annual Report form be considered incomplete.

Paperwork Reduction Act Notice

Public reporting burden for this form is estimated to average 2.5 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number of this form on any correspondence. Do not send the completed Annual Report form to this address.

Instructions for Completing the Annual Report Form

Annual Report for Stormwater Discharges Associated with Industrial Activity Under an NPDES General Permit

Submitting Your Form

If you have been granted a waiver from your Regional Office to submit a paper Annual Report form, you must send your Annual Report form by mail to one of the following addresses:

For Regular U.S. Mail Delivery:

Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2015 MSGP Reports
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:

Stormwater Notice Processing Center
William Jefferson Clinton East Building - Room 7420
ATTN: 2015 MSGP Reports
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Visit this website for instructions on how to submit electronically:
http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm

Appendix J - Calculating Hardness in Freshwater Receiving Waters for Hardness Dependent Metals

Overview

For any sectors required to conduct benchmark samples for a hardness-dependent metal, EPA includes 'hardness ranges' from which benchmark values are determined. To determine which hardness range to use, you must collect data on the hardness of your receiving water(s). Once the site-specific hardness data have been collected, the corresponding benchmark value for each metal is determined by comparing where the hardness data fall within hardness ranges, as shown in Table 1. You only need to determine hardness for your discharges into freshwater as the benchmark values for metals do not vary for discharges to saline waters.

Table 1. ***Hardness Ranges to Be Used to Determine Benchmark Values for Cadmium, Copper, Lead, Nickel, Silver, and Zinc.***

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

How to Determine Hardness for Hardness-Dependent Parameters in Freshwater.

You may select one of three methods to determine hardness, including: individual grab sampling, grab sampling by a group of operators which discharge to the same receiving water, or using third-party data. Regardless of the method used, you are responsible for documenting the procedures used for determining hardness values. The hardness value is required to be submitted to EPA with your Notice of Intent (NOI) so that your electronic Discharge Monitoring Report (DMR) which you will submit through NetDMR will include the appropriate limits. You must retain all report and monitoring data in accordance with Part 7.5 of the permit. The three method options for determining hardness are detailed in the following sections.

(1) Permittee Samples for Receiving Stream Hardness

This method involves collecting samples in the receiving water and submitting these to a laboratory for analysis. If you elect to sample your receiving water(s) and submit samples for analysis, hardness must be determined from the closest intermittent or perennial stream downstream of your point of discharge. The sample can be collected during either dry or wet weather. Collection of the sample during wet weather is more representative of conditions

during stormwater discharges; however, collection of in-stream samples during wet weather events may be impracticable or present safety issues.

Hardness must be sampled and analyzed using approved methods as described in 40 CFR Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants).

(2) Group Monitoring for Receiving Stream Hardness

You can be part of a group of permittees discharging to the same receiving waters and collect samples that are representative of the hardness values for all members of the group. In this scenario, hardness of the receiving water must be determined using 40 CFR Part 136 procedures and the results shared by group members. To use the same results, hardness measurements must be taken on a stream reach within a reasonable distance of the discharge points of each of the group members.

(3) Collection of Third-Party Hardness Data

You can submit receiving stream hardness data collected by a third party provided the results are collected consistent with the approved 40 CFR Part 136 methods. These data may come from a local water utility, previously conducted stream reports, TMDLs, peer reviewed literature, other government publications, or data previously collected by the permittee. Data should be less than 10 years old.

Water quality data for many of the nation's surface waters are available on-line or by contacting EPA or a state environmental agency. EPA's data system STORET, short for STOrage and RETrieval, is a repository for receiving water quality, biological, and physical data and is used by state environmental agencies, EPA and other federal agencies, universities, private citizens, and many others. Similarly, state environmental agencies and the U.S. Geological Service (USGS) also have water quality data available that, in some instances, can be accessed online. "Legacy STORET" codes for hardness include: 259 hardness, carbonate; 260 hardness, noncarbonated; and 261 calcium + magnesium, while more recent, "Modern STORET" data codes include: 00900 hardness, 00901 carbonate hardness, and 00902 noncarbonate hardness; or the discrete measurements of calcium (00915) and magnesium (00925) can be used to calculate hardness. Hardness data historically has been reported as "carbonate," "noncarbonate," or "Ca + Mg." If these are unavailable, then individual results for calcium (Ca) and magnesium (Mg) may be used to calculate hardness using the following equation:

$$\text{mg/L } CaCO_3 = 2.497 \text{ (Ca mg/L)} + 4.118 \text{ (Mg mg/L)}$$

When interpreting the data for carbonate and non-carbonate hardness, note that total hardness is equivalent to the sum of carbonate and noncarbonate hardness if both forms are reported. If only carbonate hardness is reported, it is more than likely that noncarbonate hardness is absent and the total hardness is equivalent to the available carbonate hardness.

Appendix K - No Exposure Certification Form

Part 7.1 requires you to use the NPDES eReporting Tool, or "NeT", to prepare and submit your No Exposure Certification (NOE) form. However, if you are given a waiver by the EPA Regional Office to use a paper NOE form, and you elect to use it, you must complete and submit the following form.

NPDES FORM 3510-11	EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 NO EXPOSURE CERTIFICATION (NOE) FOR EXCLUSION FROM EPA'S MULTI-SECTOR GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY (MSGP)	Form Approved OMB No. 2040-0004

Submission of this No Exposure Certification constitutes notice that the operator identified in Section C does not require permit authorization under EPA's Stormwater Multi Sector General Permit for its stormwater discharges associated with industrial activity from the facility identified in Section D of this form due to the existence of a condition of no exposure.

A condition of no exposure exists at an industrial facility when all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product. A storm resistant shelter is not required for the following industrial materials and activities:

- drums, barrels, tanks, and similar containers that are tightly sealed, provided those containers are not deteriorated and do not leak. "Sealed" means banded or otherwise secured and without operational taps or valves;
- adequately maintained vehicles used in material handling; and
- final products, other than products that would be mobilized in stormwater discharges (e.g., rock salt).

A No Exposure Certification must be provided for each facility qualifying for the no exposure exclusion. In addition, the exclusion from NPDES permitting is available on a facility-wide basis only, not for individual outfalls. If any industrial activities or materials are or will be exposed to precipitation, the facility is not eligible for the no exposure exclusion.

By signing and submitting this No Exposure Certification form, the operator in Section C is certifying that a condition of no exposure exists at its facility or site, and is obligated to comply with the terms and conditions of 40 CFR 122.26(g).

A. Approval to Use Paper NOE Form

1. Have you been granted a waiver from electronic reporting from the EPA Regional Office*? ☐ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted:

☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.

☐ The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver:

Date approval obtained: / /

*** Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper NOE form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (NeT) at http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm**

B. Reason for Submission

Select the purpose for filling out this form (check only 1).

☐ **To obtain a new No Exposure Certification.** Fill in Sections C, D, E and F.

☐ **To discontinue an existing No Exposure Certification**. Select this option if you would like to discontinue an existing No Exposure Certification because your facility is no longer subject to regulation under 40 CFR 122.26 (e.g., the facility has ceased the industrial activity that necessitated the No Exposure Certification)*. Provide the following information and fill out Section G.

Provide the existing NPDES ID for the No Exposure Certification that you would like to discontinue:

*** Note that if your facility no longer qualifies for the No Exposure Certification because permit coverage is required for exposed industrial materials or activities, you should not check this box, and must instead file for coverage under the Multi-Sector General Permit or an individual permit. Your No Exposure Certification will be automatically discontinued after you obtain coverage under the MSGP or an individual permit.**

C. Facility Operator Information

1. Operator Name:

2. Mailing Address

Street:

City: State: ZIP Code: -

3. Phone: - - Ext.

4. E-mail:

5. Operator Point of Contact Information:

First Name, Middle Initial, Last Name:

Title:

D. Facility Information

1. Facility Name:

2. Facility Address:

Street/Location:

City: State: ZIP Code: -

County or Similar Government Subdivision:

3. Latitude/Longitude for the facility:

Latitude: __ __. __ __ __ __° N (decimal degrees) Longitude: __ __ __. __ __ __ __° W (decimal degrees)

Latitude/Longitude Data Source: ☐ Map ☐ GPS ☐ Other: _____

If you used a USGS topographic map, what was the scale? _____

Horizontal Reference Datum: ☐ NAD 27 ☐ NAD 83 ☐ WGS 84

4. Is your project/site located on Indian country lands? ☐ YES ☐ NO

If yes, provide the name of the Indian tribe associated with the area of Indian country (including name of Indian reservation, if applicable):

_____

5. Are you a "federal operator" as defined in Appendix A? ☐ YES ☐ NO

6. What is the ownership type of the facility? ☐ Federal Facility (U.S. Government) ☐ Privately Owned Facility ☐ Municipality

☐ County Government ☐ Corporation ☐ State Government ☐ Tribal Government ☐ School District

☐ District ☐ Mixed Ownership (e.g. Public/Private) ☐ Municipal or Water District

7. Have stormwater discharges from your facility been covered previously under an NPDES permit? ☐ YES ☐ NO

If yes, provide the NPDES ID if you had coverage under EPA's MSGP or the NPDES permit number if you had coverage under an EPA individual permit:

8. Has your facility previously been covered by a No Exposure exclusion? ☐ YES ☐ NO

If yes, provide the NPDES ID for your previous No Exposure exclusion:

9. Identify the 4-digit Standard Industrial Classification (SIC) code or 2-letter Activity Code that best represents the products produced or services rendered for which your facility is primarily engaged, as defined in MSGP:

Primary SIC Code: OR **Primary Activity Code**

10. Total size of site associated with industrial activity: _____ (to the nearest quarter acre)

11. Have you paved or roofed over a formerly exposed, pervious area in order to qualify for the no exposure exclusion? ☐ YES ☐ NO

If yes, please indicate approximately how much area was paved or roofed over. Completing this question does not disqualify you for the no exposure exclusion. However, your permitting authority may use this information in considering whether stormwater discharges from your site are likely to have an adverse impact on water quality, in which case you could be required to obtain permit coverage.

☐ Less than one (1) acre ☐ One (1) to five (5) acres ☐ More than five (5) acres

E. Exposure Checklist

Are any of the following materials or activities exposed to precipitation, now or in the foreseeable future?

(Please check either "Yes" or "No" in the appropriate box.) **If you answer "Yes" to any of these questions, you are <u>not</u> eligible for the no exposure exclusion.**

	Yes	No
Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed to stormwater	☐	☐
Materials or residuals on the ground or in stormwater inlets from spills/leaks	☐	☐
Materials or products from past industrial activity	☐	☐
Material handling equipment (except adequately maintained vehicles)	☐	☐
Materials or products during loading/unloading or transporting activities	☐	☐
Materials or products stored outdoors (except final products intended for outside use [e.g., new cars] where exposure to stormwater does not result in the discharge of pollutants)	☐	☐
Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers	☐	☐
Materials or products handled/stored on roads or railways owned or maintained by the discharger	☐	☐
Waste material (except waste in covered, non-leaking containers [e.g., dumpsters])	☐	☐
Application or disposal of process wastewater (unless otherwise permitted)	☐	☐
Particulate matter or visible deposits of residuals from roof stacks and/or vents not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater outflow	☐	☐

F. Certification Information

I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of "no exposure" and obtaining an exclusion from NPDES stormwater permitting.

I certify under penalty of law that there are no discharges of stormwater contaminated by exposure to industrial activities or materials from the industrial facility or site identified in this document (except as allowed under 40 CFR 122.26(g)(2)).

I understand that I am obligated to submit a no exposure certification form once every five years to the NPDES permitting authority and, if requested, to the operator of the local municipal separate storm sewer system (MS4) into which the facility discharges (where applicable). I understand that I must allow the NPDES permitting authority, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain coverage under an NPDES permit prior to any point source discharge of stormwater from the facility.

Additionally, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name:

Title:

Signature: _____ Date: / /

E-mail:

G. Discontinuation of No Exposure Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name:

Title:

Signature: _____ Date: / /

E-mail:

Instructions for Completing EPA Form 3510-11

No Exposure Certification (NOE) for Exclusion from Stormwater Discharges Associated with Industrial Activity Under an NPDES General Permit

NPDES Form Date (06/15) This Form Replaces From 3510-11 (09/08) Form Approved OMB No. 2040-0004

Who May File a No Exposure Certification

Federal law at 40 CFR Part 122.26 prohibits point source discharges of stormwater associated with industrial activity to waters of the U.S. without a National Pollutant Discharge Elimination System (NPDES) permit. However, NPDES permit coverage is not required for discharges of stormwater associated with industrial activities identified at 40 CFR 122.26(b)(14)(i)-(ix) and (xi) if the discharger can certify that a condition of "no exposure" exists at the industrial facility or site.

Stormwater discharges from construction activities identified in 40 CFR 122.26(b)(14)(x) and (b)(15) are not eligible for the no exposure exclusion.

Obtaining and Maintaining the No Exposure Exclusion

This form is used to certify that a condition of no exposure exists at the industrial facility or site described herein. This certification is only applicable in jurisdictions where EPA is the NPDES permitting authority and must be re-submitted at least once every five years.

The industrial facility operator must maintain a condition of no exposure at its facility or site in order for the no exposure exclusion to remain applicable. If conditions change resulting in the exposure of materials and activities to stormwater, the facility operator must obtain coverage under an NPDES stormwater permit immediately.

Completing the Form

You must type or print, using uppercase letters, in appropriate areas only. Enter only one character per space (i.e., between the marks). Abbreviate if necessary to stay within the number of characters allowed for each item. Use one space for breaks between words. One form must be completed for each facility or site for which you are seeking to certify a condition of no exposure. Please make sure you have addressed all applicable questions and have made a photocopy for your records before sending the completed form to the above address.

Section A. Approval to Use Paper NOE Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper No Exposure Certification (NOE) form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date that approval was provided. See http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-Contacts.cfm for a list of EPA Regional Office contacts.

Section B. Reason for Submission

You must check your reason for submitting this form. You may submit this form for obtaining a new No Exposure Certification, for renewing a previous No Exposure Certification, or for discontinuing an existing No Exposure Certification (for facilities that no longer need the exclusion from permit coverage for industrial stormwater discharges).

Section C. Facility Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the facility described in this certification form. An operator of a facility is the legal entity that controls the operation of the facility. Refer to Appendix A of the MSGP for the definition of "operator". Provide the operator's mailing address, phone number, and e-mail. Correspondence for the NOE will be sent to this address. Also provide the name and title for the operator point of contact (note that the point of contact name may be the same as the operator name).

Section D. Facility Information

Enter the official or legal name and complete street address, including city, state, ZIP code, and county or similar government subdivision of the facility. If the facility lacks a street address, indicate the general location of the facility (e.g., Intersection of State Highways 61 and 34). Complete facility information must be provided for permit coverage to be granted.

Provide the latitude and longitude of your facility in decimal degrees format. The latitude and longitude of your facility can be determined in several different ways, including through the use of global positioning system (GPS) receivers and U.S. Geological Survey (U.S.G.S.) topographic or quadrangle maps. Refer to http://transition.fcc.gov/mb/audio/bickel/DDDMMSS-decimal.html/ for assistance in providing the proper latitude/longitude format. For consistency, EPA requests that measurements be taken form the approximate center of the facility. Specify which method you used to determine latitude and longitude. If a U.S.G.S. topographic map is used, specify the scale of the map used. Enter the horizontal reference datum for your latitude and longitude. The horizontal reference datum used on USGS topographic maps is shown on the bottom left corner of USGS topographic maps; it is also available for GPS receivers.

Indicate whether the facility is on Indian country lands, and if so, provide the name of the Indian tribe associated with the area of Indian country (including name of Indian reservation, if applicable).

Indicate whether you are a "federal operator" as defined in Appendix A of the MSGP. Also check the facility's ownership type.

Indicate whether the facility was previously covered under an NPDES stormwater permit. If so, include the NPDES ID (i.e., NOI tracking number).

List the four-digit Standard Industrial Classification (SIC) code or two character activity code that best describes the primary industrial activities performed by your facility.

Enter the total size of the site associated with industrial activity in acres.

Check "Yes" or "No" as appropriate to indicate whether you have paved or roofed over a formerly exposed, pervious area (i.e., lawn, meadow, dirt or gravel road/parking lot) in order to qualify for no exposure. If yes, also indicate approximately how much area was paved or roofed over and is now impervious area.

No Exposure Certification (NOE) for Exclusion from Stormwater Discharges Associated with Industrial Activity Under an NPDES General Permit

NPDES Form Date (06/15) This Form Replaces From 3510-11 (09/08) Form Approved OMB No. 2040-0004

Section E. Exposure Checklist

Check "Yes" or "No" as appropriate to describe the exposure condition at your facility. If you answer "Yes" to **ANY** of the questions in this section, a potential for exposure exists at your site and you cannot certify to a condition of no exposure. You must obtain (or already have) coverage under an NPDES stormwater permit. After obtaining permit coverage, you can institute modifications to eliminate the potential for a discharge of stormwater exposed to industrial activity, and then certify to a condition of no exposure.

Section F and G. Certification Information

The NOE form must be signed as follows:

For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing.

Include the name, title, and email address of the person signing the form and the date of signing.

An unsigned or undated NOE certification will not be considered valid.

Paperwork Reduction Act Notice

Public reporting burden for this certification is estimated to average 1.0 hour per certification, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose to provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number of this form on any correspondence. Do not send the completed No Exposure Certification form to this address.

Submitting Your Form

If you have been granted a waiver from your Regional Office to submit a paper No Exposure Certification form, you must send your No Exposure Certification form by mail to one of the following addresses:

For Regular U.S. Mail Delivery:

Stormwater Notice Processing Center
Mail Code 4203M, ATTN: MSGP No Exposure
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:

Stormwater Notice Processing Center
William Jefferson Clinton East Building - Room 7420
ATTN: MSGP No Exposure
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Visit this website for instructions on how to submit electronically: http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm

Appendix L - List of Tier 3, Tier 2, and Tier 2.5 Waters

EPA's MSGP has special requirements for discharges to waters designated by a state or tribe as Tier 2/2.5 or Tier 3 for antidegradation purposes under 40 CFR 131.12(a). See Parts 1.1.4.8 and 1.1.4.10

The list below is provided as a resource for operators who must determine whether they discharge to a Tier 2/2.5 or Tier 3 water. Only Tier 2/2.5 or Tier 3 waters specifically identified by a water quality standard authority (e.g., a state, territory, or tribe) are identified in the table below. Many authorities evaluate the existing and protected quality of the receiving water on a pollutant-by-pollutant basis and determine whether water quality is better than the applicable criteria that would be affected by a new discharger or a new source or an increase in an existing discharge of the pollutant. In instances where water quality is better, the authority may choose to allow lower water quality, where lower water quality is determined to be necessary to support important social and economic development. Permittees are not required to identify those waters which are evaluated on an individual basis.

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
MAR050000	**Commonwealth of Massachusetts, except Indian Country lands**	
	Tier 2, Tier 2.5, and 3 waters are identified and listed in the Massachusetts Water Quality Standards 314 CMR 4.00. Surface water qualifiers that correspond with Tier classifications are defined at 314 CMR 4.06(1)(d)m and listed in tables and figures at the end of 314 CMR 4.06. See MassDEP's web page at http://www.mass.gov/eea/agencies/massdep/water/regulations/314-cmr-4-00-mass-surface-water-quality-standards.html.	
	Tier 2	Listed as "High Quality Waters", and all wetlands that are not designated as an Outstanding Resource Water
	Tier 2.5	Listed as "Outstanding Resource Water", "Public Water Supply", "Tributary to Public Water Supply", all wetlands bordering Outstanding Resource Waters, and vernal pools
	Tier 3	Defined as "Special Resource Water". Note: No waters have been defined as a Special Resource Water as of the issuance of this permit.
NHR050000	**State of New Hampshire**	
	Tier 2/2.5	There is no list of Tier 2/Tier 2.5 waters. New dischargers and new sources should contact Thelma Murphy (EPA Region 1's stormwater coordinator) at murphy.thelma@epa.gov.
	Tier 3	Env-Ws 1708.05(a) Surface waters of national forests and surface waters designated as "natural" under RSA 483:7-a, I shall be considered outstanding resource waters (ORW). "Natural waters" are listed at http://www.gencourt.state.nh.us/rsa/html/L/483/483-15.htm. Surface waters of national forests are not included in an official list. For further questions, new dischargers and new sources should contact Thelma Murphy (EPA Region 1's stormwater coordinator) at murphy.thelma@epa.gov.

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
PRR050000	**Commonwealth of Puerto Rico**	
	Tier 3	Tier III waters are those which are classified as either Class SA or Class SE. Class SA waters are defined as "Coastal waters and estuarine waters of high quality and/or exceptional ecological or recreational value whose existing characteristics shall not be altered, except by natural causes, in order to preserve the existing natural phenomena." Class SA waters include bioluminescent lagoons and bays such as La Parguera and Monsio José on the Southern Coast, Bahía de Mosquito in Vieques, and any other coastal or estuarine waters of exceptional quality of high ecological value or recreational which may be designated by Puerto Rico, through Resolution, as requiring this classification for protection of the waters. Class SE waters are defined as "Surface waters and wetlands of exceptional ecological value, whose existing characteristics should not be altered in order to preserve the existing natural phenomena." Class SE waters include Laguna Tortuguero, Laguna Cartagena and any other surface water bodies of exceptional ecological value as may be designated by Puerto Rico through Resolution.
DCR050000	**District of Columbia**	
	Tier 2/2.5	Rule 1102.4 SPECIAL WATERS OF THE DISTRICT OF COLUMBIA (SWDC): Any segment or segments of the surface waters of the District that are of water quality better than needed for the current use or have scenic or aesthetic importance shall be designated as Special Waters of the District of Columbia (SWDC). Rock Creek and its tributaries and Battery Kemble Creek and its tributaries are considered Special Waters of the District of Columbia (SWDC) under its antidegradation program.
MNR05000I	**Fond du Lac Band of MN Chippewa**	
	Tier 3	Six lakes are presently identified as Tier 3: (1) Dead Fish, (2) Jaskari, (3) Miller (Mud), (4) Perch, (5) Rice Portage, (6) Wild Rice.
	Grand Portage Band of MN Chippewa	
	Tier 2/2.5	All waters, not already classified as Tier 3, are high quality Tier 2 waters. (see Grand Portage Reservation Water Quality Standards, Section VI & VII, Pages 14-16).
	Tier 3	"The portion of Lake Superior north of latitude 47 degrees, 57 minutes, 13 seconds, east of Hat Point, south of the Minnesota-Ontario boundary, and west of the Minnesota-Michigan boundary." (see Section VII, Page 16).
WIR05000I	**Lac du Flambeau Band of the Lake Superior Chippewa**	
	Tier 2	All named waters, including wetlands, not specified under an antidegradation classification.
	Tier 2.5	Bills Lake, Birch Lake, Bobidosh Lake, Bog Lake (SE SE Sec. 31, T40NR6E), Bolton Lake, Broken Bow Lake, Chewalah Lake, Clear Lake (Sec. 2, T39NR4E), Corn Great, Great, Corn Lake, Little "Least/Lesser", Crawling Stone Lake, Big, Crawling Stone Lake, Little, Crescent Lake, Crooked Lake, Big, David Lake, Ellerson Lake, Middle, Ellerson Lake, West, Elsie Lake "Boundary Lake", Fat Lake, Fence Lake, Gresham

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
		Creek, Green Lake (NW NW Sec. 19, T41R6E), Grey Lake, Gunlock Lake, Haskell Lake, Headflyer Lake (Sec. 19, T41NR5E), Highway Lake (NW NW Sec. 19, T41NR5E), Horsehead Lake (SE SW Sec. 9, T40NR5E), Hutton's Creek, Ike Walton Lake, Lily Lake (SE SW Sec. 35, T40NR5E), Little Ten Lake, Lodge Lake "L. Rice" (NW NW Sec. 8, T41NR6E), Lucy Lake, Mindys Lake (Sec. 8, T40NR5E), Minette Lake, Mitten Lake, Monk's Lake (Sec. 13, T40NR5E), Moving Cloud Lake, Mud Creek, Muskesin Lake, Patterson Lake, Placid Twin Lake (North), Placid Twin Lake (South), Plummer Lake, Poupart Lake, Prairie Lake (NE SW Sec. 13, T40NR4E), Raven Lake, Ross Allen Lake, Sand Lake, Little, Scott Lake (Sec. 22, T40N, R4E), Shishebogama Lake, Signal Lake, Snort Lake (Sec. 5, T41N, R6E), Spring Lake "Jerms", Squirrel Lake, Statenaker Lake "Hollow", Stearns Lake "Hourglass", Sugarbush "Hidden Lake" (NW NW Sec. 17, T41NR5E), Sugarbush Creek, Sugarbush Lake, Little, Sugarbush Lake, Lower, Sugarbush Lake, Middle, Sugarbush Lake, Upper, Sunfish Lake, Tippecanoe Lake, Tomahawk River, To-To Tom Lake, Toulish Lake, Trout River, Warrior Lake, White Sand Lake, Whitefish Lake "Cattail Lake" (Sec. 34, T40N5R), Wishow Lake, Wyandock Lake
	Tier 3	Bear River (1st bridge to Reservation boundary), Big Springs (Sec. 25, T40NR4E), Black Lake, Cranberry Lake, Doud Lake, Eagle Lake, Gene Lake, Johnson Springs, Little Trout Lake, Lost Lake (Sect. 1, T41NR4E), Mishonagon Creek, Munnomin (Jesse, Duck) Lake, Negani (Hegani) Lake, Reservation Line Lake, Spring Creek, Tank Lake, Thomas Lake, Wild Rice Lake, Zee Lake
	Mole Lake Band of the Lake Superior Tribe of the Chippewa Indians, Sokaogon Chippewa Community	
	Tier 2.9	One Tribal Water, Wetland 22, is classified as Exceptional High Quality Water (EHQW). It is a high-quality water body of significant cultural, religious, social, ecological and recreational attributes.
	Tier 3	All waters in the Sokaogon Chippewa Community (WI) as classified as Tier 3, with one exception (Wetland 22).
COR0500I	**State of Colorado**	
	Ute Mountain Ute Tribe	
	Tier 3	(2010 Proposed) Designations: 1. Ute Spring and unnamed creek from Ute Spring downstream within Section 12, TWP35N R18W (Colorado). 2. Allen Canyon Creek, Sections 17, 20, 29, 30, 31, TWP 35S, R21E (Utah) 3. "Lopez" Spring and unnamed creek tributary to and downstream from the spring, within Section 35, TWP 34N, R18W
NMR050000	**State of New Mexico**	
	Tier 3	(1) Rio Santa Barbara, including the west, middle and east forks from their headwaters downstream to the boundary of the Pecos Wilderness; and (2) the waters within the United States forest service Valle Vidal special management unit including:

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
		(a) Rio Costilla, including Comanche, La Cueva, Fernandez, Chuckwagon, Little Costilla, Holman, Gold, Grassy, LaBelle and Vidal creeks, from their headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit; (b) Middle Ponil creek, including the waters of Greenwood Canyon, from their headwaters downstream to the boundary of the Elliott S. Barker wildlife management area; (c) Shuree lakes; (d) North Ponil creek, including McCrystal and Seally Canyon creeks, from their headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit; and (e) Leandro creek from its headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit. (3) the named perennial surface waters of the state, identified in Subparagraph (a) below, located within United States department of agriculture forest service wilderness. Wilderness are those lands designated by the United States congress as wilderness pursuant to the Wilderness Act. Wilderness areas included in this designation are the Aldo Leopold wilderness, Apache Kid wilderness, Blue Range wilderness, Chama River Canyon wilderness, Cruces Basin wilderness, Dome wilderness, Gila wilderness, Latir Peak wilderness, Pecos wilderness, San Pedro Parks wilderness, Wheeler Peak wilderness, and White Mountain wilderness. (a) The following waters are designated in the Rio Grande basin: (i) in the Aldo Leopold wilderness: Byers Run, Circle Seven creek, Flower canyon, Holden Prong, Indian canyon, Las Animas creek, Mud Spring canyon, North Fork Palomas creek, North Seco creek, Pretty canyon, Sids Prong, South Animas canyon, Victorio Park canyon, Water canyon; (ii) in the Apache Kid wilderness Indian creek and Smith canyon; (iii) in the Chama River Canyon wilderness: Chavez canyon, Ojitos canyon, Rio Chama; (iv) in the Cruces Basin wilderness: Beaver creek, Cruces creek, Diablo creek, Escondido creek, Lobo creek, Osha creek; (v) in the Dome wilderness: Capulin creek, Medio creek, Sanchez canyon/creek; (vi) in the Latir Peak wilderness: Bull creek, Bull Creek lake, Heart lake, Lagunitas Fork, Lake Fork creek, Rito del Medio, Rito Primero, West Latir creek; (vii) in the Pecos wilderness: Agua Sarca, Hidden lake, Horseshoe lake (Alamitos), Jose Vigil lake, Nambe lake, Nat lake IV, No Fish lake, North Fork Rio Quemado, Rinconada, Rio Capulin, Rio de las Trampas (Trampas creek), Rio de Truchas, Rio Frijoles, Rio Medio, Rio Molino, Rio Nambe, Rio San Leonardo, Rito con Agua, Rito Gallina, Rito Jaroso, Rito Quemado, San Leonardo lake, Santa Fe lake, Santa Fe river, Serpent lake, South Fork Rio Quemado, Trampas lake (East), Trampas lake (West); (viii) in the San Pedro Parks wilderness: Agua Sarca, Cañon Madera, Cave creek, Cecilia Canyon creek, Clear creek (North SPP), Clear creek (South SPP), Corralitos creek, Dove creek, Jose Miguel creek, La

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
		Jara creek, Oso creek, Rio Capulin, Rio de las Vacas, Rio Gallina, Rio Puerco de Chama, Rito Anastacio East, Rito Anastacio West, Rito de las Palomas, Rito de las Perchas, Rito de los Pinos, Rito de los Utes, Rito Leche, Rito Redondo, Rito Resumidero, San Gregorio lake; (ix) in the Wheeler Peak wilderness: Black Copper canyon, East Fork Red river, Elk lake, Horseshoe lake, Lost lake, Sawmill creek, South Fork lake, South Fork Rio Hondo, Williams lake. (b) The following waters are designated in the Pecos River basin: (i) in the Pecos wilderness: Albright creek, Bear creek, Beatty creek, Beaver creek, Carpenter creek, Cascade canyon, Cave creek, El Porvenir creek, Hollinger creek, Holy Ghost creek, Horsethief creek, Jack's creek, Jarosa canyon/creek, Johnson lake, Lake Katherine, Lost Bear lake, Noisy brook, Panchuela creek, Pecos Baldy lake, Pecos river, Rio Mora, Rio Valdez, Rito Azul, Rito de los Chimayosos, Rito de los Esteros, Rito del Oso, Rito del Padre, Rito las Trampas, Rito Maestas, Rito Oscuro, Rito Perro, Rito Sebadilloses, South Fork Bear creek, South Fork Rito Azul, Spirit lake, Stewart lake, Truchas lake (North), Truchas lake (South), Winsor creek; (ii) in the White Mountain wilderness: Argentina creek, Aspen creek, Bonito creek, Little Bonito creek, Mills canyon/creek, Rodamaker creek, South Fork Rio Bonito, Turkey canyon/creek. (c) The following waters are designated in the Gila River basin: (i) in the Aldo Leopold wilderness: Aspen canyon, Black Canyon creek, Bonner canyon, Burnt canyon, Diamond creek, Falls canyon, Fisherman canyon, Running Water canyon, South Diamond creek; (ii) in the Gila wilderness: Apache creek, Black Canyon creek, Brush canyon, Canyon creek, Chicken Coop canyon, Clear creek, Cooper canyon, Cow creek, Cub creek, Diamond creek, East Fork Gila river, Gila river, Gilita creek, Indian creek, Iron creek, Langstroth canyon, Lilley canyon, Little creek, Little Turkey creek, Lookout canyon, McKenna creek, Middle Fork Gila river, Miller Spring canyon, Mogollon creek, Panther canyon, Prior creek, Rain creek, Raw Meat creek, Rocky canyon, Sacaton creek, Sapillo creek, Sheep Corral canyon, Skeleton canyon, Squaw creek, Sycamore canyon, Trail canyon, Trail creek, Trout creek, Turkey creek, Turkey Feather creek, Turnbo canyon, West Fork Gila river, West Fork Mogollon creek, White creek, Willow creek, Woodrow canyon. (d) The following waters are designated in the Canadian River basin: in the Pecos wilderness Daily creek, Johns canyon, Middle Fork Lake of Rio de la Casa, Middle Fork Rio de la Casa, North Fork Lake of Rio de la Casa, Rito de Gascon, Rito San Jose, Sapello river, South Fork Rio de la Casa, Sparks creek (Manuelitas creek). (e) The following waters are designated in the San Francisco River basin: (i) in the Blue Range wilderness: Pueblo creek; (ii) in the Gila wilderness: Big Dry creek, Lipsey canyon, Little Dry creek, Little Whitewater creek, South Fork Whitewater creek, Spider creek, Spruce creek, Whitewater creek.

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
		(f) The following waters are designated in the Mimbres Closed basin: in the Aldo Leopold wilderness Corral canyon, Mimbres river, North Fork Mimbres river, South Fork Mimbres river. (g) The following waters are designated in the Tularosa Closed basin: in the White Mountain wilderness Indian creek, Nogal Arroyo, Three Rivers. (h) The wetlands designated are identified on the maps and list of wetlands within United States forest service wilderness areas designated as outstanding national resource waters published at the New Mexico state library and available on the department's website.
CAR05000I	**Hualapai Tribe**	
	Tier 3	Spencer, Meriwhitica, Willow Spring, Upper Milkweed Spring, Bridge Canyon, Travertine Spring, Travertine Falls, Diamond Creek, Diamond Creek Spring, Blue Mountain, Metuck, Peach Springs Spring, Westwater, Clay Tank, Hockey Puck, Pocamote Spring, Mohawk Spring, Granite Spring, Three Spring, Warm Spring, Honga Spring, National Canyon Spring, National Canyon, Moss Spring
	White Mountain Apache Tripe of the Fort Apache Indian Reservation	
	Tier 2/2.5	East Fork White River, above R52 Road, East Fork White River below R52 Road, above Rock Cr., Paradise Creek, above Wohlenberg, Ord Creek, Smith Cienega, Bull Cienega, Smith Creek, Big Bonito , Tonto Creek, below Y47 Crossing, Crooked Creek, Boggy Creek, Lofer Cienego Creek, Little Bonito Creek, above Y55 Crossing, Flash Creek, Squaw Creek, Hurricane Lake, Hurricane Creek, Hughey Creek, Bonito Cienega, West Fork Black River, Hall Cienega, Purcell Cienega, Thompson Creek, Carrizo Creek below Corduroy, Carrizo Creek above Corduroy, Cedar Creek, Big Canyon (E. Cedar Creek), Middle Cedar Creek, West Cedar Creek, Cibecue Creek in Box Canyon to Salt river, Cibecue Creek, Box CallYon up to confluence with Salt Creek, Spring Creek, Salt Creek, Cibecue Creek, from confluence w/Salt Cr, to Big Springs, Cibecue Creek, above Big Springs, Rock Springs Creek, Salt Draw, Canyon Creek S. of Chediski Farms, Willow Creek (Lower Canyon Cr), Oak Creek, Canyon Creek. N. of Chedlski Fanns,
	Tier 3	East Fork While River, in Wilderness Area, Pumpkin Lake
IDR050000	**State of Idaho**	
	For Tier 2 and Tier 3 waters, please consult the Idaho Integrated Report, available at: http://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report.aspx and the closest regional office of the Idaho Department of Environmental Quality: http://www.deq.idaho.gov/regional-offices-issues.aspx	

Appendix M - Discharge Monitoring Report (DMR) Form

Part 7.1 requires you to use the electronic NetDMR system to prepare and submit your Discharge Monitoring Report (DMR) form. However, if you are given approval by the EPA Regional Office to use a paper DMR form, and you elect to use it, you must complete and submit the following form.

NPDES FORM 6100-29	EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 MSGP INDUSTRIAL DISCHARGE MONITORING REPORT (DMR) FORM	Form Approved. OMB No. 2040-0004

A. Approval to Use Paper DMR Form

1. Have you been granted a waiver from electronic reporting from the EPA Regional Office*? ☐ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted:
- ☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.
- ☐ The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver:

Date approval obtained: / /

*** Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper DMR form. If you have not obtained a waiver, you must file this form electronically using the NetDMR at http://www.epa.gov/netdmr/**

B. Permit Information

1. NPDES ID:

2. Reason(s) for Submission (Check all that apply):

- ☐ Submitting monitoring data (Fill in all Sections).
- ☐ Reporting no discharge for all outfalls for this monitoring period (Fill in Sections A, B, C, D, E.1, and G).
- ☐ Reporting that your site status has changed to inactive and unstaffed (Fill in Sections A, B, C, D, and F and include date of status change in comment field in Section F.4).
- ☐ Reporting that your site status has changed to active (Fill in all Sections and include date of status change in comment field in Section F.4).
- ☐ Reporting that no further pollutant reductions are achievable for all outffalls and for all pollutants via Part 6.2.1.2 of the MSGP (Fill in Sections A, B, C, D, and G).

C. Facility Operator Information

1. Operator Information

Operator Name:

Mailing Address:

Street:

City: State: ZIP Code: -

Phone: - - Ext.

E-mail:

2. DMR Preparer (Complete if DMR was prepared by someone other than the certifier):

First Name, Middle Initial, Last Name:

Organization:

Phone: - - Ext.

E-mail:

D. Facility Information

1. Facility Name:

2. Facility Address:

Street/Location:

City: State: ZIP Code: -

County or Similar Government Subdivision:

E. Discharge Information

1. Identify monitoring period: ☐ Check here if proposing alternative monitoring periods due to irregular stormwater runoff. Identify alternative monitoring schedule and indicate for which alternative monitoring period you are reporting monitoring data:

☐ Quarter 1 (January 1 – March 31)	☐ Quarter 1:	From	/	/	To	/	/	
☐ Quarter 2 (April 1 – June 30)	☐ Quarter 2:	From	/	/	To	/	/	
☐ Quarter 3 (July 1 – September 30)	☐ Quarter 3:	From	/	/	To	/	/	
☐ Quarter 4 (October 1 – December 31)	☐ Quarter 4:	From	/	/	To	/	/	

2. Are you required to monitor for cadmium, copper, chromium, lead, nickel, silver, or zinc in freshwater? ☐ Yes (Skip to 3) ☐ No (Skip to 4)

3. What is the hardness level of the receiving water? (mg/L)

4. Does your facility discharge into any saltwater receiving waters? ☐ Yes ☐ No

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460
MSGP INDUSTRIAL DISCHARGE MONITORING REPORT (DMR)

Form Approved. OMB No. 2040-0004

F. Monitoring Information

Note: Make additional copies of this form as necessary.

1. Nature of Discharge: ☐ Rainfall (Complete line items 2.a., 2.b., & 2.c.) ☐ Snowmelt

2.a. Duration of the rainfall event (hours): ☐☐ 2.b. Rainfall amount (inches): ☐☐.☐ 2.c. Time since previous measurable storm event (days): ☐☐☐

3.a. Outfall ID (list the same 3-digit outfalls identified on the NOI form)	3.b. Check if Any Outfalls are Substantially Identical to Other Outfalls Listed	3.c. Check if No Discharge	3.d. Monitoring Type QBM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quality or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance due to natural background pollutant levels	3.k. No further pollutant reductions achievable?
		☐							☐	☐
	☐ Substantially identical to outfall:_____	☐							☐	☐
	☐ Substantially identical to outfall:_____	☐							☐	☐
	☐ Substantially identical to outfall:_____	☐							☐	☐
	☐ Substantially identical to outfall:_____	☐							☐	☐
	☐ Substantially identical to outfall:_____	☐							☐	☐
	☐ Substantially identical to outfall:_____	☐							☐	☐
	☐ Substantially identical to outfall:_____	☐							☐	☐

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) -Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

G. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name:

Title:

Signature: _____ Date: / /

E-mail:

Instructions for Completing EPA Form 6100-29

Discharge Monitoring Report (DMR) for Stormwater Discharges Associated with Industrial Activity Under the NPDES Multi-Sector General Permit

NPDES Form Date (06/15) Form Approved OMB No. 2040-0004

Who Must Submit A Discharge Monitoring Report to EPA?

Facilities covered under the Multi-Sector General Permit (MSGP or permit) that are required to monitor pursuant to Parts 6.2 and 8 of the permit must submit Discharge Monitoring Reports (DMRs) consistent with the reporting requirements specified in Part 7.1 of the permit.

Completing the Form

Obtain and read a copy of the 2015 MSGP, viewable at http://water.epa.gov/polwaste/npdes/stormwater/EPA-Multi-Sector-General-Permit-MSGP.cfm. To complete this form, type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. Please submit original document with signature in ink - do not send a photocopied signature. **Photocopy your DMR form for your records before you send the completed original form to the appropriate address.**

Section A. Approval to Use Paper DMR Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper DMR form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA staff person who granted the waiver, and the date that approval was provided. See http://water.epa.gov/polwaste/npdes/stormwater/EPA-Multi-Sector-General-Permit-MSGP.cfm for a list of EPA Regional Office contacts.

Section B. Permit Information

Provide the NPDES ID (i.e., NOI tracking number) assigned to the facility for which this DMR is being submitted.

Indicate your reason(s) for submitting this DMR by checking all boxes that apply. The reasons for submission are defined as follows:

- *Submitting monitoring data*: For each storm sampled, submit one DMR form with data for all outfalls sampled. Select this reason even if you only have monitoring data for some of your outfalls (i.e., some outfalls did not discharge). If you select this reason you are required to complete all Sections of the form.
- *Reporting no discharge for all outfalls for this monitoring period*: Indicates that there were no discharges from all outfalls during this monitoring period. If you select this reason you are only required to complete Sections A, B, C, D, E.1, and G.
- *Reporting that your site status has changed to inactive and unstaffed*: Indicates that your facility is currently inactive and unstaffed (See Part 6.2.1.3 of the permit for more information). If you select this reason you are only required to complete Sections A, B, C, D, and F and include date of status change in comment field in Section F.4
- *Reporting that your site status has changed from inactive to active*: Indicates that your facility is currently active (See Part 6.2.1.3 of the permit for more information). If you select this reason you are required to complete all Sections of the form and include date of status change in the comment field in Section F.4.
- *Reporting that no further reductions are achievable for all outfalls and for all pollutants via Part 6.2.1.2 of the permit*: Indicates that you have determined that no further pollutant reductions are technologically and economically practicable in light of best industry practice to meet the technology-based effluent limits or are necessary to meet the water-quality-based effluent limitations in Parts 2 of the permit (See Part 6.2.1.2 of the permit for more information). If you select this reason you are required to complete Sections A, B, C, D and G. However, if you can make this finding for some outfalls and pollutants, but not for others, you cannot select this reason; you will instead be able to identify which outfalls and which pollutants you can make this finding for in Section F.

Section C. Facility Operator Information.

Provide the legal name of the person, firm, public organization, or any other entity that operates the facility for which this DMR is being submitted. An operator of a facility is the legal entity that controls the operation of the facility. Refer to Appendix A of the permit for the definition of "operator". Provide the operator's mailing address, phone number, and e-mail. The operator information in this Section should match the operator information provided on your NOI form.

Provide the name, organization, phone number, an email address for the person who prepared this DMR form.

Section D. Facility Information

Enter the official or legal name and complete street address, including city, state, ZIP code, and county or similar government subdivision of the facility. If the facility lacks a street address, indicate the general location of the facility (e.g., Intersection of State Highways 61 and 34). Complete facility information must be provided for permit coverage to be granted. The facility information in this Section should match the facility information provided on your NOI form.

Section E. Discharge Information.

Indicate the appropriate monitoring period (Quarter 1, 2, 3, or 4) covered by the DMR. "Alternative" monitoring periods can apply to facilities located in arid and semi-arid climates, or in areas subject to snow or prolonged freezing. To use alternative monitoring periods, you must provide a revised monitoring schedule here. If using alternative monitoring periods, identify the first day of the monitoring period through the last day of the monitoring period for each of the four periods. The dates should be displayed as month (Mo) / day (Day). See Parts 6.1.6 and 6.1.7 of the permit for more information.

If you are submitting benchmark monitoring data, identify if your facility is required to collect benchmark samples for one or more hardness-dependent metals (i.e., cadmium, copper, lead, nickel, silver, and zinc). If you select "yes" to this question provide the hardness level of the receiving water (in mg/L)). If you select "no" to this question, you must identify if your facility discharges into any saltwater receiving waters.

Discharge Monitoring Report (DMR) for Stormwater Discharges Associated with Industrial Activity Under the NPDES Multi-Sector General Permit

NPDES Form Date (06/15) Form Approved OMB No. 2040-0004

F. Monitoring Information

For the reported monitoring event indicate whether the discharge was from a rainfall or snowmelt event. If you select "rainfall" then indicate the duration (in hours) of the rainfall event, rainfall total (in inches) for that rainfall event, and time (in days) since the previous measurable storm event in line items 2.a-c. For both rainfall and snowmelt monitoring, you must identify the date of collection for the monitoring event in column 3.i. of the table. If the discharge occurs during a period of both rainfall and snowmelt, check both the rainfall and snowmelt boxes and report the appropriate rainfall information in item 2.a-c. To report multiple monitoring events in the same reporting period, copy this form and enter each monitoring event separately with data for all outfalls sampled.

Identify all the outfalls from your facility that discharge stormwater. Each outfall must be assigned a unique 3-digit number (e.g., 001, 002, 003), and should match the outfalls identified on your NOI form.

If any outfalls are substantially identical, check the box in 3.b and identify the outfall that the outfall in 3.a is substantially identical to. In 3.d – k, you only need to provide benchmark monitoring data for one of the outfalls.

For any outfall for which there was no discharge during the monitoring period, check the box in 3.

In 3.d, identify the type of monitoring using the specified codes, in parentheses, below:

- (QBM) – Quarterly benchmark monitoring
- (ELG) – Annual effluent limitations guidelines monitoring;
- (S/T) – State- or Tribal-specific monitoring;
- (I) – Impaired waters monitoring; or
- (O) – Other monitoring as required by EPA.

In 3.e, enter each "parameter" (or "pollutant") monitored. For QBM and ELG monitoring, use the same parameter name as in Part 8 of the permit.

In 3.f., enter a sample measurement value for each parameter analyzed and required to be reported. Enter "ND" (i.e., not detected) for any sample results below the method detection limit or "BQL" (i.e., below quantitation limit) for sample results above the detection limit but below the quantitation limit.

In 3.g., enter the units for sample measurement values (i.e., "mg/L" for milligrams per liter) for each parameter analyzed and required to be reported. For monitoring results reported as ND or BQL this space will be left blank and the units will be reported in Column 3.f.

3.h. must be completed for any monitoring results reported as ND or BQL in the "Quality or Concentration" column. For ND, report the laboratory detection level and units in this column. For BQL, report the laboratory quantitation limit and units in this column.

In 3.i. identify the sampling date for each parameter monitoring result reported on this form.

3.h. *Exceedance due to natural background pollutant levels:* Check box if following the first 4 quarters of benchmark monitoring (or sooner if the exceedance is triggered by less than 4 quarters of data) you have determined that the exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background for that outfall and any substantially identical outfalls, or for impaired waters monitoring, the presence of the pollutant is caused solely by natural background. See Part 6.2.1.2 and 6.2.4.1 of the permit for more information.

In 3.j .check the box if after collection of 4 quarterly samples (or sooner if the exceedance is triggered by less than 4 quarters of data), the average of the 4 monitoring values for any parameter exceeds the benchmark and you have made the determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology-based effluent limits or are necessary to meet the water-quality-based effluent

Where violations of the permit requirements are reported, include a brief explanation to describe the cause and corrective actions taken, and reference each violation by date. Also, this section should include any additional comments such as are required when changing site status from inactive and unstaffed to active or vice versa. Attach additional pages if you need more space.

Attach additional copies of Section F as necessary to address all outfalls and parameters.

Section G. Certification Information

DMRs must be signed by a person described below, or by a duly authorized representative of that person.

For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing.

A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above;

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and

3. The written authorization is submitted to the Director.

An unsigned or undated DMR form be considered incomplete.

Paperwork Reduction Act Notice

Public reporting burden for this form is estimated to average 7.25 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number of this form on any correspondence. Do not send the completed DMR form to this address.

Submitting Your Form

If you have been granted a waiver from your Regional Office to submit a paper DMR form, you must send your DMR form by mail to one of the following addresses:

Region 1
MSGP Discharge Monitoring Reports (OES4-SMR)
EPA New England, Region 1
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Region 2
MSGP Discharge Monitoring Reports
290 Broadway
DECA/CAPBS/DMT
21st Floor
New York, NY, 10007-1866

Region 3
Nancy Ford
U.S. EPA Region 3
1650 Arch Street
Mail Code #3WP60
Philadelphia, PA 19103

Region 5
U.S. Environmental Protection Agency Region 5
77 West Jackson Boulevard (WN-16J)
Chicago, Illinois 60604
Attn: Brian Bell - Storm Water Coordinator

Region 6
U.S. EPA, Region 6 MSGP DMRs
Water Enforcement Branch (6EN-WC)
1445 Ross Avenue
Dallas, TX 75202

Region 7
Neal Gilbert
U.S. Environmental Protection Agency, Region 7
Enforcement Coordination Office
11201 Renner Blvd
Lenexa, KS 66219

Region 8
U.S. EPA, Region 8 (ENF-PJ)
Attention: DMR Coordinator
1595 Wynkoop Street
Denver, CO 80202-1129

Region 9
Sandra Chew
U.S. EPA Region 9
Information Management Section, ENF-4-1
75 Hawthorne Street
San Francisco, CA 94105

Region 10
U.S. EPA Region 10
Attn: NPDES Data Manager, OCE-101
1200 Sixth Avenue, Suite 900
Seattle, WA 98101

Visit this website for instructions on how to submit electronically:
http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm

Sector A. Timber Products					
Sub-sector	**SIC Codes**		**NAICS Codes**		**Notes**
A3	**2411**	Logging (log storage and handling activities only; wet deck storage areas only authorized if no chemical additives are used in the spray water or applied to the logs.)	**113310**	Logging	
A1	**2421**	General Sawmills and Planing Mills (sawmills)	**321113**	Sawmills	
		(lumber manufacturing from purchased lumber, softwood cut stock, wood lath, fence pickets, and planing mill products)	**321912**	Cut Stock, Resawing Lumber, and Planing	
		(softwood flooring)	**321918**	Other Millwork (including Flooring)	
		(box lumber made from purchased lumber)	**321920**	Wood Container and Pallet Manufacturing	
		(kiln drying)	**321999**	All Other Miscellaneous Wood Product Manufacturing	
A4	**2426**	Hardwood Dimension and Flooring Mills (hardwood dimension lumber made from logs or bolts)	**321113**	Sawmills	
		(hardwood cut stock, resawing hardwood lumber, and planing purchased hardwood lumber except flooring)	**321912**	Cut Stock, Resawing Lumber, and Planing	
		(hardwood flooring)	**321918**	Other Millwork (including Flooring)	
		(wood furniture frames and finished furniture parts)	**337215**	Showcase, Partition, Shelving, and Locker Manufacturing	
	2429	Special Product Sawmills, Not Elsewhere Classified (shingle mills, shakes)	**321113**	Sawmills	
		(stave manufacturing from purchased lumber)	**321912**	Cut Stock, Resawing Lumber, and Planing	
		(cooperage stock)	**321920**	Wood Container and Pallet Manufacturing	
		(excelsior)	**321999**	All Other Miscellaneous Wood Product Manufacturing	

	2431	Millwork (wood windows and doors)	**321911**	Wood Window and Door Manufacturing	
		(except wood windows and doors)	**321918**	Other Millwork (including Flooring)	
	2435	Hardwood Veneer and Plywood	**321211**	Hardwood Veneer and Plywood Manufacturing	
	2436	Softwood Veneer and Plywood	**321212**	Softwood Veneer and Plywood Manufacturing	
	2439	Structural Wood Members, Not Elsewhere Classified (except trusses)	**321213**	Engineered Wood Member (except Truss) Manufacturing	
		(trusses)	**321214**	Truss Manufacturing	
A5	**2441**	Nailed and Lock Corner Wood Boxes and Shook	**321920**	Wood Container and Pallet Manufacturing	
A4	**2448**	Wood Pallets and Skids	**321920**	Wood Container and Pallet Manufacturing	
	2449	Wood Containers, Not Elsewhere Classified	**321920**	Wood Container and Pallet Manufacturing	
	2451	Mobil Homes	**321991**	Manufactured Home (Mobil Home) Manufacturing	
	2452	Prefabricated Wood Buildings and Components	**321992**	Prefabricated Wood Building Manufacturing	
A2	**2491**	Wood Preserving	**321114**	Wood Preservation	
A4	**2493**	Reconstituted Wood Products	**321219**	Reconstituted Wood Product Manufacturing	
	2499	Wood Products, Not Elsewhere Classified (wood containers, such as noncoopered vats and reed or straw baskets)	**321920**	Wood Container and Pallet Manufacturing	
		(except wood containers, wood cooling towers, cork life preservers, mirror or picture frames, and laundry hampers of reed, rattan, and willow)	**321999**	All Other Miscellaneous Wood Product Manufacturing	
		(wood cooling towers)	**333415**	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	
		(laundry hampers of reed, rattan, and willow)	**337125**	Household Furniture (except Wood and Metal) Manufacturing	
		(cork life preservers)	**339113**	Surgical Appliance and Supplies Manufacturing	
		(mirror and picture frames)	**339999**	All Other Miscellaneous Manufacturing	

Sector B. Paper and Allied Products Manufacturing

Sub-sector	SIC Codes		NAICS Codes		Notes
B2	**2611**	Pulp Mills			
		(pulp producing mills only)	**322110**	Pulp Mills	
		(producing paper except newsprint)	**322121**	Paper (except Newsprint) Mills	
		(producing newsprint)	**322122**	Newsprint Mills	
		(producing paperboard)	**322130**	Paperboard Mills	
	2621	Paper Mills			
		(except newsprint mills)	**322121**	Paper (except Newsprint) Mills	
		(newsprint mills)	**322122**	Newsprint Mills	
B1	**2631**	Paperboard Mills	**322130**	Paperboard Mills	
B2	**2652**	Setup Paperboard Boxes	**322213**	Setup Paperboard Box Manufacturing	
	2653	Corrugated and Solid Fiber Boxes	**322211**	Corrugated and Solid Fiber Boxes Manufacturing	
	2655	Fiber Cans, Tubes, Drums, and Similar Products	**322214**	Fiber Can, Tube, Drum, and Similar Products Manufacturing	
	2656	Sanitary Food Containers, Except Folding	**322215**	Nonfolding Sanitary Food Container Manufacturing	
	2657	Folding Paperwork Boxes	**322212**	Folding Paperboard Box Manufacturing	
	2671	Packaging Paper and Plastics Film, Coated and Laminated			
		(except single-web and multi-web plastics packaging film and sheets)	**322221**	Coated and Laminated Packaging Paper and Plastics Film Manufacturing	
		(single-web and multi-web plastics packaging film and sheets)	**326112**	Plastics Packaging Film and Sheet (including Laminated) Manufacturing	Any facility whose primary activity is manufacturing single-web and multi-web plastics packaging film and sheets (SIC 2671 / NAICS 326112) should be regulated under Sector Y, but may continue to be regulated under Sector B, or alternatively, under Sector AD. Sectors Y, B, and AD do not have specific requirements for facilities manufacturing single-web and multi-web plastics packaging film and sheets. However, under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements. Regulatory burden would not differ between Sectors B and Y.
	2672	Coated and Laminated Paper, NEC	**322222**	Coated and Laminated Paper Manufacturing	

	2673	Plastics, Foil, and Coated Paper Bags (except single-web or multi-web plastics bags)	**322223**	Plastics, Foil, and Coated Paper Bags Manufacturing	
		(single-web and multi-web plastics bags)	**326111**	Plastics Bag Manufacturing	Any facility whose primary activity is manufacturing single-web and multi-web plastics bags (SIC 2673 / NAICS 326111) should be regulated under Sector Y, but may continue to be regulated under Sector B, or alternatively, under Sector AD. Sectors Y, B, and AD do not have specific requirements for facilities manufacturing single-web and multi-web plastics bags. However, under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements. Regulatory burden would not differ between Sectors B and Y.
	2674	Uncoated Paper and Multiwall Bags	**322224**	Uncoated Paper and Multiwall Bags Manufacturing	
	2675	Die Cut Paper and Paperboard and Cardboard (pasted, lined, laminated, or surface-coated paperboard)	**322226**	Surface-Coated Paperboard Manufacturing	
		(die cut paper and paperboard office supplies, such as file folders, tabulating cards, and report covers)	**322231**	Die Cut Paper and Paperboard Office Supplies Manufacturing	
		(except pasted, lined, laminated, or surface-coated paperboard and die-cut paper and paperboard office supplies)	**322299**	All Other Converted Paper Product Manufacturing	
	2676	Sanitary Paper Products	**322291**	Sanitary Paper Product Manufacturing	
	2677	Envelopes	**322232**	Envelope Manufacturing	
	2678	Stationery, Tablets, and Related Products	**322233**	Stationery, Tablets, and Related Product Manufacturing	
	2679	Converted Paper and Paperboard Products, NEC (corrugated paper)	**322211**	Corrugated and Solid Fiber Box Manufacturing	
		(wallpaper and gift wrap paper)	**322222**	Coated and Laminated Paper Manufacturing	
		(paper supplies for business machines, such as adding machine tape, and other paper office supplies)	**322231**	Die Cut Paper and Paperboard Office Supplies Manufacturing	

		(except corrugated paper, wall paper, gift wrap paper, paper supplies for business machines, and other paper office supplies)	**322299**	All Other Converted Paper Product Manufacturing	

Sector C. Chemical and Allied Products Manufacturing

Sub-sector	SIC Codes		NAICS Codes		Notes
C2	**2812**	Alkalies and Chlorine	**325181**	Alkalies and Chlorine Manufacturing	
	2813	Industrial Gases	**325120**	Industrial Gas Manufacturing	
	2816	Inorganic Pigments (except bone and lamp black)	**325131**	Inorganic Dye and Pigment Manufacturing	
		(bone and lamp black)	**325182**	Carbon Black Manufacturing	
	2819	Industrial Inorganic Chemicals, Not Elsewhere Classified (recovering sulfur from natural gas)	**211112**	Natural Gas Liquid Extraction	
		(inorganic dyes)	**325131**	Inorganic Dye and Pigment Manufacturing	
		(other)	**325131**	All Other Basic Inorganic Chemical Manufacturing	
		(activated carbon and charcoal)	**325998**	All Other Miscellaneous Chemical Product and Preparation Manufacturing	
		(alumina)	**331311**	Alumina Refining	Any facility whose primary activity is alumina refining (NAICS 331311) should be regulated under Sector F, but may continue to be regulated under Sector C. Sector C requires sector/subsector specific benchmark monitoring for total aluminum, total iron, and nitrate plus nitrite nitrogen. Sector F applies additional technology-based effluent limits comprised of good housekeeping measures; additional SWPPP requirements; and additional inspection requirements. Regulatory burdens differ between Sectors C and F but determining which sector would be more burdensome would depend on the regulated facility.
C4	**2821**	Plastics Materials, Synthetic Resins, and Nonvulcanizable Elastomers	**325211**	Plastics Material and Resin Manufacturing	
	2822	Synthetic Rubber	**325212**	Synthetic Rubber Manufacturing	

	2823	Cellulosic Manmade Fibers	**325221**	Cellulosic Organic Fiber Manufacturing	
	2824	Manmade Organic Fibers, Except Cellulosic	**325222**	Noncellulosic Organic Fiber Manufacturing	
C5	**2833**	Medicinal Chemicals and Botanical Products	**325411**	Medicinal and Botanical Manufacturing	
	2834	Pharmaceutical Preparations	**325412**	Pharmaceutical Preparation Manufacturing	
	2835	In Vitro and In Vivo Diagnostic Substances			
		(except in vitro diagnostic)	**325412**	Pharmaceutical Preparation Manufacturing	
		(in vitro diagnostic substances)	**325413**	In Vitro Diagnostic Substance Manufacturing	
	2836	Biological Products, Except Diagnostic Substances	**325414**	Biological Product (except Diagnostic) Manufacturing	
C3	**2841**	Soaps and Other Detergents, Except Specialty Cleaners	**325611**	Soap and Other Detergent Manufacturing	
	2842	Specialty Cleaning, Polishing, and Sanitation Preparations	**325612**	Polish and Other Sanitation Good Manufacturing	
	2843	Surface Active Agents, Finishing Agents, Sulfonated Oils, and Assistants	**325613**	Surface Active Agent Manufacturing	
	2844	Perfumes, Cosmetics, and Other Toilet Preparations			
		(toothpaste, gel and dentifrice powders)	**325611**	Soap and Other Detergent Manufacturing	
		(except toothpaste, gel and dentifrice powders)	**325620**	Toilet Preparation Manufacturing	
C5	**2851**	Paints, Varnishes, Lacquers, Enamels, and Allied Products	**325510**	Paint and Coating Manufacturing	
	2861	Gum and Wood Chemicals	**325191**	Gum and Wood Chemical Manufacturing	
	2865	Cyclic Organic Crudes and Intermediates, and Organic Dyes and Pigments			
		(aromatics)	**325110**	Petrochemical Manufacturing	
		(organic dyes and pigments)	**325132**	Synthetic Organic Dye and Pigment Manufacturing	
		(except aromatics and organic dyes and pigments)	**325192**	Cyclic Crude and Intermediate Manufacturing	
	2869	Industrial Organic Chemicals, Not Elsewhere Classified			
		(aliphatics)	**325110**	Petrochemical Manufacturing	
		(fluorocarbon gases)	**325120**	Industrial Gas Manufacturing	
		(carbon bisulfide)	**325188**	All Other Basic Inorganic Chemical Manufacturing	

		(cyclopropane, diethylcyclohexane, naphthalene sulfonic acid)	**325192**	Cyclic Crude and Intermediate Manufacturing	
		(ethyl alcohol)	**325193**	Ethyl Alcohol Manufacturing	
		(except aliphatics, carbon bisulfide, ethyl alcohol, cyclopropane, diethylcyclohexane, napthalene sulfonic acid, synthetic hydraulic fluids, and fluorocarbon gases)	**325199**	All Other Basic Organic Chemical Manufacturing	
		(synthetic hydraulic fluids)	**325998**	All Other Miscellaneous Chemical Product and Preparation Manufacturing	
C1	**2873**	Nitrogenous Fertilizers	**325311**	Nitrogenous Fertilizer Manufacturing	
	2874	Phosphatic Fertilizers	**325312**	Phosphatic Fertilizer Manufacturing	
	2875	Fertilizers, Mixing Only	**325314**	Fertilizers (Mixing Only) Manufacturing	
	2879	Pesticides and Agricultural Chemicals, NEC	**325320**	Pesticides and Other Agricultural Chemical Manufacturing	
C5	**2891**	Adhesives and Sealants	**325520**	Adhesive Manufacturing	
	2892	Explosives	**325920**	Explosives Manufacturing	
	2893	Printing Ink	**325910**	Printing Ink Manufacturing	
	2895	Carbon Black	**325182**	Carbon Black Manufacturing	
	2899	Chemicals and Chemical Preparations, NEC			
		(table salt)	**311942**	Spice and Extract Manufacturing (table salt only)	
		(fatty acids)	**325199**	All Other Basic Organic Chemical Manufacturing	
		(frit and plastic wood fillers)	**325510**	Paint and Coating Manufacturing	
		(except frit, plastic wood fillers, fatty acids, and table salt)	**325998**	All Other Miscellaneous Chemical Product and Preparation Manufacturing	
	2911	Petroleum Refining	**324110**	Petroleum Refineries	
	3952	Lead Pencils, Crayons, and Artists' Materials (limited to inks and paints, including china painting enamels)			
		(drawing inks and india ink)	**325998**	All Other Miscellaneous Chemical Product and Preparation Manufacturing	
		(china painting enamels, platinum paint for burnt wood or leather work, paints for china painting, artist's paints, and artist's watercolors)	**339942**	Lead Pencil and Art Good Manufacturing	

Sector D. Asphalt Paving and Roofing Materials Manufacturers and Lubricant Manufacturers

Sub-sector	SIC Codes		NAICS Codes		Notes
D1	2951	Asphalt Paving Mixtures and Blocks	324121	Asphalt Paving Mixture and Block Manufacturing	
	2952	Asphalt Felt and Coatings	324122	Asphalt Shingle and Coating Materials Manufacturing	
D2	2992	Lubricating Oils and Greases	324191	Petroleum Lubricating Oil and Grease Manufacturing	
	2999	Products of Petroleum and Coal, Not Elsewhere Classified	324199	All Other Petroleum and Coal Products Manufacturing	

Sector E. Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing

Sub-sector	SIC Codes		NAICS Codes		Notes
E3	3211	Flat Glass	327211	Flat Glass Manufacturing	
	3221	Glass Containers	327213	Glass Container Manufacturing	
	3229	Pressed and Blown Glass and Glassware, Not Elsewhere Classified	327212	Other Pressed and Blown Glass and Glassware Manufacturing	
	3231	Glass Product Manufacturing Made of Purchased Glass	327215	Glass Product Manufacturing Made of Purchased Glass	
	3241	Hydraulic Cement	327310	Cement Manufacturing	
E1	3251	Brick and Structural Clay Tile (except slumped brick)	327121	Brick and Structural Clay Tile Manufacturing	
		(slumped brick)	327331	Concrete Block and Brick Manufacturing	
	3253	Ceramic Wall and Floor Tile	327122	Ceramic Wall and Floor Tile Manufacturing	
	3255	Clay Refractories	327124	Clay Refractory Manufacturing	
	3259	Structural Clay Products, Not Elsewhere Classified	327123	Other Structural Clay Product Manufacturing	
	3261	Vitreous China Plumbing Fixtures and China and Earthenware Fittings and Bathroom Accessories	327111	Vitreous China Plumbing Fixture and China and Earthenware Bathroom Accessories Manufacturing	
	3262	Vitreous China Table and Kitchen Articles	327112	Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing	
	3263	Fine Earthenware (Whiteware) Table and Kitchen Articles	327112	Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing	
	3264	Porcelain Electrical Supplies	327113	Porcelain Electrical Supply Manufacturing	
	3269	Pottery Products, Not Elsewhere Classified	327112	Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing	

E2	**3271**	Concrete Block and Brick	**327331**	Concrete Block and Brick Manufacturing	
	3272	Concrete Products, Except Block and Brick			
		(concrete pipe)	**327332**	Concrete Pipe Manufacturing	
		(concrete products, except dry mix concrete and pipe)	**327390**	Other Concrete Product Manufacturing	
		(dry mixture concrete)	**327999**	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing	
	3273	Ready-Mixed Concrete	**327320**	Ready-Mix Concrete Manufacturing	
	3274	Lime Manufacturing			
		Calcium hydroxide (i.e., hydrated lime) manufacturing	**327410**	Lime Manufacturing	
		Calcium oxide (i.e., quicklime) manufacturing	**327410**	Lime Manufacturing	
		Dolomite, dead-burned, manufacturing	**327410**	Lime Manufacturing	
		Hydrated lime (i.e., calcium hydroxide) manufacturing	**327410**	Lime Manufacturing	
		Quicklime (i.e., calcium oxide) manufacturing	**327410**	Lime Manufacturing	
		Agricultural lime manufacturing	**327410**	Lime Manufacturing	
		Dolomitic lime manufacturing	**327410**	Lime Manufacturing	
	3275	Gypsum Products	**327420**	Gypsum Product Manufacturing	
E3	**3281**	Cut Stone and Stone Products	**327991**	Cut Stone and Stone Product Manufacturing	
	3291	Abrasive Products			
		(except steel wool manufacturing)	**327910**	Abrasive Product Manufacturing	
		(steel wool manufacturing)	**332999**	All Other Miscellaneous Fabricated Metal Product Manufacturing	Any facility whose primary activity is steel wool manufacturing (NAICS 332999) should be regulated under Sector AA, but may continue to be regulated under Sector E. Sector AA applies additional technology-based effluent limits comprised of good housekeeping measures, spill prevention and response procedures, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector E applies additional technology-based effluent limits comprised of good housekeeping measures, and additional SWPPP requirements.

					Regulatory burden would likely be greater under Sector AA.
	3292	Asbestos Products			
		(except brake pads and linings)	**327999**	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing	
		(asbestos brake linings and pads)	**336340**	Motor Vehicle Brake System Manufacturing	
		(asbestos clutch facings, motor vehicle)	**336350**	Motor Vehicle Transmission and Power Train Parts Manufacturing	
	3295	Minerals and Earths, Ground or Otherwise Treated			
		(grinding, washing, separating, etc. of kaolin and ball clay)	**212324**	Kaolin and Ball Clay Mining	
		(grinding, washing, separating, etc. of clay, ceramic, and refractory minerals not elsewhere classified)	**212325**	Clay and Ceramic and Refractory Minerals Mining	
		(grinding, washing, separating, etc. of chemical and fertilizer minerals, not elsewhere classified)	**212393**	Other Chemical and Fertilizer Mineral Mining	
		(grinding, washing, separating, etc. of nonmetallic minerals, not elsewhere classified)	**212399**	All Other Nonmetallic Mineral Mining	
		(except grinding, washing, separating, etc. of nonmetallic minerals)	**327992**	Ground or Treated Mineral and Earth Manufacturing	
	3296	Mineral Wool	**327993**	Mineral Wool Manufacturing	
	3297	Nonclay Refractories	**327125**	Nonclay Refractory Manufacturing	
	3299	Nonmetallic Mineral Products, Not Elsewhere Classified			
		(clay statuary)	**327112**	Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing	
		(moldings, ornamental and architectural plaster work, and gypsum statuary)	**327420**	Gypsum Product Manufacturing	
		(except moldings, ornamental and architectural plaster work, clay statuary, and gypsum statuary)	**327999**	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing	

Sector F. Primary Metals

Sub-sector	SIC Codes		NAICS Codes		Notes
F1	**3312**	Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills			

		(coke oven products [e.g., coke, gases, tars] made in coke oven establishments)	**324199**	All Other Petroleum and Coal Products Manufacturing	Any facility whose primary activity is manufacturing coke oven products (e.g., coke, gases, tars) made in coke oven establishments should be regulated under Sector D, but may continue to be regulated under Sector F. Sector F requires sector-specific benchmark monitoring requirements for total aluminum and total zinc, Sector D does not require benchmark monitoring from these facilities. Regulatory burden would be greater under Sector F.
		(except coke ovens not integrated with steel mills and hot-rolling purchased steel)	**331111**	Iron and Steel Mills	
		(hot-rolling purchased steel)	**331221**	Rolled Steel Shape Manufacturing	
	3313	Electrometallurigcal Products, Except Steel	**331112**	Electrometallurigcal Ferroalloy Product Manufacturing	
	3315	Steel Wiredrawing and Steel Nails and Spikes (steel wire drawing)	**331222**	Steel Wire Drawing	
	3316	Cold-Rolled Steel Sheet, Strip, and Bars	**331221**	Rolled Steel Shape Manufacturing	
	3317	Steel Pipe and Tubes	**331210**	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	
F2	**3321**	Gray and Ductile Iron Foundries	**331511**	Iron Foundries	
	3322	Malleable Iron Foundries	**331511**	Iron Foundries	
	3324	Steel Investment Foundries	**331512**	Steel Investment Foundries	
	3325	Steel Foundries, NEC	**331513**	Steel Foundries (except Investment)	
F5	**3331**	Primary Smelting and Refining of Copper	**331411**	Primary Smelting and Refining of Copper	
	3334	Primary Production of Aluminum	**331312**	Primary Aluminum Production	
	3339	Primary Smelting and Refining of Nonferrous Metals, Except Copper and Aluminum	**331419**	Primary Smelting and Refining of Nonferrous Metal (except Copper and Aluminum)	
	3341	Secondary Smelting and Refining of Nonferrous Metals (aluminum)	**331314**	Secondary Smelting and Alloying of Aluminum	
		(copper)	**331423**	Secondary Smelting, Refining and Alloying of Copper	

		(except copper and aluminum)	**331492**	Secondary Smelting, Refining and Alloying of Nonferrous Metal (except Copper and Aluminum)	
F3	**3351**	Rolling, Drawing, and Extruding of Copper	**331421**	Copper Rolling, Drawing, and Extruding	
	3353	Aluminum Sheet, Plate, and Foil	**331315**	Aluminum Sheet, Plate, and Foil Manufacturing	
	3354	Aluminum Extruded Products	**331316**	Aluminum Extruded Product Manufacturing	
	3355	Aluminum Rolling and Drawing, Not Elsewhere Classified	**331319**	Other Aluminum Rolling and Drawing	
	3356	Rolling, Drawing, and Extruding of Nonferrous Metals, Except Copper and Aluminum	**331491**	Nonferrous Metal (Except Copper and Aluminum) Rolling, Drawing, and Extruding	
	3357	Drawing and Insulating of Nonferrous Wire			
		(aluminum wire drawing)	**331319**	Other Aluminum Rolling and Drawing	
		(copper wire drawing)	**331422**	Copper Wire (except Mechanical) Drawing	
		(wire drawing except copper or aluminum)	**331491**	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding	
		(fiber optic cable-insulating only)	**335921**	Fiber Optic Cable Manufacturing	
		(communication and energy wire, except fiber optic-insulating only)	**335929**	Other Communication and Energy Wire Manufacturing	
F4	**3363**	Aluminum Die Castings	**331521**	Aluminum Die Casting Foundries	
	3364	Nonferrous Die Castings, Except Aluminum	**331522**	Nonferrous (Except Aluminum) Die Casting Foundries	
	3365	Aluminum Foundries	**331524**	Aluminum Foundries (Except Die-Casting)	
	3366	Copper Foundries	**331525**	Copper Foundries (Except Die-Casting)	
	3369	Nonferrous Foundries, Except Copper and Aluminum	**331528**	Other Nonferrous Foundries (Except Die-Casting)	
F5	**3398**	Metal Heat Treating	**332811**	Metal Heat Treating	
	3399	Primary Metal Products, Not Elsewhere Classified			
		(iron ore recovery from open hearth slag)	**331111**	Iron and Steel Mills	
		(ferrous powder, paste, flakes, etc.)	**331221**	Rolled Steel Shape Manufacturing	
		(aluminum powder, paste, flakes, etc.)	**331314**	Secondary Smelting and Alloying of Aluminum	
		(copper powder, paste, flakes, etc.)	**331423**	Secondary Smelting, Refining, and Alloying of Copper	
		(nonferrous powder, paste, flakes, etc. except copper and aluminum)	**331492**	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)	
		(nonferrous nails, brads, staples, tacks, etc. made from purchased nonferrous wire)	**332618**	Other Fabricated Wire Product Manufacturing	

Sector G. Metal Mining (Ore Mining and Dressing)

Sub-sector	SIC Codes		NAICS Codes		Notes
G1	1021	Copper Ores	212234	Copper Ore and Nickel Ore Mining	
G2	1011	Iron Ores	212210	Iron Ore Mining	
	1021	Copper Ores	212234	Copper Ore and Nickel Ore Mining	
	1031	Lead and Zinc Ores	212231	Lead Ore and Zinc Ore Mining	
	1041	Gold Ores	212221	Gold Ore Mining	
	1044	Silver Ores	212222	Silver Ore Mining	
	1061	Ferroalloy Ores, Except Vanadium (nickel)	212234	Copper Ore and Nickel Ore Mining	
		(other ferroalloys except nickel)	212299	All Other Metal Ore Mining	
	1081	Metal Mining Services (except site preparation and related activities performed on a contract or fee basis and geophysical surveying and mapping)	213114	Support Activities for Metal Mining	
		(site preparation and related construction activities on a contract basis)	238910	Site Preparation Contractors	
	1094	Uranium-Radium-Vanadium Ores	212291	Uranium-Radium-Vanadium Ore Mining	
	1099	Miscellaneous Metal Ores, Not Elsewhere Classified	212299	All Other Metal Ore Mining	

Sector H. Coal Mines and Coal Mining-Related Facilities

Sub-sector	SIC Codes		NAICS Codes		Notes
H1	1221	Bituminous Coal and Lignite Surface Mining	212111	Bituminous Coal and Lignite Surface Mining	
	1222	Bituminous Coal Underground Mining	212112	Bituminous Coal Underground Mining	
	1231	Anthracite Mining	212113	Anthracite Mining	
	1241	Coal Mining Services (except site preparation and related construction activities on a contract basis)	213113	Support Activities for Coal Mining	
		(site preparation and related construction activities on a contract basis)	238910	Site Preparation Contractors	

Sector I. Oil and Gas Extraction

Sub-sector	SIC Codes		NAICS Codes		Notes
I1	1311	Crude Petroleum and Natural Gas	211111	Crude Petroleum and Natural Gas Extraction	
	1321	Natural Gas Liquids	211112	Natural Gas Liquid Extraction	
	1381	Drilling Oil and Gas Wells	213111	Drilling Oil and Gas Wells	
	1382	Oil and Gas Field Exploration Services	213112	Support Activities for Oil and Gas Operations	
	1389	Oil and Gas Field Services, Not Elsewhere Classified (except construction of field gathering lines, site preparation and related construction activities performed on a contract or fee basis)	213112	Support Activities for Oil and Gas Operations	
		(construction of field gathering lines on a contract or fee basis)	237120	Oil and Gas Pipeline and Related Structures Construction	
		(site preparation and related construction activities on a contract basis)	238910	Site Preparation Contractors	

Sector J. Mineral Mining and Dressing

Sub-sector	SIC Codes		NAICS Codes		Notes
J2	1411	Dimension Stone	212311	Dimension Stone Mining and Quarrying	
	1422	Crushed and Broken Limestone	212312	Crushed and Broken Limestone Mining and Quarrying	
	1423	Crushed and Broken Granite	212313	Crushed and Broken Granite Mining and Quarrying	
	1429	Crushed and Broken Stone, Not Elsewhere Classified	212319	Other Crushed and Broken Stone Mining and Quarrying	
J1	1442	Construction Sand and Gravel	212321	Construction Sand and Gravel Mining	
	1446	Industrial Sand	212322	Industrial Sand Mining	
J3	1455	Kaolin and Ball Clay	212324	Kaolin and Ball Clay Mining	
	1459	Clay, Ceramic, and Refractory Minerals, Not Elsewhere Classified	212325	Clay, Ceramic, and Refractory Minerals Mining	
	1474	Potash, Soda, and Borate Minerals	212391	Potash, Soda, and Borate Mineral Mining	
	1475	Phosphate Rock	212392	Phosphate Rock Mining	
	1479	Chemical and Fertilizer Mineral Mining, Not Elsewhere Classified	212393	Other Chemical and Fertilizer Mineral Mining	
J2	1481	Nonmetallic Minerals Services, Except Fuels			

		(except geophysical surveying and mapping and site preparation and related construction activities performed on a contract or fee basis)	**213115**	Support Activities for Nonmetallic Minerals (except Fuels)	
		(site preparation and related construction activities on a contract basis)	**238910**	Site Preparation Contractors	
	1499	Miscellaneous Nonmetallic Minerals, Except Fuels			
		(except bituminous limestone and bituminous sandstone)	**212399**	All Other Nonmetallic Mineral Mining	

Sector K. Hazardous Waste Treatment, Storage or Disposal Facilities

Sub-Sector	Activity Code	Narrative Description	Notes
K1	**HZ**	• Hazardous waste treatment • Hazardous waste storage • Hazardous waste disposal • Hazardous waste facilities operating under interim status • Hazardous waste facilities operating under a permit under Subtitle C of RCRA	HZ is the Activity Code (i.e., non-SIC / non-NAICS designation) for this Sector. It potentially applies to any facility regardless of SIC / NAICS Code, in addition to these specifically related to hazardous waste: • SIC 4953 Refuse Systems (hazardous waste treatment and disposal); • NAICS 562211 Hazardous Waste Treatment and Disposal; • NAICS 562112 Hazardous Waste Collection (hazardous waste transfer stations).

Sector L. Landfills and Land Application Sites

Sub-Sector	Activity Code	Narrative Description	Notes
L1	**LF**	• All Landfill, Land Application Sites and Open Dumps	LF is the Activity Code (i.e., non-SIC and non-NAICS designation) for this Sector. It may apply to any facility / SIC Code / NAICS Code, in addition to these specifically related to landfills and landfill application sites: • SIC 4953 Refuse Systems (solid waste landfills); • NAICS 562212 Solid Waste Landfill. Industrial waste is waste from any of the facilities covered by the MSGP (also described in 40 CFR 122.26(b)(14)).
L2	**LF**	All Landfill, Land Application Sites and Open Dumps, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.	

Sector M. Automobile Salvage Yards

Sub-sector	SIC Codes		NAICS Codes		Notes
M1	**5015**	Motor Vehicle Parts, Used (merchant wholesalers except those selling via retail method)	**423140**	Motor Vehicle Parts (Used) Merchant Wholesalers	

Sector N. Scrap Recycling Facilities

Sub-sector	SIC Codes		NAICS Codes		Notes
N1	**5093**	Scrap and Waste Materials (merchant wholesalers except Source-Separated Recycling)	**423930**	Recyclable Material Merchant Wholesalers	
N2	**5093**	Scrap and Waste Materials (Source-Separated Recycling)	**423930**	Recyclable Material Merchant Wholesalers	

Sector O. Steam Electric Generating Facilities

Sub-Sector	Activity Code	Narrative Description	Notes
O1	**SE**	• steam electric power generation using coal, including coal handling areas • steam electric power generation using natural gas • steam electric power generation using oil • steam electric power generation using nuclear energy • steam electric power generation using any other fuel to produce a steam source • coal pile runoff (includes effluent limitations established by 40 CFR 423) • dual fuel co-generation (i.e., steam generation using fossil fuel to augment a heat-capture generation system)	SE is the Activity Code (i.e., non-SIC and non-NAICS designation) for this Sector. It may apply to any facility / SIC Code / NAICS Code, in addition to these specifically related to steam electric generation: • SIC 4911 Electric Services (fossil fuel power generation, nuclear electric power generation & other electric power generation) • NAICS 221112 Fossil Fuel Electric Power Generation • NAICS 221113 Nuclear Electric Power Generation

Sector P. Land Transportation

Sub-sector	SIC Codes		NAICS Codes		Notes
P1	**4011**	Railroads, Line-Haul Operating	**482111**	Line-Haul Railroads	
	4013	Railroad Switching and Terminal Establishments (short line railroads)	**482112**	Short Line Railroads	
		(except short line railroads)	**488210**	Support Activities for Rail Transportation	
	4111	Local and Suburban Transit (mixed mode)	**485111**	Mixed Mode Transit Systems	
		(commuter rail)	**485112**	Commuter Rail Systems	
		(bus and motor vehicle)	**485113**	Bus and Other Motor Vehicle Transit Systems	
		(except mixed mode, commuter rail, airport transportation service, and bus and motor vehicle)	**485119**	Other Urban Transit Systems	
		(airport transportation service)	**485999**	All Other Transit and Ground Passenger Transportation	
	4119	Local Passenger Transportation, Not Elsewhere Classified			

		(limousine rental with driver and automobile rental with driver)	**485320**	Limousine Service	
		(employee transportation)	**485410**	School and Employee Bus Transportation	
		(special needs transportation)	**485991**	Special Needs Transportation	
		(hearse rental with driver and carpool and vanpool operation)	**485999**	All Other Transit and Ground Passenger Transportation	
		(sightseeing buses and cable and cog railways, except scenic)	**487110**	Scenic and Sightseeing Transportation, Land	
		(land ambulance)	**621910**	Ambulance Services	
	4121	Taxicabs	**485310**	Taxi Service	
	4131	Intercity and Rural Bus Transportation	**485210**	Interurban and Rural Bus Transportation	
	4141	Local Bus Charter Service	**485510**	Charter Bus Industry	
	4142	Bus Charter Service, Except Local	**485510**	Charter Bus Industry	
	4151	School Buses	**485410**	School and Employee Bus Transportation	
	4173	Terminal and Service Facilities for Motor Vehicle Passenger Transportation	**488490**	Other Support Activities for Road Transportation	
	4212	Local Trucking Without Storage (general freight)	**484110**	General Freight Trucking, Local	
		(household goods moving)	**484210**	Used Household and Office Goods Moving	
		(specialized freight)	**484220**	Specialized Freight (except Used Goods) Trucking, Local	
		(solid waste collection without disposal)	**562111**	Solid Waste Collection	
		(hazardous waste collection without disposal)	**562112**	Hazardous Waste Collection	
		(other waste collection without disposal)	**562119**	Other Waste Collection	
	4213	Trucking, Except Local (general freight, truckload)	**484121**	General Freight Trucking, Long-Distance, Truckload	
		(general freight, less than truckload)	**484122**	General Freight Trucking, Long-Distance, Less Than Truckload	
		(household goods moving)	**484210**	Used Household and Office Goods Moving	
		(specialized freight)	**484230**	Specialized Freight (except Used Goods) Trucking, Long-Distance	
	4214	Local Trucking With Storage (general freight)	**484110**	General Freight Trucking, Local	
		(household goods moving)	**484210**	Used Household and Office Goods Moving	
		(specialized freight)	**484220**	Specialized Freight (except Used Goods) Trucking, Local	

	4215	Courier Services, Except by Air			
		(hub and spoke intercity delivery)	**492110**	Couriers	
		(local delivery)	**492210**	Local Messengers and local Delivery	
	4226	Special Warehousing and Storage, Not Elsewhere Classified			
		(warehousing in foreign trade zones)	**493110**	General Warehousing and Storage	
		(fur storage)	**493120**	Refrigerated Warehousing and Storage	
		(except fur storage and warehousing in foreign trade zones)	**493190**	Other Warehousing and Storage	
	4231	Terminal and Joint Terminal Maintenance Facilities for Motor Freight Transportation	**488490**	Other Support Activities for Road Transportation	
	4311	United States Postal Service	**491110**	Postal Service	
	5171	Petroleum Bulk Stations and Terminals			
		(except petroleum sold via retail method)	**424710**	Petroleum Bulk Stations and Terminals	
		(heating oil sold to final consumer)	**454311**	Heating Oil Dealers	
		(LP gas sold to final consumer)	**454312**	Liquefied Petroleum Gas (Bottled Gas) Dealers	

Sector Q. Water Transportation

Sub-sector	SIC Codes		NAICS Codes		Notes
Q1	**4412**	Deep Sea Foreign Transportation of Freight	**483111**	Deep Sea Freight Transportation	
	4424	Deep Sea Domestic Transportation of Freight	**483113**	Coastal and Great Lakes Freight Transportation	
	4432	Freight Transportation on the Great Lakes - St. Lawrence Seaway	**483113**	Coastal and Great Lakes Freight Transportation	
	4449	Water Transportation of Freight, Not Elsewhere Classified	**483211**	Inland Water Freight Transportation	
	4481	Deep Sea Transportation of Passengers, Except by Ferry			
		(deep sea activities)	**483112**	Deep Sea Passenger Transportation	
		(coastal activities)	**483114**	Coastal and Great Lakes Passenger Transportation	
	4482	Ferries			
		(coastal and Great Lakes)	**483114**	Coastal and Great Lakes Passenger Transportation	
		(inland)	**483212**	Inland Water Passenger Transportation	

	4489	Water Transportation of Passengers, Not Elsewhere Classified (water taxis)	**483212**	Inland Water Passenger Transportation	
		(airboats, excursion boats, and sightseeing boats)	**487210**	Scenic and Sightseeing Transportation, Water	
	4491	Marine Cargo Handling (dock and pier operations)	**488310**	Port and Harbor Operations	
		(all but dock and pier operations)	**488320**	Marine Cargo Handling	
	4492	Towing and Tugboat Services	**488330**	Navigational Services to Shipping	
	4493	Marinas	**713930**	Marinas	
	4499	Water Transportation Services, Not Elsewhere Classified (lighterage)	**483211**	Inland Water Freight Transportation	
		(lighthouse and canal operations)	**488310**	Port and Harbor Operations	
		(piloting vessels in and out of harbors and marine salvage)	**488330**	Navigational Services to Shipping	
		(all but lighthouse operations, piloting vessels in and out of harbors, boat and ship rental, marine salvage, lighterage, marine surveyor services, and canal operations)	**488390**	Other Support Activities for Water Transportation	
		(boat and ship rental, commercial)	**532411**	Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing	

Sector R. Ship and Boat Building and Repair Yards

Sub-sector	SIC Codes		NAICS Codes		Notes
R1	**3731**	Ship Building and Repairing (except repairs in floating drydocks)	**336611**	Ship Building and Repairing	
		(repair services provided by floating drydocks)	**488390**	Other Support Activities for Water Transportation (includes ship scaling facilities)	
	3732	Boat Building and Repairing (boat building)	**336612**	Boat Building	
		(pleasure boat repair and maintenance services without retailing new boats)	**811490**	Other Personal and Household Goods Repair and Maintenance	
		(ship scaling)	**488390**	Other Support Activities for Water Transportation (drydocks, floating [i.e., routine repair and maintenance of ships]; other support activities for water transportation; ship dismantling at floating drydock; ship scaling services not done at a shipyard)	
		(motorboat [i.e., inboard and outboard] repair and maintenance	**811490**	Other Personal and Household Goods Repair and Maintenance	

		services; outboard motor repair shops)			

Sector S. Air Transportation Facilities

Sub-sector	SIC Codes		NAICS Codes		Notes
S1	**4512**	Air Transportation, Scheduled (passenger)	**481111**	Scheduled Passenger Air Transportation	
		(freight)	**481112**	Scheduled Freight Air Transportation	
	4513	Air Courier Services	**492110**	Couriers	
	4522	Air Transportation, Nonscheduled (passenger)	**481211**	Nonscheduled Chartered Passenger Air Transportation	
		(freight)	**481212**	Nonscheduled Chartered Freight Air Transportation	
		(using general purpose aircraft for a variety of passenger, freight, courier, and other uses)	**481219**	Other Nonscheduled Air Transportation	
		(sightseeing planes)	**487990**	Scenic and Sightseeing Transportation, Other	
		(air ambulance)	**621910**	Ambulance Services	
	4581	Airports, Flying Fields, and Airport Terminal Services (air freight handling at airports, hangar operations, airport terminal services, aircraft storage, airports, and flying fields)	**488119**	Other Airport Operations	
		(aircraft servicing and repairing)	**488190**	Other Support Activities for Air Transportation	

Sector T. Treatment Works

Sub-sector	Activity Code	Narrative Description	Notes
T1	TW	• treatment works with a design flow of 1.0 MGD or more treating domestic sewage or any other sewage sludge; • wastewater treatment devices or system used by the treatment works for the storage, treatment, recycling and reclamation of municipal or domestic sewage; • land located within the confines of the treatment works that is dedicated to the disposal of sewage sludge; • treatment works required to have an approved pretreatment program under 40 CFR Part 403	TW is the Activity Code (i.e., non-SIC and non-NAICS designation) for this Sector. It may apply to any facility / SIC Code / NAICS Code, in addition to these specifically related to treatment works: • SIC 4952 Sewerage Systems • NAICS 221320 Sewage Treatment Facilities

Sector U. Food and Kindred Products

Sub-sector	SIC Codes		NAICS Codes		Notes
U3	2011	Meat Packing Plants	311611	Animal (except Poultry) Slaughtering	
	2013	Sausages and Other Prepared Meat Products (except lard made from purchased materials)	311612	Meat Processed from Carcasses	
		(lard made from purchased materials)	311613	Rendering and Meat Byproduct Processing	
	2015	Poultry Slaughtering and Processing (poultry slaughtering and processing)	311615	Poultry Processing	
		(egg processing)	311999	All Other Miscellaneous Food Manufacturing	
	2021	Creamery Butter	311512	Creamery Butter Manufacturing	
	2022	Natural, Processed, and Imitation Cheese	311513	Cheese Manufacturing	
	2023	Dry, Condensed and Evaporated Dairy Products (liquid non-dairy creamer)	311511	Fluid Milk Manufacturing	
		(except liquid non-dairy creamer)	311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing	
	2024	Ice Cream and Frozen Deserts	311520	Ice Cream and Frozen Desert Manufacturing	
	2026	Fluid Milk (except ultra-high temperature)	311511	Fluid Milk Manufacturing	
		(ultra-high temperature)	311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing	
	2032	Canned Specialties (except canned puddings)	311422	Specialty Canning	
		(canned puddings)	311999	All Other Miscellaneous Food Manufacturing	
	2033	Canned Fruits, Vegetables, Preserves, Jams, and Jellies	311421	Fruit and Vegetable Canning	

	2034	Dried and Dehydrated Fruits, Vegetables and Soup Mixes (vegetable flour)	**311211**	Flour Milling	
		(except vegetable flour and soup mixes made from purchased dried and dehydrated ingredients)	**311423**	Dried and Dehydrated Food Manufacturing	
		(soup mixes made from purchased dehydrated ingredients)	**311999**	All Other Miscellaneous Food Manufacturing	
	2035	Pickled Fruits and Vegetables, Vegetable Sauces and Seasonings, and Salad Dressings (pickled fruits and vegetables)	**311421**	Fruit and Vegetable Canning	
		(sauces and salad dressings)	**311941**	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	
	2037	Frozen Fruits, Fruit Juices, and Vegetables	**311411**	Frozen Fruit, Juice, and Vegetable Manufacturing	
	2038	Frozen Specialties, Not Elsewhere Classified	**311412**	Frozen Specialty Food Manufacturing	
U1	**2041**	Flour and Other Grain Mill Products	**311211**	Flour Milling	
	2043	Cereal Breakfast Foods (cereal breakfast foods and related preparations except grain based coffee substitutes)	**311230**	Breakfast Cereal Manufacturing	
		(grain based coffee substitutes)	**311920**	Coffee and Tea Manufacturing	
	2044	Rice Milling	**311212**	Rice Milling	
	2045	Prepared Flour Mixes and Doughs	**311822**	Flour Mixes and Dough Manufacturing from Purchased Flour	
	2046	Wet Corn Milling (except refining purchased corn oil)	**311221**	Wet Corn Milling	
		(refining purchased corn oil)	**311225**	Fats and Oils Refining and Blending	
	2047	Dog and Cat Food	**311111**	Dog and Cat Food Manufacturing	
	2048	Prepared Feeds and Feed Ingredients for Animals and Fowls, Except Dogs and Cats (except slaughtering animals for pet food)	**311119**	Other Animal Food Manufacturing	
		(slaughtering animals for pet food)	**311611**	Animal (except Poultry) Slaughtering	
U3	**2051**	Bread and Other Bakery Products, Except Cookies and Crackers	**311812**	Commercial Bakeries	
	2052	Cookies and Crackers (unleavened bread and soft pretzels)	**311812**	Commercial Bakeries	
		(except unleavened bread and pretzels)	**311821**	Cookie and Cracker Manufacturing	

		(hard pretzels and snack pretzels, except soft)	**311919**	Other Snack Food Manufacturing (pretzels, except soft)	
	2053	Frozen Bakery Products, Except Bread	**311813**	Frozen Cakes, Pies, and Other Pastries Manufacturing	
	2061	Cane Sugar, Except Refining	**311311**	Sugarcane Mills	
	2062	Cane Sugar Refining	**311312**	Cane Sugar Refining	
	2063	Beet Sugar	**311313**	Beet Sugar Manufacturing	
	2064	Candy and Other Confectionery Products			
		(chocolate confectionery)	**311330**	Confectionery Manufacturing from Purchased Chocolate	
		(nonchocolate confectionery)	**311340**	Nonchocolate Confectionery Manufacturing	
	2066	Chocolate and Cocoa Products (except chocolate products, made from purchased chocolate)	**311320**	Chocolate and Confectionery Manufacturing from Cacao Beans	
		(chocolate products made from purchased chocolate)	**311330**	Confectionery Manufacturing from Purchased Chocolate	
	2067	Chewing Gum	**311340**	Nonchocolate Confectionery Manufacturing	
	2068	Salted and Roasted Nuts and Seeds	**311911**	Roasted Nuts and Peanut Butter Manufacturing	
U2	**2074**	Cottonseed Oil Mills (cottonseed processing)	**311223**	Other Oilseed Processing	
		(processing purchased cottonseed oil)	**311225**	Fats and Oils Refining and Blending	
	2075	Soybean Oil Mills (soybean processing, except edible soybean oil)	**311222**	Soybean Processing	
		(processing purchased soybean oil)	**311225**	Fats and Oils Refining and Blending	
	2076	Vegetable Oil Mills, Except Corn, Cottonseed, and Soybean (oilseed processing)	**311223**	Other Oilseed Processing	
		(processing purchased vegetable and oilseed oils)	**311225**	Fats and Oils Refining and Blending	
	2077	Animal and Marine Fats and Oils (animal fats and oils)	**311613**	Rendering and Meat Byproduct Processing	
		(canned marine fats and oils)	**311711**	Seafood Canning	
		(fresh and frozen marine fats and oils)	**311712**	Fresh and Frozen Seafood Processing	
	2079	Shortening, Table Oils, Margarine, and Other Edible Fats and Oils, Not Elsewhere Classified (processing soybean oil into edible cooking oils from soybeans crushed in the same establishment)	**311222**	Soybean Processing	

		(processing vegetable oils, except soybean, into edible cooking oils from oilseeds and vegetables crushed in the same establishment)	**311223**	Other Oilseed Processing	
		(except processing vegetable and soybean oils into edible oils from oilseeds and vegetables crushed in the same establishment)	**311225**	Fats and Oils Refining and Blending	
U3	**2082**	Malt Beverages			
		(malt extract)	**311942**	Spice and Extract Manufacturing	
		(except malt extract)	**312120**	Breweries	
	2083	Malt	**311213**	Malt Manufacturing	
	2084	Wines, Brandy and Brandy Spirits	**312130**	Wineries	
	2085	Distilled and Blended Liquors			
		(apple jack)	**312130**	Wineries	
		(except apple jack)	**312140**	Distilleries	
	2086	Bottled and Canned Soft Drinks and Carbonated Water			
		(except bottled water)	**312111**	Soft Drink Manufacturing	
		(bottled water)	**312112**	Bottled Water Manufacturing	
	2087	Flavoring Extracts and Flavoring Syrups, Not Elsewhere Classified			
		(coffee flavoring and syrups)	**311920**	Coffee and Tea Manufacturing	
		(flavoring syrups and concentrates except coffee)	**311930**	Flavoring Syrup and Concentrate Manufacturing	
		(flavoring extracts and natural food colorings)	**311942**	Spice and Extract Manufacturing	
		(powered drink mix)	**311999**	All Other Miscellaneous Food Manufacturing	
	2091	Canned and Cured Fish and Seafoods	**311711**	Seafood Canning	
	2092	Prepared Fresh or Frozen Fish and Seafoods	**311712**	Fresh and Frozen Seafood Processing	
	2095	Roasted Coffee	**311920**	Coffee and Tea Manufacturing	
	2096	Potato Chips, Corn Chips, and Similar Snacks	**311919**	Other Snack Food Manufacturing	
	2097	Maufactured Ice	**312113**	Ice manufacturing	
	2098	Macaroni, Spaghetti, Vermicelli, and Noodles	**311823**	Dry Pasta Manufacturing	
	2099	Food Preparations, Not Elsewhere Classified			
		(rice, uncooked and packaged with other ingredients made in rice mills)	**311212**	Rice Milling	
		(marshmallow creme)	**311340**	Nonchocolate Confectionery Manufacturing	

		(bouillon and potatoes dried and packaged with other ingredients produced in dehydrating plants)	**311423**	Dried and Dehydrated Food Manufacturing	
		(dry pasta packaged with other ingredients made in dry pasta plants)	**311823**	Dry Pasta Manufacturing	
		(tortillas)	**311830**	Tortilla Manufacturing	
		(peanut butter)	**311911**	Roasted Nuts and Peanut Butter Manufacturing	
		(tea)	**311920**	Coffee and Tea Manufacturing	
		(vinegar, prepared dip)	**311941**	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	
		(spices, dry dip mix, dry salad dressing mix, and seasoning mix)	**311942**	Spice and Extract Manufacturing	
		(perishable prepared food)	**311991**	Perishable Prepared Food Manufacturing	
		(except bouillon, marshmallow creme, spices, peanut butter, perishable prepared foods, tortillas, tea and tea extracts, dry dip mix, prepared dips, dry salad dressing mix, seasoning mix, dried potatoes, pasta, and rice mixed with other ingredients in mills or dehydrating plants, reducing maple sap to maple syrup, wool grease, and vinegar)	**311999**	All Other Miscellaneous Food Manufacturing	
	2111	Cigarettes	**312221**	Cigarette Manufacturing	
	2121	Cigars	**312229**	Other Tobacco Product Manufacturing	
	2131	Chewing and Smoking Tobacco and Snuff	**312229**	Other Tobacco Product Manufacturing	
	2141	Tobacco Stemming and Redrying (stemming and redrying tobacco)	**312210**	Tobacco Stemming and Redrying	
		(reconstituted tobacco)	**312229**	Other Tobacco Product Manufacturing	

Sector V. Textile Mills, Apparel, and Other Fabric Product Manufacturing

Sub-sector	SIC Codes		NAICS Codes		Notes
V1	**2211**	Broadwoven Fabric Mills, Cotton	**313210**	Broadwoven Fabric Mills	
	2221	Broadwoven Fabric Mills, Manmade Fiber and Silk	**313210**	Broadwoven Fabric Mills	
	2231	Broadwoven Fabric Mills, Wool (Including Dyeing and Finishing) (except finishing wool fabric without weaving wool fabric)	**313210**	Broadwoven Fabric Mills 2231	
		(wool broadwoven fabric finishing without weaving fabric)	**313311**	Broadwoven Fabric Finishing Mills	

		(wool fabric, except broadwoven, finishing without weaving fabric)	**313312**	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
	2241	Narrow Fabric and Other Smallwares Mills: Cotton, Wool, Silk and Manmade Fiber	**313221**	Narrow Fabric Mills	
	2251	Women's Full-Length and Knee-Length Hosiery, Except Socks (dyeing and finishing sheer hosiery without knitting sheer hosiery)	**313312**	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
		(except dyeing and finishing sheer hosiery without knitting sheer hosiery)	**315111**	Sheer Hosiery Mills	
	2252	Hosiery, Not Elsewhere Classified (dyeing and finishing hosiery , except sheer, without knitting hosiery)	**313312**	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
		(girls' full length and knee length sheer hosiery)	**315111**	Sheer Hosiery Mills	
		(except girls' full-length and knee-length sheer hosiery and dyeing and finishing hosiery without knitting hosiery)	**315119**	Other Hosiery and Sock Mills	
	2253	Knit Outerwear Mills (dyeing and finishing knit outerwear without knitting outerwear)	**313312**	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
		(except bath and lounging robes and dying and finish without knitting garments)	**315191**	Outerwear Knitting Mills	
		(knitting bath or lounging robes)	**315192**	Underwear and Nightwear Knitting Mills	
	2254	Knit Underwear and Nightwear Mills (dyeing and finishing underwear and nightwear without knitting garments)	**313312**	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
		(except dyeing and finishing underwear and nightwear without knitting garments)	**315192**	Underwear and Nightwear Knitting Mills	
	2257	Weft Knit Fabric Mills (except finishing without knitting weft fabric)	**313241**	Weft Knit Fabric Mills	
		(finishing weft fabric without knitting weft fabric)	**313312**	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
	2258	Weft Knit Fabric Mills (except finishing without knitting weft fabric)	**313241**	Weft Knit Fabric Mills	
		(finishing weft fabric without knitting weft fabric)	**313312**	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	

	2259	Knitting Mills, Not Elsewhere Classified			
		(knitting weft fabric and fabricating textile products, such as bedspreads, curtains, or towels)	**313241**	Weft Knit Fabric Mills	
		(knitting lace or warp fabric and fabricating textile products, such as bedspreads, curtains, or towels)	**313249**	Other Knit Fabric and Lace Mills	
		(dyeing and finishing knit gloves and mittens without knitting gloves or mittens)	**313312**	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
		(knitting gloves and mittens)	**315191**	Outerwear Knitting Mills	
		(knitting girdles and allied foundation garments)	**315192**	Underwear and Nightwear Knitting Mills	
	2261	Finishers of Broadwoven Fabrics of Cotton	**313311**	Broadwoven Fabric Finishing Mills	
	2262	Finishers of Broadwoven Fabrics of Manmade Fibers and Silk	**313311**	Broadwoven Fabric Finishing Mills	
	2269	Finishers of Textiles, Not Elsewhere Classified			
		(linen fabric finishing)	**313311**	Broadwoven Fabric Finishing Mills	
		(except linen fabric finishing)	**313312**	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
	2273	Carpets and Rugs	**314110**	Carpet and Rug Mills	
	2281	Yarn Spinning Mills	**313111**	Yarn Spinning Mills	
	2282	Yarn Texturizing, Throwing, Twisting and Spinning Mills	**313112**	Yarn Texturizing, Throwing, Twisting Mills	
	2284	Thread Mills			
		(except finishing thread without manufacturing thread)	**313113**	Thread Mills	
		(finishing thread without manufacturing thread)	**313312**	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
	2295	Coated Fabrics, Not Rubberized	**313320**	Fabric Coating Mills	
	2296	Tire Cord and Fabrics	**314992**	Tire Cord and Tire fabric Mills	
	2297	Nonwoven Fabrics	**313230**	Nonwoven Fabric Mills	
	2298	Cordage and Twine			
		(hemp rope made in spinning mills)	**313111**	Yarn Spinning Mills	
		(except hemp rope made in spinning mills)	**314991**	Rope, Cordage, and Twine Mills	
	2299	Textile Goods, Not Elsewhere Classified			

		(hemp bags made in spinning mills, & spinning yarn of flax, hemp, jute, and ramie)	**313111**	Yarn Spinning Mills	
		(manufacturing thread of hemp, linen, and ramie)	**313113**	Thread Mills	
		(broadwoven fabrics of jute, linen, hemp, and ramie and hand woven fabrics)	**313210**	Broadwoven Fabric Mills	
		(narrow woven fabric of jute, linen, hemp, and ramie)	**313221**	Narrow Fabric Mills	
		(nonwoven felt)	**313230**	Nonwoven Fabric Mills	
		(finishing hard fiber thread and yarn without manufacturing thread or yarn)	**313312**	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	
		(manufacturing other textile products)	**314999**	All Other Miscellaneous Textile Product Mills	
	2311	Men's and Boys' Suits, Coats, and Overcoats			
		(contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(except contractors)	**315222**	Men's and Boys' Cut and Sew Suit, Coat and Overcoat Manufacturing	
	2321	Men's and Boys' Shirts, Except Work Shirts			
		(contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(except contractors)	**315223**	Men's and Boys' Cut and Sew Shirt (except Work Shirt) Manufacturing	
	2322	Men's and Boys' Underwear and Nightwear			
		(contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(except contractors)	**315221**	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing	
	2323	Men's and Boys' Neckwear			
		(contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(except contractors)	**315993**	Men's and Boys' Neckwear Manufacturing	
	2325	Men's and Boys' Separate Trousers and Slacks			
		(contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(except contractors)	**315224**	Men's and Boys' Cut and Sew Trouser, Slack and Jean Manufacturing	

	2326	Men's and Boys' Work Clothing (contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(except contractors)	**315225**	Men's and Boys' Cut and Sew Work Clothing Manufacturing	
	2329	Men's and Boys' Clothing, Not Elsewhere Classified (contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(except team athletic uniforms and contractors)	**315228**	Men's and Boys' Cut and Sew Other Outerwear Manufacturing	
		(team athletic uniforms except contractors)	**315299**	All Other Cut and Sew Apparel Manufacturing	
	2331	Women's, Misses', and Juniors' Blouses and Shirts (contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	**315232**	Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing	
	2335	Women's, Misses', and Juniors' Dresses (contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	**315233**	Women's and Girls' Cut and Sew Dress Manufacturing	
	2337	Women's, Misses', and Juniors' Suits, Skirts, and Coats (contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	**315234**	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing	
	2339	Women's, Misses', and Juniors' Outerwear, Not Elsewhere Classified (contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except team athletic uniforms, scarves, and contractors)	**315239**	Women's and Girls' Cut and Sew Other Outerwear Manufacturing	
		(team athletic uniforms except contractors)	**315299**	All Other Cut and Sew Apparel Manufacturing	
		(scarves except contractors)	**315999**	Other Apparel Accessories and Other Apparel Manufacturing	

	2341	Women's, Misses', Children's, and Infants' Underwear and Nightwear			
		(boys' contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(boys' except contractors)	**315221**	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing	
		(women and girls' except contractors)	**315231**	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing	
		(infants' except contractors)	**315291**	Infants' Cut and Sew Apparel Manufacturing	
	2342	Brassieres, Girdles, and Allied Garments			
		(contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	**315231**	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing	
	2353	Hats, Caps, and Millinery			
		(men's and boys' contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	**315991**	Hat, Cap, and Millinery Manufacturing	
	2361	Girls', Children's, and Infants' Dresses, Blouses, and Shirts			
		(boys' contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(girls' and infants' contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(boys' shirts except contractors)	**315223**	Men's and Boys' Cut and Sew Shirt (except Work Shirt) Manufacturing	
		(girls' blouses and shirts except contractors)	**315232**	Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing	
		(girls' dresses except contractors)	**315233**	Women's and Girls' Cut and Sew Dress Manufacturing	
		(infants' except contractors)	**315291**	Infants' Cut and Sew Apparel Manufacturing	
	2369	Girls', Children's, and Infants' Outerwear, Not Elsewhere Classified			
		(boys' contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(girls' and infants' contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(boys' robes except contractors)	**315221**	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing	

		(boys' suits and coats except contractors)	**315222**	Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing	
		(boys' trousers, slacks, and jeans except contractors)	**315224**	Men's and Boys' Cut and Sew Trouser, Slack and Jean Manufacturing	
		(boys' other outerwear except contractors)	**315228**	Men's and Boys' Cut and Sew Other Outerwear Manufacturing	
		(girls' robes except contractors)	**315231**	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing	
		(girls' suits, coats, jackets, and skirts except contractors)	**315234**	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing	
		(girls' other outerwear except contractors)	**315239**	Women's and Girls' Cut and Sew Other Outerwear Manufacturing	
		(infants' except contractors)	**315291**	Infants' Cut and Sew Apparel Manufacturing	
	2371	Fur Goods			
		(men's and boys' contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	**315292**	Fur and Leather Apparel Manufacturing	
	2381	Dress and Work Gloves, Except Knit and All-Leather			
		(men's and boys' contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	**315992**	Glove and Mitten Manufacturing	
	2384	Robes and Dressing Gowns			
		(men's and boys' contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(men's except contractors)	**315221**	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing	
		(women's except contractors)	**315231**	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing	
	2385	Waterproof Outerwear			
		(men's and boys' contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(men's and boys' water resistant or water repellent tailored overcoats, except made from rubberized fabric, plastics, etc. and contractors)	**315222**	Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing	

		(men's and boys' water resistant or water repellent nontailored outerwear, except made from rubberized fabric, plastics, etc. and contractors)	**315228**	Men's and Boys' Cut and Sew Other Outerwear Manufacturing	
		(women's and girls' water resistant or water repellent tailored coats, except made from rubberized fabric, plastics, etc. and contractors)	**315234**	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing"	
		(other women's and girls' water resistant or water repellent nontailored outerwear, except made from rubberized fabric, plastics, etc. and contractors)	**315239**	Women's and Girls' Cut and Sew Other Outerwear Manufacturing	
		(infants' waterproof outerwear made from rubberized fabric, plastics, etc. except contractors)	**315291**	Infants' Cut and Sew Apparel Manufacturing	
		(men's, boys', women's, and girls' waterproof outerwear made from rubberized fabric, plastics, etc. except contractors)	**315299**	All Other Cut and Sew Apparel Manufacturing	
		(accessories, such as aprons, bibs, and other miscellaneous waterproof items, made from rubberized fabric, plastics, etc. except contractors)	**315999**	Other Apparel Accessories and Other Apparel Manufacturing	
	2386	Leather and Sheep-Lined Clothing			
		(men's and boys' contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	**315292**	Fur and Leather Apparel Manufacturing	
	2387	Apparel Belts			
		(men's and boys' contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	**315999**	Other Apparel Accessories and Other Apparel Manufacturing	
	2389	Apparel and Accessories, Not Elsewhere Classified			
		(men's and boys' contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	

		(garters and garter belts except contractors)	**315231**	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing	
		(apparel, such as academic gowns, clerical outerwear, and band uniforms, except contractors)	**315299**	All Other Cut and Sew Apparel Manufacturing	
		(accessories such as, handkerchiefs, arm bands, cummerbunds, suspenders, etc., except contractors)	**315999**	Other Apparel Accessories and Other Apparel Manufacturing	
	2391	Curtains and Draperies	**314121**	Curtain and Drapery Mills	
	2392	Housefurnishings, Except Curtains and Draperies (except mops, dust rags, and bags)	**314129**	Other Household Textile Product Mills	
		(blanket, laundry, and wardrobe bags)	**314911**	Textile Bag Mills	
		(dust rags)	**314999**	All Other Miscellaneous Textile Product Mills	
		(floor and dust mops)	**339994**	Broom, Brush, and Mop Manufacturing	
	2393	Textile Bags	**314911**	Textile Bag Mills	
	2394	Canvas and Related Products	**314912**	Canvas and Related Product Mills	
	2395	Pleating, Decorative and Novelty Stitching, and Tucking for the Trade (except apparel contractors)	**314999**	All Other Miscellaneous Textile Product Mills	
		(men's and boy's apparel contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' apparel contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
	2396	Automotive Trimmings, Apparel Findings, and Related Products (textile products except automotive and apparel trimmings and findings, printing or embossing on apparel, and contractors)	**314999**	All Other Miscellaneous Textile Product Mills	
		(men's and boys' contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(apparel findings and trimmings, except contractors)	**315999**	Other Apparel Accessories and Other Apparel Manufacturing	
		(printing and embossing on fabric articles)	**323113**	Commercial Screen Printing	
		(textile motor vehicle trimming except contractors)	**336360**	Motor Vehicle Seating and Interior Trim Manufacturing	
	2397	Schiffli Machine Embroideries	**313222**	Schiffli Machine Embroidery	

	2399	Fabricated Textile Products, Not Elsewhere Classified (except apparel and accessories, automotive seat belts, seat and tire covers, and contractors)	**314999**	All Other Miscellaneous Textile Product Mills	
		(men's and boys' contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(apparel and apparel accessories, except contractors)	**315999**	Other Apparel Accessories and Other Apparel Manufacturing	
		(seat belts, and seat and tire covers)	**336360**	Motor Vehicle Seating and Interior Trim Manufacturing	
	3131	Boot and Shoe Cut Stock and Findings (except wood heels and metal buckles)	**316999**	All Other Leather Good Manufacturing	
		(heels, boot and shoe, finished wood, manufacturing)	**321999**	All Other Miscellaneous Wood Product Manufacturing	A facility with the primary activity of NAICS 321999 "heels, boot and shoe, finished wood, manufacturing" can be regulated under Sector A or Sector V. Sector A requires additional technology-based effluent limits comprising good housekeeping; additional SWPPP requirements; additional inspection requirements; and benchmark monitoring for COD and TSS. Sector V requires additional technology-based effluent limits comprised of good housekeeping measures and employee training; additional SWPPP requirements; and additional inspection requirements. Regulatory burden would likely be greater under Sector A.
		(metal buckles)	**339993**	Fastener, Button, Needle, and Pin Manufacturing	Any facility whose primary activity is manufacturing metal buckles (SIC 3131 / NAICS 339993) should be regulated under Sector Y, but may continue to be regulated under Sector V, or alternatively, under Sector AD. Sector Y does not apply additional sector-specific requirements to metal

					buckle manufacturers. Sector V applies additional technology-based limitations comprised of good housekeeping measures for material storage areas and employee training. Under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements. Regulatory burden would likely be greater under Sector V.
	3142	House Slippers	**316212**	House Slipper Manufacturing	
	3143	Men's Footwear, Except Athletic	**316213**	Men's Footwear (except Athletic) Manufacturing	
	3144	Women's Footwear, Except Athletic	**316214**	Women's Footwear (except Athletic) Manufacturing	
	3149	Footwear, Except Rubber, Not Elsewhere Classified	**316219**	Other Footwear Manufacturing	
	3151	Leather Gloves and Mittens			
		(men's and boys' contractors)	**315211**	Men's and Boys' Cut and Sew Apparel Contractors	
		(women's, girls', and infants' contractors)	**315212**	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	
		(except contractors)	**315992**	Glove and Mitten Manufacturing	
	3161	Luggage	**316991**	Luggage Manufacturing	
	3171	Women's Handbags and Purses	**316992**	Women's Handbag and Purse Manufacturing	
	3172	Personal Leather Goods, Except Women's Handbags and Purses (except nonprecious metal personal goods, such as card cases, cigar cases, and comb cases)	**316993**	Personal Leather Good (except Women's Handbag and Purse) Manufacturing	
		(nonprecious metal personal goods, such as card cases, cigar cases, and comb cases)	**339914**	Costume Jewelry and Novelty Manufacturing	Any facility whose primary activity is manufacturing nonprecious metal personal goods, such as card cases, cigar cases, and comb cases (SIC 3172 / NAICS 339914) should be regulated under Sector Y, but may continue to be regulated under Sector V, or alternatively, under Sector AD. Sector Y does not apply additional sector-specific requirements to metal buckle manufacturers. Sector V applies additional technology-based limitations comprised of good

					housekeeping measures for material storage areas and employee training. Under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements. Regulatory burden would likely be greater under Sector V.
	3199	Leather Goods, Not Elsewhere Classified	**316999**	All Other Leather Good Manufacturing	

Sector W. Furniture and Fixtures

Sub-sector	SIC Codes		NAICS Codes		Notes
W1	**2434**	Wood Kitchen Cabinets	**337110**	Wood Kitchen Cabinet and Countertop Manufacturing	
	2511	Wood Household Furniture, Except Upholstered			
		(except wood box spring frames)	**337122**	Nonupholstered Wood Household Furniture Manufacturing	
		(wood box spring frames (parts))	**337215**	Showcase, Partition, Shelving, and Locker Manufacturing	
	2512	Wood Household Furniture, Upholstered	**337121**	Upholstered Household Furniture Manufacturing	
	2514	Metal Household Furniture			
		(upholstered)	**337121**	Upholstered Household Furniture Manufacturing	
		(except upholstered metal furniture and metal box spring frames)	**337124**	Metal Household Furniture Manufacturing	
		(metal box spring frames)	**337215**	Showcase, Partition, Shelving, and Locker Manufacturing	
	2515	Mattresses, Foundations, and Convertible Beds			
		(convertible beds)	**337121**	Upholstered Household Furniture Manufacturing	
		(mattresses and foundations)	**337910**	Mattress Manufacturing	
	2517	Wood, Television, Radio, Phonograph, and Sewing Machine Cabinets	**337129**	Wood, Television, Radio, Phonograph, and Sewing Machine Cabinet Manufacturing	
	2519	Household Furniture, Not Elsewhere Classified	**337125**	Household Furniture (except Wood and Metal) Manufacturing	
	2521	Wood Office Furniture	**337211**	Wood Office Furniture Manufacturing	
	2522	Office Furniture, Except Wood	**337214**	Office Furniture (Except Wood) Manufacturing	

	2531	Public Building and Related Furniture			
		(seats for motor vehicles)	**336360**	Motor Vehicle Seating and Interior Trim Manufacturing	
		(except motor vehicle seats and blackboards)	**337127**	Institutional Furniture Manufacturing	
		(blackboards)	**339942**	Lead Pencil and Art Good Manufacturing	
	2541	Wood Office and Store Fixtures, Partitions, Shelving, and Lockers			
		(counter tops)	**337110**	Wood Kitchen Cabinet and Countertop Manufacturing	
		(wood lunchroom tables and chairs)	**337127**	Institutional Furniture Manufacturing	
		(custom architectural millwork)	**337212**	Custom Architectural Woodwork and Millwork Manufacturing	
		(except custom architectural millwork, counter tops, and lunchroom tables and chairs)	**337215**	Showcase, Partition, Shelving, and Locker Manufacturing	
	2542	Office and Store Fixtures, Partitions, Shelving, and Lockers, Except Wood			
		(lunchroom tables and chairs)	**337127**	Institutional Furniture Manufacturing	
		(except lunchroom tables and chairs)	**337215**	Showcase, Partition, Shelving, and Locker Manufacturing	
	2591	Drapery Hardware and Window Blinds and Shades	**337920**	Blind and Shade Manufacturing	
	2599	Furniture and Fixtures, Not Elsewhere Classified			
		(except hospital beds)	**337127**	Institutional Furniture Manufacturing	
		(hospital beds)	**339111**	Laboratory Apparatus and Furniture Manufacturing	

Sector X. Printing and Publishing

Sub-sector	SIC Codes		NAICS Codes		Notes
X1	**2711**	Newspapers: Publishing, or Publishing and Printing (except Internet newspaper publishing)	**511110**	Newspaper Publishers	
	2721	Periodicals: Publishing, or Publishing and Printing (except Internet periodical publishing)	**511120**	Periodical Publishers	
	2731	Books: Publishing, or Publishing and Printing (except Internet book publishing)			
		(except music books)	**511130**	Book Publishers	
		(music books)	**512230**	Music Publishers	

	2732	Book Printing	**323117**	Book Printing	
	2741	Miscellaneous Publishing (except Internet publishers) (shopping news and advertising periodical publishing or publishing and printing except Internet)	**511120**	Periodical Publishers	
		(technical manuals and books publishing or publishing and printing, except Internet)	**511130**	Book Publishers	
		(directory publishers, except Internet publishers)	**511140**	Directory and Mailing List Publishers	
		(except database, advertising periodicals, shopping news, technical manuals and books, and sheet music publishing or publishing and printing)	**511199**	All Other Publishers	
		(sheet music publishing or publishing and printing)	**512230**	Music Publishers	
	2752	Commercial Printing, Lithographic (except quick printing)	**323110**	Commercial Lithographic Printing	
		(quick printing)	**323114**	Quick Printing	
	2754	Commercial Printing, Gravure	**323111**	Commercial Gravure Printing	
	2759	Commercial Printing, NEC (flexographic printing)	**323112**	Commercial Flexographic Printing	
		(screen printing)	**323113**	Commercial Screen Printing	
		(digital printing, except quick printing)	**323115**	Digital Printing	
		(other commercial printing except flexographic, screen, digital, and quick printing)	**323119**	Other Commercial Printing	
	2771	Greeting Cards (except Internet greeting card publishers) (lithographic printing of greeting cards)	**323110**	Commercial Lithographic Printing	
		(gravure printing of greeting cards)	**323111**	Commercial Gravure Printing	
		(flexographic printing of greeting cards)	**323112**	Commercial Flexographic Printing	
		(screen printing of greeting cards)	**323113**	Commercial Screen Printing	
		(other printing of greeting cards)	**323119**	Other Commercial Printing	
		(publishing greeting cards)	**511191**	Greeting Card Publishers	
	2782	Blankbooks, Looseleaf Binders and Devices (checkbooks)	**323116**	Manifold Business Form Printing	
		(except checkbooks)	**323118**	Blankbook, Loose-leaf Binder, and Device Manufacturing	

	2789	Bookbinding and Related Work	**323121**	Tradebinding and Related Work	
	2791	Typesetting	**323122**	Prepress Services	
	2796	Platemaking and Related Services	**323122**	Prepress Services	

Sector Y. Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries

Sub-sector	SIC Codes		NAICS Codes		Notes
Y1	**3011**	Tires and Inner Tubes	**326211**	Tire Manufacturing (except Retreading)	
	3021	Rubber and Plastics Footwear	**316211**	Rubber and Plastics Footwear Manufacturing	
	3052	Rubber and Plastics Hose and Belting	**326220**	Rubber and Plastics Hoses and Belting Manufacturing	
	3053	Gaskets, Packing, and Sealing Devices	**339991**	Gaskets, Packing, and Sealing Device Manufacturing	
	3061	Molded, Extruded, and Lathe-Cut Mechanical Rubber Goods	**326291**	Rubber Product Manufacturing for Mechanical Use	
	3069	Fabricated Rubber Products, Not Elsewhere Classified			
		(rubberizing fabric or purchased textile products)	**313320**	Fabric Coating Mills	
		(bags made from rubberized fabric)	**314911**	Textile Bag Mills	
		(rubber cut and sew outerwear)	**315299**	All Other Cut and Sew Apparel Manufacturing	
		(bibs, bathing caps, related rubber accessories)	**315999**	Other Apparel Accessories and Other Apparel Manufacturing	
		(rubber resilient floor coverings)	**326192**	Resilient Floor Covering Manufacturing	
		(except rubberized fabric and garments, gloves, life vests, wet suits, accessories, such as bibs and bathing caps, rubber toys, bags made from rubberized fabric, rubber diaper covers, and rubber resilient floor coverings)	**326299**	All Other Rubber Product Manufacturing	
		(rubber gloves, inflatable rubber life jackets)	**339113**	Surgical and Appliance and Supplies Manufacturing	
		(wet suits)	**339920**	Sporting and Athletic Goods Manufacturing	
		(rubber toys, except dolls)	**339932**	Game, Toy, and Children's Vehicle Manufacturing	
Y2	**3081**	Unsupported Plastics Film and Sheet	**326113**	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	
	3082	Unsupported Plastics Profile Shapes	**326121**	Unlaminated Plastics Profile Shape Manufacturing	

	3083	Laminated Plastics Plate, Sheet, and Profile Shapes	**326130**	Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing	
	3084	Plastics Pipe	**326122**	Plastics Pipe and Pipe Fitting Manufacturing	
	3085	Plastics Bottles	**326160**	Plastics Bottle Manufacturing	
	3086	Plastics Foam Products (polystyrene foam products)	**326140**	Polystyrene Foam Product Manufacturing	
		(except polystyrene foam products)	**326150**	Urethane and Other Foam Product (except Polystyrene) Manufacturing	
	3087	Custom Compounding of Purchased Plastics Resins	**325991**	Custom Compounding of Purchased Resins	
	3088	Plastics Plumbing Fixtures	**326191**	Plastics Plumbing Fixture Manufacturing	
	3089	Plastics Products, Not Elsewhere Classified (plastics sausage casings)	**326121**	Unlaminated Plastics Profile Shape Manufacturing	
		(pipe fittings)	**326122**	Plastics Pipe and Pipe Fitting Manufacturing	
		(except plastics pipe fittings, inflatable plastics life jackets, plastics furniture parts, and plastics sausage casings)	**326199**	All Other Plastics Product Manufacturing	
		(finished plastic furniture parts)	**337215**	Showcase, Partition, Shelving, and Locker Manufacturing	
		(inflatable plastic life jackets)	**339113**	Surgical Appliance and Supplies Manufacturing	
	3931	Musical Instruments	**339992**	Musical Instrument Manufacturing	
	3942	Dolls and Stuffed Toys	**339931**	Doll and Stuffed Toy Manufacturing	
	3944	Games, Toys, and Children's Vehicles, Except Dolls and Bicycles (metal tricycles)	**336991**	Motorcycle, Bicycle, and Parts Manufacturing	Any facility whose primary activity is manufacturing metal tricycles (SIC 3944 / NAICS 336991) should be regulated under Sector AB, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector AB applies additional SWPPP requirements. Sector Y does not apply additional sector-specific requirements to metal tricycle manufacturers and under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements. Regulatory burden would be greater under Sector AB.

		(except metal tricycles)	**339932**	Game, Toy, and Children's Vehicle Manufacturing	
	3949	Sporting and Athletic Goods, Not Elsewhere Classified	**339920**	Sporting and Athletic Goods Manufacturing	
	3951	Pens, Mechanical Pencils, and Parts	**339941**	Pens, Mechanical Pencil Manufacturing	
	3953	Marking Devices	**339943**	Marking Device Manufacturing	
	3955	Carbon Paper and Inked Ribbons	**339944**	Carbon Paper and Inked Ribbon Manufacturing	
	3961	Costume Jewelry and Costume Novelties, Except Precious Metal (except cuff links)	**339914**	Costume Jewelry and Novelty Manufacturing	
		(nonprecious cuff links)	**339993**	Fastener, Button, Needle, and Pin Manufacturing	
	3965	Fasteners, Buttons, Needles, and Pins	**339993**	Fastener, Button, Needle, and Pin Manufacturing	
	3991	Brooms and Brushes	**339994**	Broom, Brush, and Mop Manufacturing	
	3993	Signs and Advertising Specialties			
		(screen printing purchased advertising specialties[34])	**323113**	Commercial Screen Printing	Any facility whose primary activity is screen printing purchased advertising specialties (SIC 3993 / NAICS 323113) should be regulated under Sector X, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector X applies additional technology-based effluent limits comprised of good housekeeping measures for material storage areas, and additional SWPPP requirements. Sector Y does not apply additional requirements to these facilities and under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements. Regulatory burden would be greater under Sector X.
		(signs)	**339950**	Sign Manufacturing	
	3995	Burial Caskets	**339995**	Burial Casket Manufacturing	
	3996	Linoleum, Asphalted-Felt-Base, and Other Hard Surface Floor Coverings, Not Elsewhere Classified	**326192**	Resilient Floor Covering Manufacturing	

	3999	Manufacturing Industries, Not Elsewhere Classified			
		(fur dressing and finishing)	**316110**	Leather and Hide Tanning and Finishing	Any facility whose primary activity is fur dressing and finishing (SIC 3999 / NAICS 316110) should be regulated under Sector Z, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector Z applies additional technology-based effluent limits comprised of good housekeeping measures for material storage areas and handling areas, and additional SWPPP requirements. Sector Y does not apply additional requirements to these facilities and under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements. Regulatory burden would be greater under Sector Z.
		(burnt wood articles)	**321999**	All Other Miscellaneous Wood Product Manufacturing	Any facility whose primary activity is burnt wood articles (SIC 3999 / NAICS 321999) should be regulated under Sector A, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector A applies additional technology-based effluent limits comprised of good housekeeping measures, additional SWPPP requirements, and benchmark monitoring for COD and TSS. Sector Y does not apply additional requirements to these facilities and under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements. Regulatory burden would be greater under Sector A.
		(matches and match books manufacturing)	**325998**	All Other Miscellaneous Chemical Product and Preparation Manufacturing	Any facility whose primary activity is matches and match books manufacturing (SIC 3999 / NAICS

					325998) should be regulated under Sector C, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sectors C and Y do not require additional sector-specific requirements. EPA could establish additional facility-specific monitoring and reporting requirements under Sector AD. Regulatory burden is not expected to differ between Sectors C and Y.
		(plastics products such as combs, hair curlers, etc.)	**326199**	All Other Plastics Product Manufacturing	
		(hand operated hair clippers for humans)	**332211**	Cutlery and Flatware (except Precious) Manufacturing	Any facility whose primary activity is manufacturing hand operated hair clippers for humans (SIC 3999 / NAICS 332211) should be regulated under Sector AA, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector AA applies additional technology-based effluent limits comprised of good housekeeping measures, spill prevention and response procedures, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector Y does not require additional sector-specific requirements. EPA could establish additional facility-specific monitoring and reporting requirements under Sector AD. Regulatory burden would be greater under Sector AA.
		(tape measures)	**332212**	Hand and Edge Tool Manufacturing	Any facility whose primary activity is manufacturing tape measures (SIC 3999 / NAICS 332212) should be regulated under Sector AA, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector AA applies additional

					technology-based effluent limits comprised of good housekeeping measures, spill prevention and response procedures, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector Y does not require additional sector-specific requirements. EPA could establish additional facility-specific monitoring and reporting requirements under Sector AD. Regulatory burden would be greater under Sector AA.
		(flocking metal products for the trade)	**332812**	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	Any facility whose primary activity is manufacturing flocking metal products for the trade (SIC 3999 / NAICS 332812) should be regulated under Sector AA, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector AA applies additional technology-based effluent limits comprised of good housekeeping measures, spill prevention and response procedures, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector Y does not require additional sector-specific requirements. EPA could establish additional facility-specific monitoring and reporting requirements under Sector AD. Regulatory burden would be greater under Sector AA.
		(other miscellaneous metal products, such as combs, hair curlers, etc.)	**332999**	All Other Miscellaneous Fabricated Metal Product Manufacturing	Any facility whose primary activity is manufacturing other miscellaneous metal products, such as combs, hair curlers, etc. (SIC 3999 / NAICS 332999) should be regulated under Sector AA, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector

					AA applies additional technology-based effluent limits comprised of good housekeeping measures, spill prevention and response procedures, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector Y does not require additional sector-specific requirements. EPA could establish additional facility-specific monitoring and reporting requirements under Sector AD. Regulatory burden would be greater under Sector AA.
		(beauty and barber shop equipment, except chairs)	**333319**	Other Commercial and Service Industry Machinery Manufacturing	
		(lamp shades of paper or textile)	**335121**	Residential Electric Lighting Fixture Manufacturing	
		(electric hair clippers for humans)	**335211**	Electric Housewares and Household Fan Manufacturing	Any facility whose primary activity is manufacturing electric hair clippers for humans (SIC 3999 / NAICS 335211) should be regulated under Sector AC, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sectors Y and AC do not apply sector-specific requirements to facilities manufacturing electric hair clippers for humans. EPA may establish facility-specific monitoring and reporting requirements under Sector AD. Regulatory burden is not expected to differ between Sectors Y and AC.
		(beauty and barber chairs)	**337127**	Institutional Furniture Manufacturing	Any facility whose primary activity is manufacturing beauty and barber chairs (SIC 3999 / NAICS 337127) should be regulated under Sector W, but may continue to be regulated under Sector Y, or alternatively, under Sector AD. Sector W applies additional SWPPP requirements to facilities manufacturing beauty and

					barber chairs. Sector Y applies no additional requirements and under Sector AD EPA could establish additional facility-specific monitoring and reporting requirements. Regulatory burden would be greater under Sector W.
		(embroidery kits)	**339932**	Game, Toy, and Children's Vehicle Manufacturing	
		(other miscellaneous products not specially provided for previously)	**339999**	All Other Miscellaneous Manufacturing	

Sector Z. Leather Tanning and Finishing

Sub-sector	SIC Codes		NAICS Codes		Notes
Z1	**3111**	Leather Tanning and Finishing	**316110**	Leather and Hide Tanning and Finishing	

Sector AA. Fabricated Metal Products

Sub-sector	SIC Codes		NAICS Codes		Notes
AA1	**3411**	Metal Cans	**332431**	Metal Can Manufacturing	
	3412	Metal Shipping Barrels, Drums, Kegs, and Pails	**332439**	Other Metal Container Manufacturing	
	3421	Cutlery (except hedge shears and trimmers, tinners' snips, and similar nonelectric hand tools)	**332211**	Cutlery and Flatware (except Precious) Manufacturing	
		(hedge shears and trimmers, tinners snips, and similar nonelectric hand tools)	**332212**	Hand and Edge Tool Manufacturing	
	3423	Hand and Edge Tools, Except Machine Tools and Handsaws	**332212**	Hand and Edge Tool Manufacturing	
	3425	Saw Blades and Handsaws	**332213**	Saw Blade and Handsaw Manufacturing	
	3429	Hardware, Not Elsewhere Classified (vacuum and insulated bottles, jugs, and chests)	**332439**	Other Metal Container Manufacturing	
		(except fire hose nozzles, hose couplings, vacuum and insulated bottles, jugs and chests, fireplace fixtures, time locks, turnbuckles, pulleys, tackle blocks, luggage and utility racks, sleep sofa mechanisms and chair glides, traps, handcuffs and	**332510**	Hardware Manufacturing	

		leg irons, ladder jacks, and other like metal products)			
		(turnbuckles and hose clamps)	**332722**	Bolt, Nut, Screw, Rivet, and Washer Manufacturing	
		(fire hose nozzles and hose couplings)	**332919**	Other Metal Valve and Pipe Fitting Manufacturing	
		(fireplace fixtures, traps, handcuffs and leg irons, ladder jacks, and other like metal products)	**332999**	All Other Miscellaneous Fabricated Metal Product Manufacturing	
		(pulleys, tackle blocks, block and tackle assemblies)	**333923**	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing	
		(time locks)	**334518**	Watch, Clock, and Part Manufacturing	
		(luggage and utility racks)	**336399**	All Other Motor Vehicle Parts Manufacturing	
		(sleep sofa mechanisms and chair glides)	**337215**	Showcase, Partition, Shelving, and Locker Manufacturing	
	3431	Enameled Iron and Metal Sanitary Ware	**332998**	Enameled Iron and Metal Sanitary Ware Manufacturing	
	3432	Plumbing Fixture Fittings and Trim (except shower rods, lawn hose nozzles, and lawn sprinklers)	**332913**	Plumbing Fixture Fitting and Trim Manufacturing	
		(lawn hose nozzles and lawn sprinklers)	**332919**	Other Metal Valve and Pipe Fitting Manufacturing	
		(metal shower rods)	**332999**	All Other Miscellaneous Fabricated Metal Product Manufacturing	
	3443	Fabricated Plate Work (Boiler Shops) (fabricated plate work and metal weldments)	**332313**	Plate Work Manufacturing	
		(power boilers and heat exchangers)	**332410**	Power Boiler and Heat Exchanger Manufacturing	
		(heavy gauge tanks)	**332420**	Metal Tank (Heavy Gauge) Manufacturing	
		(metal cooling towers)	**333415**	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing (metal cooling towers)	
	3444	Sheet Metal Work (stamped metal skylights)	**332321**	Metal Window and Door Manufacturing	
		(except sheet metal bins and vats, skylights, and sheet metal cooling towers)	**332322**	Sheet Metal Work Manufacturing	
		(metal bins and vats)	**332439**	Other Metal Container Manufacturing	
		(cooling towers, sheet metal)	**333415**	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	

	3446	Architectural and Ornamental Ironwork	**332323**	Ornamental and Architectural Metal Work Manufacturing	
	3448	Prefabricated Metal Buildings and Components	**332311**	Prefabricated Metal Building and Component Manufacturing	
	3449	Miscellaneous Structural Metal Work (custom roll forming)	**332114**	Custom Roll Forming	
		(fabricated bar joists and concrete reinforcing bars)	**332312**	Fabricated Structural Metal Manufacturing	
		(curtain wall and metal plaster bases and lath)	**332323**	Ornamental and Architectural Metal Work Manufacturing	
	3451	Screw Machine Products	**332721**	Precision Turned Product Manufacturing	
	3452	Bolts, Nuts, Screws, Rivets, and Washers	**332722**	Bolt, Nut, Screw, Rivet, and Washer Manufacturing	
	3462	Iron and Steel Forgings	**332111**	Iron and Steel Forging	
	3463	Nonferrous Forgings	**332112**	Nonferrous Forging	
	3465	Automotive Stampings	**336370**	Motor Vehicle Metal Stamping	
	3466	Crowns and Closures	**332115**	Crown and Closure Manufacturing	
	3469	Metal Stampings, Not Elsewhere Classified (except kitchen utensils, pots and pans for cooking, coins, and stamped metal boxes)	**332116**	Metal Stamping	
		(kitchen utensils, pots, and pans for cooking)	**332214**	Kitchen Utensil, Pot, and Pan Manufacturing	
		(stamped metal tool, cash, mail, and lunch boxes)	**332439**	Other Metal Container Manufacturing	
	3471	Electroplating, Plating, Polishing, Anodizing, and Coloring	**332813**	Electroplating, Plating, Polishing, Anodizing, and Coloring	
AA2	**3479**	Coating, Engraving, and Allied Services, Not Elsewhere Classified (except jewelry, silverware, and flatware engraving and etching)	**332812**	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	
		(precious metal jewelry engraving and etching)	**339911**	Jewelry (except Costume) Manufacturing	
		(silver and plated ware engraving and etching)	**339912**	Silverware and Holloware Manufacturing	
		(costume jewelry engraving and etching)	**339914**	Costume Jewelry and Novelty Manufacturing	
AA1	**3482**	Small Arms Ammunition	**332992**	Small Arms Ammunition Manufacturing	
	3483	Ammunition, Except for Small Arms	**332993**	Ammunition (except for Small Arms) Manufacturing	
	3484	Small Arms	**332994**	Small Arms Manufacturing	

	3489	Ordinance and Accessories, Not Elsewhere Classified	**332995**	Other Ordinance and Accessories Manufacturing	
	3491	Industrial Valves	**332911**	Industrial Valve Manufacturing	
	3492	Fluid Power Valves and Hose Fittings	**332912**	Fluid Power Valve and Hose Fitting Manufacturing	
	3493	Steel Springs, Except Wire	**332611**	Spring (Heavy Gauge) Manufacturing	
	3494	Valves and Pipe Fittings, Not Elsewhere Classified (except metal pipe hangers and supports)	**332919**	Other Metal Valve and Pipe Fitting Manufacturing	
		(metal pipe hangers and supports)	**332999**	All Other Miscellaneous Fabricated Metal Product Manufacturing	
	3495	Wire Springs (except watch and clock springs)	**332612**	Spring (Light Gauge) Manufacturing	
		(clock and watch springs)	**334518**	Watch, Clock, and Part Manufacturing	
	3496	Miscellaneous Fabricated Wire Products (potato mashers)	**332214**	Kitchen Utensil, Pot, and Pan Manufacturing	
		(except shopping carts and potato mashers)	**332618**	Other Fabricated Wire Product Manufacturing	
		(shopping carts made from purchased wire)	**333924**	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	
	3497	Metal Foil and Leaf (laminated aluminum foil rolls and sheets for flexible packaging uses)	**322225**	Laminated Aluminum Foil Manufacturing for Flexible Packaging Uses	
		(foil and foil containers)	**332999**	All Other Miscellaneous Fabricated Metal Product Manufacturing	
	3498	Fabricated Pipe and Pipe Fittings	**332996**	Fabricated Pipe and Pipe Fitting Manufacturing	
	3499	Fabricated Metal Products, Not Elsewhere Classified (powder metallurgy)	**332117**	Powder Metallurgy Part Manufacturing	
		(metal boxes)	**332439**	Other Metal Container Manufacturing	
		(safe and vault locks)	**332510**	Hardware Manufacturing	
		(metal aerosol valves)	**332919**	Other Metal Valve and Pipe Fitting Manufacturing	
		(other metal products)	**332999**	All Other Miscellaneous Fabricated Metal Product Manufacturing	
		(metal automobile seat frames)	**336360**	Motor Vehicle Seating and Interior Trim Manufacturing	
		(metal furniture frames)	**337215**	Showcase, Partition, Shelving, and Locker Manufacturing	
	3911	Jewelry, Precious Metal	**339911**	Jewelry (except Costume) Manufacturing	

	3914	Silverware, Plated Ware, and Stainless Steel Ware (cutlery and flatware, nonprecious and precious plated)	**332211**	Cutlery and Flatware (except Precious) Manufacturing	
		(precious metal plated hollowware)	**332999**	All Other Miscellaneous Fabricated Metal Product Manufacturing	
		(except nonprecious and precious plated metal cutlery, flatware, and hollowware)	**339912**	Silverware and Holloware Manufacturing	
	3915	Jewelers Findings and Materials and Lapidary Work			
		(watch jewels)	**334518**	Watch, Clock, and Part Manufacturing	Any facility whose primary activity is manufacturing watch jewels (SIC 3915 / NAICS 334518) should be regulated under Sector AC, but may continue to be regulated under Sector AA, or alternatively, under Sector AD. Sector AA applies additional technology-based effluent limits comprising good housekeeping measures, spill prevention and response, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector AC does not apply additional sector-specific requirements and EPA may establish facility-specific monitoring and reporting requirements under Sector AD. Regulatory burden would be greater under Sector AA.
		(except watch jewels)	**339913**	Jewelers' Material and Lapidary Work Manufacturing	

Sector AB. Transportation Equipment, Industrial or Commercial Machinery

Sub-sector	SIC Codes		NAICS Codes		Notes
AB1	**3511**	Steam, Gas, and Hydraulic Turbines, and Turbine Generator Set Units	**333611**	Turbine and Turbine Generator Set Units Manufacturing	
	3519	Internal Combustion Engines, Not Elsewhere Classified (except stationary engine radiators)	**333618**	Other Engine Equipment Manufacturing	
		(stationary engine radiators)	**336399**	All Other Motor Vehicle Parts Manufacturing	

	3523	Farm Machinery and Equipment (hand hair clippers for animals)	**332212**	Hand and Edge Tool Manufacturing	
		(corrals, stalls, and holding gates)	**332323**	Ornamental and Architectural Metal Work Manufacturing	
		(except corrals, stalls, holding gates, hand clippers for animals, and farm conveyors/elevators)	**333111**	Farm Machinery and Equipment Manufacturing	
		(farm conveyors and elevators)	**333922**	Conveyor and Conveying Equipment Manufacturing	
	3524	Lawn and Garden Tractors and Home Lawn and Garden Equipment (nonpowered lawnmowers)	**332212**	Hand and Edge Tool Manufacturing	
		(except nonpowered lawnmowers)	**333112**	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing	
	3531	Construction Machinery and Equipment (except railway track maintenance equipment; winches, aerial work platforms; and automotive wrecker hoists)	**333120**	Construction Machinery Manufacturing	
		(winches, aerial work platforms, automobile wrecker hoists, locomotive cranes, and ship cranes)	**333923**	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing	
		(railway track maintenance equipment)	**336510**	Railroad Rolling Stock Manufacturing	
	3532	Mining Machinery and Equipment, Except Oil and Gas Field Machinery and Equipment	**333131**	Mining Machinery and Equipment Manufacturing	
	3533	Oil and Gas Field Machinery and Equipment	**333132**	Oil and Gas Field Machinery and Equipment Manufacturing	
	3534	Elevators and Moving Stairways	**333921**	Elevators and Moving Stairway Manufacturing	
	3535	Conveyors and Conveying Equipment	**333922**	Conveyors and Conveying Equipment Manufacturing	
	3536	Overhead Traveling Cranes, Hoists, and Monorail Systems	**333923**	Overhead Traveling Cranes, Hoists, and Monorail System Manufacturing	
	3537	Industrial Trucks, Tractors, Trailers, and Stackers (metal air cargo containers)	**332439**	Other Metal Container Manufacturing	
		(metal pallets)	**332999**	All Other Miscellaneous Fabricated Metal Product Manufacturing	

		(except metal pallets and metal air cargo containers)	**333924**	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	
	3541	Machine Tools, Metal Cutting Types	**333512**	Machine Tool (Metal Cutting Types) Manufacturing	
	3542	Machine Tools, Metal Forming Types	**333513**	Machine Tool (Metal Forming Types) Manufacturing	
	3543	Industrial Patterns	**332997**	Industrial Pattern Manufacturing	
	3544	Special Dies and Tools, Die Sets, Jigs and Fixtures, and Industrial Molds (industrial molds)	**333511**	Industrial Mold Manufacturing	
		(except molds)	**333514**	Special Die and Tool, Die Set, Jig, and Fixture Manufacturing	
	3545	Cutting Tools, Machine Tool Accessories, and Machinist Precision Measuring Devices (precision measuring devices)	**332212**	Hand and Edge Tool Manufacturing	
		(except precision measuring devices)	**333515**	Cutting Tool and Machine Tool Accessory Manufacturing	
	3546	Power-Driven Handtools	**333991**	Power-Driven Handtool Manufacturing	
	3547	Rolling Mill Machinery and Equipment	**333516**	Rolling Mill Machinery and Equipment Manufacturing	
	3548	Electric and Gas Welding and Soldering Equipment (except transformers for arc-welding)	**333992**	Welding and Soldering Equipment Manufacturing	
		(transformers for arc-welders)	**335311**	Power, Distribution, and Specialty Transformer Manufacturing	
	3549	Metalworking Machinery, Not Elsewhere Classified	**333518**	Other Metalworking Machinery Manufacturing	
	3552	Textile Machinery	**333292**	Textile Machinery Manufacturing	
	3553	Woodworking Machinery	**333210**	Sawmill and Woodworking Machinery Manufacturing	
	3554	Paper Industries Machinery	**333291**	Paper Industry Machinery Manufacturing	
	3555	Printing Trades Machinery and Equipment	**333293**	Printing Machinery and Equipment Manufacturing	
	3556	Food Products Machinery	**333294**	Food Product Machinery Manufacturing	
	3559	Special Industry Machinery, Not Elsewhere Classified (nuclear control rod drive mechanisms)	**332410**	Power Boiler and Heat Exchanger Manufacturing	
		(cotton ginning machinery)	**333111**	Farm Machinery and Equipment Manufacturing	
		(rubber and plastics manufacturing machinery)	**333220**	Plastics and Rubber Industry Machinery Manufacturing	

		(semiconductor machinery manufacturing)	**333295**	Semiconductor Machinery Manufacturing	
		(except rubber and plastics manufacturing machinery, semiconductor manufacturing machinery, and automotive maintenance equipment)	**333298**	All Other Industrial Machinery Manufacturing	
		(automotive maintenance equipment)	**333319**	Other Commercial and Service Industry Machinery Manufacturing	
	3561	Pumps and Pumping Equipment	**333911**	Pump and Pumping Equipment Manufacturing	
	3562	Ball and Roller Bearings	**332991**	Ball and Roller Bearing Manufacturing	
	3563	Air and Gas Compressors	**333912**	Air and Gas Compressor Manufacturing	
	3564	Industrial and Commercial Fans and Blowers and Air Purification Equipment (air purification equipment)	**333411**	Air Purification Equipment Manufacturing	
		(fans and blowers)	**333412**	Industrial and Commercial Fan and Blower Manufacturing	
	3565	Packaging Machinery	**333993**	Packaging Machinery Manufacturing	
	3566	Speed Changers, Industrial High-Speed Drives, and Gears	**333612**	Speed Changer, Industrial High-Speed Drives, and Gear Manufacturing	
	3567	Industrial Process Furnaces and Ovens	**333994**	Industrial Process Furnace and Oven Manufacturing	
	3568	Mechanical Power Transmission Equipment, Not Elsewhere Classified	**333613**	Mechanical Power Transmission Equipment Manufacturing	
	3569	General Industrial Machinery and Equipment, Not Elsewhere Classified (textile fire hose)	**314999**	All Other Miscellaneous Textile Product Mills	
		(electric swimming pool heaters)	**333414**	Heating Equipment (except Warm Air Furnaces) Manufacturing	
		(except fire hoses and electric swimming pool heaters)	**333999**	All Other Miscellaneous General Purpose Machinery Manufacturing	
	3581	Automatic Vending Machines	**333311**	Automatic Vending Machine Manufacturing	
	3582	Commercial Laundry, Drycleaning, and Pressing Machines	**333312**	Commercial Laundry, Drycleaning, and Pressing Machine Manufacturing	
	3585	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment (except motor vehicle air-conditioning)	**333415**	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	
		(motor vehicle air-conditioning)	**336391**	Motor Vehicle Air-Conditioning Manufacturing	

	3586	Measuring and Dispensing Pumps	**333913**	Measuring and Dispensing Pump Manufacturing	
	3589	Service Industry Machinery, Not Elsewhere Classified	**333319**	Other Commercial and Service Industry Machinery Manufacturing	
	3592	Carburetors, Pistons, Piston Rings, and Valves	**336311**	Carburetor, Piston, Piston Ring, and Valve Manufacturing	
	3593	Fluid Power Cylinders and Actuators	**333995**	Fluid Power Cylinder and Actuator Manufacturing	
	3594	Fluid Power Pumps and Motors	**333996**	Fluid Power Pumps and Motors Manufacturing	
	3596	Scales and Balances, Except Laboratory	**333997**	Scale and Balance (except Laboratory) Manufacturing	
	3599	Industrial and Commercial Machinery and Equipment, Not Elsewhere Classified			
		(machine shops)	**332710**	Machine Shops	
		(grinding castings for the trade)	**332813**	Electroplating, Plating, Polishing, Anodizing and Coloring	
		(flexible metal hose)	**332999**	All Other Miscellaneous Fabricated Metal Product Manufacturing	
		(carnival amusement park equipment)	**333319**	Other Commercial and Service Industry Machinery Manufacturing	
		(other industrial and commercial machinery and equipment)	**333999**	All Other Miscellaneous General Purpose Machinery Manufacturing	
		(water leak detectors)	**334519**	Other Measuring and Controlling Device Manufacturing	
		(gasoline, oil, and intake filters for internal combustion engines, except for motor vehicles)	**336399**	All Other Motor Vehicle Parts Manufacturing	
	3711	Motor Vehicles and Passenger Car Bodies			
		(automobiles)	**336111**	Automobile Manufacturing	
		(light trucks and utility vehicles)	**336112**	Light Truck and Utility Vehicle Manufacturing	
		(heavy duty trucks)	**336120**	Heavy Duty Truck Manufacturing	
		(kit car and other passenger car bodies)	**336211**	Motor Vehicle Body Manufacturing	
		(military armored vehicles)	**336992**	Military Armored Vehicle, Tank, and Tank Component Manufacturing	
	3713	Truck and Bus Bodies	**336211**	Motor Vehicle Body Manufacturing	
	3714	Motor Vehicle Parts and Accessories (dump truck lifting mechanisms and fifth wheels)	**336211**	Motor Vehicle Body Manufacturing	
		(gasoline engines and engine parts including rebuilt)	**336312**	Gasoline Engine and Engine Parts Manufacturing	

		(wiring harness sets, other than ignition; block heaters and battery heaters; instrument board assemblies; permanent defrosters; windshield washer-wiper mechanisms; cruise control mechanisms; and other electrical equipment for internal combustion engines)	**336322**	Other Motor Vehicle Electrical and Electronic Equipment Manufacturing	
		(steering and suspension parts)	**336330**	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing	
		(brake and brake systems, including assemblies)	**336340**	Motor Vehicle Brake System Manufacturing	
		(transmissions and power train parts, including rebuilding)	**336350**	Motor Vehicle Transmission and Power Train Parts Manufacturing	
		(except truck and bus bodies, trailers, engine and engine parts, motor vehicle electrical and electronic equipment, motor vehicle steering and suspension components, motor vehicle brake systems, and motor vehicle transmission and power train parts)	**336399**	All Other Motor Vehicle Parts Manufacturing	
	3715	Truck Trailers	**336212**	Truck Trailer Manufacturing	
	3716	Motor Homes	**336213**	Motor Home Manufacturing	
	3721	Aircraft (except research and development not producing prototypes)	**336411**	Aircraft Manufacturing	
	3724	Aircraft Engines and Engine Parts (except research and development not producing prototypes)	**336412**	Aircraft Engine and Engine Parts Manufacturing	
	3728	Aircraft Parts and Auxiliary Equipment, Not Elsewhere Classified			
		(fluid power aircraft subassemblies)	**332912**	Fluid Power Valve and Hose Fitting Manufacturing	
		(target drones)	**336411**	Aircraft Manufacturing	
		(except fluid power aircraft subassemblies, target drones, and research and development not producing prototypes)	**336413**	Other Aircraft Part and Auxiliary Equipment Manufacturing	
	3743	Railroad Equipment (locomotive fuel lubricating or cooling medium pumps)	**333911**	Pump and Pumping Equipment Manufacturing	
		(except locomotive fuel lubricating or cooling medium pumps)	**336510**	Railroad Rolling Stock Manufacturing	

	3751	Motorcycles, Bicycles, and Parts	**336991**	Motorcycle, Bicycle, and Parts Manufacturing	
	3761	Guided Missiles and Space Vehicles (except research and development not producing prototypes)	**336414**	Guided Missile and Space Vehicle Manufacturing	
	3764	Guided Missile and Space Vehicle Propulsion Units and Propulsion Unit Parts (except research and development not producing prototypes)	**336415**	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing	
	3769	Guided Missile and Space Vehicle Parts and Auxiliary Equipment, Not Elsewhere Classified (except research and development not producing prototypes)	**336419**	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing	
	3792	Travel Trailers and Campers	**336214**	Travel Trailer and Camper Manufacturing	
	3795	Tanks and Tank Components	**336992**	Military Armored Vehicle, Tank, and Tank Component Manufacturing	
	3799	Transportation Equipment, Not Elsewhere Classified			
		(wheelbarrows)	**333924**	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	
		(automobile, boat, utility and light truck trailers)	**336214**	Travel Trailer and Camper Manufacturing	
		(trailer hitches)	**336399**	All Other Motor Vehicle Parts Manufacturing	
		(except automobile, boat, utility light truck trailers, trailer hitches, and wheelbarrows)	**336999**	All Other Transportation Equipment Manufacturing	

Sector AC. Electronic, Electrical, Photographic and Optical Goods

Sub-sector	SIC Codes		NAICS Codes		Notes
AC1	**3571**	Electronic Computers	**334111**	Electronic Computer Manufacturing	
	3572	Computer Storage Devices	**334112**	Computer Storage Device Manufacturing	
	3575	Computer Terminals	**334113**	Computer Terminal Manufacturing	
	3577	Computer Peripheral Equipment, Not Elsewhere Classified			
		(except plotter controllers and magnetic tape head cleaners)	**334119**	Other Computer Peripheral Equipment Manufacturing	
		(plotter controllers)	**334418**	Printed Circuit Assembly (Electronic Assembly) Manufacturing	
		(magnetic tape head cleaners)	**334613**	Magnetic and Optical Recording Media Manufacturing	

	3578	Calculating and Accounting Machinery, Except Electronic Computers (change making machines)	**333311**	Automatic Vending Machine Manufacturing	
		(except point of sales terminals, change making machines and funds transfer devices)	**333313**	Office Machinery Manufacturing	
		(point of sale terminals and fund transfer devices)	**334119**	Other Computer Peripheral Equipment Manufacturing	
	3579	Office Machines, Not Elsewhere Classified (except timeclocks, time stamps, pencil sharpeners, stapling machines, etc.)	**333313**	Office Machinery Manufacturing	
		(time clocks and other time recording devices)	**334518**	Watch, Clock, and Part Manufacturing	
		(pencil sharpeners, staplers and other office equipment)	**339942**	Lead Pencil and Art Good Manufacturing	
	3612	Power, Distribution, and Specialty Transformers	**335311**	Power, Distribution, and Specialty Transformer Manufacturing	
	3613	Switchgear and Switchboard Apparatus	**335313**	Switchgear and Switchboard Apparatus Manufacturing	
	3621	Motors and Generators	**335312**	Motors and Generator Manufacturing	
	3624	Carbon and Graphite Products	**335991**	Carbon and Graphite Product Manufacturing	
	3625	Relays and Industrial Controls	**335314**	Relay and Industrial Control Manufacturing	
	3629	Electrical Industrial Apparatus, Not Elsewhere Classified	**335999**	All Other Miscellaneous Electrical Equipment and Component Manufacturing	
	3631	Household Cooking Equipment	**335221**	Household Cooking Appliance Manufacturing	
	3632	Household Refrigerators and Home and Farm Freezers	**335222**	Household Refrigerator and Home Freezer Manufacturing	
	3633	Household Laundry Equipment	**335224**	Household Laundry Equipment Manufacturing	
	3634	Electric Housewares and Fans (wall and baseboard heating units for permanent installation)	**333414**	Heating Equipment (except Warm Air Furnaces) Manufacturing	
		(except wall and baseboard heating units for permanent installation, electronic cigarette lighters, and wall mount restroom hand dryers)	**335211**	Electric Housewares and Household Fan Manufacturing	
		(electronic cigarette lighters)	**339999**	All Other Miscellaneous Manufacturing	
	3635	Household Vacuum Cleaners	**335212**	Household Vacuum Cleaner Manufacturing	
	3639	Household Appliances, Not Elsewhere Classified (household sewing machines)	**333298**	All Other Industrial Machinery Manufacturing	

		(floor waxing and floor polishing machines)	**335212**	Household Vacuum Cleaner Manufacturing	
		(except floor waxing and floor polishing machines, and household sewing machines)	**335228**	Other Major Household Appliance Manufacturing	
	3641	Electric Lamp Bulbs and Tubes	**335110**	Electric Lamp Bulbs and Part Manufacturing	
	3643	Current-Carrying Wiring Devices	**335931**	Current-Carrying Wiring Device Manufacturing	
	3644	Noncurrent-Carrying Wiring Devices			
		(fish wire, electrical wiring tool)	**332212**	Hand and Edge Tool Manufacturing	Any facility whose primary activity is manufacturing fish wire, electrical wiring tool (SIC 3644 / NAICS 332212) should be regulated under Sector AA, but may continue to be regulated under Sector AC, or alternatively, under Sector AD. Sector AA applies additional technology-based effluent limits comprising good housekeeping measures, spill prevention and response, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector AC does not apply additional sector-specific requirements and EPA may establish facility-specific monitoring and reporting requirements under Sector AD. Regulatory burden would be greater under Sector AA.
		(except fishwire, electrical wiring tool)	**335932**	Noncurrent-Carrying Wiring Device Manufacturing	
	3645	Residential Electric Lighting Fixtures	**335121**	Residential Electric Lighting Fixture Manufacturing	
	3646	Commercial, Industrial, and Institutional Electric Lighting Fixtures	**335122**	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing	
	3647	Vehicular Lighting Equipment	**336321**	Vehicular Lighting Equipment Manufacturing	
	3648	Lighting Equipment, Not Elsewhere Classified	**335129**	Other Lighting Equipment Manufacturing	
	3651	Household Audio and Video Equipment	**334310**	Audio and Video Equipment Manufacturing	

	3652	Phonograph Records and Prerecorded Audio Tapes and Disks (reproduction of all other media except video)	**334612**	Prerecorded Compact Disc (except Software), Tape, and Record Reproducing	
	3661	Telephone and Telegraph Apparatus (except consumer external modems)	**334210**	Telephone Apparatus Manufacturing	
		(consumer external modems)	**334418**	Printed Circuit Assembly (Electronic Assembly) Manufacturing	
	3663	Radio and Television Broadcasting and Communications Equipment	**334220**	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	
	3669	Communications Equipment, Not Elsewhere Classified	**334290**	Other Communications Equipment Manufacturing	
	3671	Electron Tubes	**334411**	Electron Tube Manufacturing	
	3672	Printed Circuit Boards	**334412**	Bare Printed Circuit Board Manufacturing	
	3674	Semiconductors and Related Devices	**334413**	Semiconductor and Related Device Manufacturing	
	3675	Electronic Capacitors	**334414**	Electronic Capacitor Manufacturing	
	3676	Electronic Resistors	**334415**	Electronic Resistor Manufacturing	
	3677	Electronic Coils, Transformers, and Other Inductors	**334416**	Electronic Coil, Transformer, and Other Inductor Manufacturing	
	3678	Electronic Connectors	**334417**	Electronic Connector Manufacturing	
	3679	Electronic Components, Not Elsewhere Classified			
		(antennas)	**334220**	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	
		(radio headphones)	**334310**	Audio and Video Equipment Manufacturing	
		(printed circuit/electronic assembly manufacturing)	**334418**	Printed Circuit Assembly (Electronic Assembly) Manufacturing	
		(other electronic components)	**334419**	Other Electronic Component Manufacturing	
	3691	Storage Batteries	**335911**	Storage Battery Manufacturing	
	3692	Primary Batteries, Dry and Wet	**335912**	Primary Battery Manufacturing	
	3694	Electrical Equipment for Internal Combustion Engines	**336322**	Other Motor Vehicle Electrical and Electronic Equipment Manufacturing	
	3695	Magnetic and Optical Recording Media	**334613**	Magnetic and Optical Recording Media Manufacturing	
	3699	Electrical Machinery, Equipment, and Supplies, Not Elsewhere Classified (electronic teaching machines and flight simulators)	**333319**	Other Commercial and Service Industry Machinery Manufacturing	
		(outboard electric motors)	**333618**	Other Engine Equipment Manufacturing	Any facility whose primary activity is manufacturing outboard electric

					motors (SIC 3699 / NAICS 333618) should be regulated under Sector AB, but may continue to be regulated under Sector AC, or alternatively, under Sector AD. Sector AB applies additional sector-specific SWPPP requirements. Sector AC does not apply additional sector-specific requirements and EPA may establish facility-specific monitoring and reporting requirements under Sector AD. Regulatory burden would be greater under Sector AB.
		(laser welding and soldering equipment)	**333992**	Welding and Soldering Equipment Manufacturing	
		(Christmas tree lighting sets, electric insect lamps, electric fireplace logs, and trouble lights)	**335129**	Other Lighting Equipment Manufacturing	
		(other electrical industrial apparatus)	**335999**	All Other Miscellaneous Electrical Equipment and Component Manufacturing	
	3812	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical Systems and Instruments	**334511**	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	
	3821	Laboratory Apparatus and Furniture	**339111**	Laboratory Apparatus and Furniture Manufacturing	
	3822	Automatic Controls for Regulating Residential and Commercial Environments and Appliances	**334512**	Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use	
	3823	Industrial Instruments for Measurement, Display, and Control of Process Variables; and Related Products	**334513**	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	
	3824	Totalizing Fluid Meters and Counting Devices	**334514**	Totalizing Fluid Meter and Counting Device Manufacturing	
	3825	Instruments for Measuring and Testing of Electricity and Electrical Signals			
		(automotive ammeters and voltmeters)	**334514**	Totalizing Fluid Meter and Counting Device Manufacturing	
		(except automotive instruments)	**334515**	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	

	3826	Laboratory Analytical Instruments	**334516**	Analytical Laboratory Instrument Manufacturing	
	3827	Optical Instruments and Lenses	**333314**	Optical Instruments and Lens Manufacturing	
	3829	Measuring and Controlling Devices, Not Elsewhere Classified			
		(motor vehicle gauges)	**334514**	Totalizing Fluid Meter and Counting Device Manufacturing	
		(electronic chronometers)	**334518**	Watch, Clock, and Part Manufacturing	
		(except medical thermometers, electronic chronometers and motor vehicle gauges)	**334519**	Other Measuring and Controlling Device Manufacturing	
		(medical thermometers)	**339112**	Surgical and Medical Instrument Manufacturing	
	3841	Surgical and Medical Instruments and Apparatus			
		(tranquilizer guns)	**332994**	Small Arms Manufacturing	Any facility whose primary activity is manufacturing tranquilizer guns (SIC 3841 / NAICS 332994) should be regulated under Sector AA, but may continue to be regulated under Sector AC, or alternatively, under Sector AD. Sector AA applies additional technology-based effluent limits comprising good housekeeping measures, spill prevention and response, and spills and leaks; additional SWPPP requirements; and additional inspection requirements. Sector AC does not apply additional sector-specific requirements and EPA may establish facility-specific monitoring and reporting requirements under Sector AD. Regulatory burden would be greater under Sector AA.
		(operating room tables)	**339111**	Laboratory Apparatus and Furniture Manufacturing	
		(except tranquilizer guns and operating room tables)	**339112**	Surgical and Medical Instrument Manufacturing	

	3842	Orthopedic, Prosthetic, and Surgical Appliances and Supplies (incontinent pads and bed pads)	**322291**	Sanitary Paper Product Manufacturing	Any facility whose primary activity is manufacturing incontinent pads and bed pads (SIC 3842 / NAICS 322291) should be regulated under Sector B, but may continue to be regulated under Sector AC, or alternatively, under Sector AD. Sectors B and AC do not apply additional sector-specific requirements. EPA may require additional facility-specific monitoring and reporting requirement under Sector AD. Regulatory burden is not expected to differ between Sectors B and AC.
		(electronic hearing aids)	**334510**	Electromedical and Electrotherapeutic Apparatus Manufacturing	
		(except electronic hearing aids, incontinent pads, anatomical models, and bed pads)	**339113**	Surgical Appliance and Supplies Manufacturing	
		(anatomical models)	**339999**	All Other Miscellaneous Manufacturing	
	3843	Dental Equipment and Supplies	**339114**	Dental Equipment and Supplies Manufacturing	
	3844	X-Ray Apparatus and Tubes and Related Irradiation Apparatus	**334517**	Irradiation Apparatus Manufacturing	
	3845	Electromedical and Electrotherapeutic Apparatus (except CT and CAT scanners)	**334510**	Electromedical and Electrotherapeutic Apparatus Manufacturing	
		(CT and CAT Scanners)	**334517**	Irradiation Apparatus Manufacturing	
	3851	Ophthalmic Goods (intraoccular lenses, i.e., surgical implants)	**339113**	Surgical Appliance and Supplies Manufacturing	
		(except intraocular lenses)	**339115**	Ophthalmic Goods Manufacturing	
	3861	Photographic Equipment and Supplies (photographic films, paper, plates and chemicals)	**325992**	Photographic Film, Paper, Plate, and Chemical Manufacturing	
		(except photographic film, paper, plates, and chemicals)	**333315**	Photographic and Photocopying Equipment Manufacturing	
	3873	Watches, Clocks, Clockwork Operated Devices, and Parts	**334518**	Watch, Clock, and Part Manufacturing	

Sector AD. Non-Classified Facilities		
Sub-Sector	**Narrative Description**	**Notes**
AD1	Other stormwater discharges designated by the Director as needing a permit (see 40 CFR 122.26(a)(9)(i)(C) & (D)) or any facility discharging stormwater associated with industrial activity not described by any of Sectors A-AC. NOTE: Facilities may not elect to be covered under Sector AD. Only the Director may assign a facility to Sector AD.	

Appendix O - Summary of Reports Permit Submittals

Permit Section	Report/Submittal	Frequency	Due Date(s)	Where to Submit
Part 1.1.4.5	**Endangered and Threatened Species Appendix E Criterion C Eligibility Form** (Applicable only for operators seeking coverage under Part 1.1.4.5 eligibility criterion C).	Once, if applicable	At least 30 days prior to submitting the NOI for permit coverage	Email to msgpesa@epa.gov
Part 1.2	**New Discharger:** Submittal of Notice of Intent (NOI) for Permit Coverage	Once per permit term	A minimum of 30 days prior to commencing discharge	Electronically using the NPDES eReporting Tool (NeT) for MSGP
Part 1.2	**Existing Discharger:** Submittal of Notice of Intent (NOI) for Permit Coverage	Once per permit term	No later than Septemer 2, 2015. However, if you have not previously obtained coverage under an NPDES permit, you must submit your NOI immediately.	Electronically using the NPDES eReporting Tool (NeT) for MSGP
Part 1.3	**Notice of Termination**	Once, if applicable	Within 30 days after: • a new operator takes over responsibility for the facility; or • operations and stormwater discharges have ceased; or • for Sector G, H, or J facilities, the applicable termination requirements have been met; or • alternative permit coverage has been obtained	Electronically using the NPDES eReporting Tool (NeT) for MSGP
Part 1.4	**Conditional "No Exposure" Certification Form**	If eligible, once every 5 years	As necessary	Electronically using the NPDES eReporting Tool (NeT) for MSGP

Permit Section	Report/Submittal	Frequency	Due Date(s)	Where to Submit
Part 3.1.2	**Routine Inspection Documentation**	At least quarterly	By the end of the quarter.	Reports are kept with SWPPP
Part 3.2.2	**Quarterly Visual Assessment Documentation**	At least quarterly	By the end of the quarter.	Reports are kept with SWPPP
Part 4.4	**Corrective Action Documentation**	• Document existence of corrective action condition within 24 hours of becoming aware of the condition • Document corrective actions taken or to be taken within 14 days from the time of discovery of the condition	As necessary	Reports are kept with SWPPP
Part 5 Part 7.3	**Stormwater Pollution Prevention Plan (SWPPP)**	• Provide URL for SWPPP or provide SWPPP information directly on the NOI form. • Update the on-site SWPPP as site conditions indicate. At minimum, the SWPPP must be modified based on corrective actions and deadlines required under Part 4.2.	Develop initial SWPPP prior to the submittal of NOI form. Update the SWPPP information included on URL or on NOI form, at a minimum, no later than 45 days after conducting the final routine facility inspection for the year.	Electronically using the NPDES eReporting Tool (NeT) for MSGP
Part 6 Part 7.4	**Discharge Monitoring Reports (DMRs)**	• 1/quarter for benchmark monitoring • 1/year for numeric effluent limitation monitoring • 1/year for impaired waters monitoring	Within 30 days of receiving your full laboratory results for all monitored outfalls during the reporting period.	Electronically using NetDMR
Part 7.5	**Annual Report**	1/year	By January 30th	Electronically using the NPDES eReporting Tool (NeT) for MSGP
Part 7.6	**Exceedance Report for Numeric Effluent Limitations**	If applicable	30 days after lab results if 30-day follow-up monitoirng indicates exceedance	Follow-up monitoring submitted Electronically using NetDMR Exceedance eports submitted directly to the EPA Regional Office listed in Part 7.9.1 of the permit

Permit Section	Report/Submittal	Frequency	Due Date(s)	Where to Submit
Part 7.7	**Additional Reporting (Noncompliance endangering health, reportable quantity spills, etc.)**	As necessary	Varies – see Part 7.7	

Appendix P - List of Federal CERCLA Sites

Part 1.1.4.10 of the MSGP has special requirements for discharges to a federal CERCLA site.[3]

If your facility discharges to one of the federal CERCLA sites listed below, you are ineligible for coverage under this permit, unless you notify the EPA Regional Office in advance and the EPA Regional Office determines that you are eligible for permit coverage. In determining eligibility for coverage under Part 1.1.4.10, the EPA Regional Office may evaluate whether you have included appropriate controls and implementation procedures designed to ensure your discharge will not lead to recontamination of aquatic media at the CERCLA Site, such that it would cause or contribute to a water quality standard exceedance. If it is determined that your facility discharges to a CERCLA Site listed below after you have obtained coverage under this permit, you must contact your applicable EPA Regional Office to develop appropriate controls and/or implementation procedures, as necessary, to ensure that your discharges will not lead to recontamination of aquatic media at the CERCLA Site such that they would cause or contribute to a water quality standard exceedance.

EPA Region 10

The CERCLA Sites and the receiving waters associated with these sites to which the requirements of Part 1.1.4.10 apply are listed in the table below. The areas where the permit applies are enumerated in Appendix C of the permit. For maps of CERCLA sites in Region 10 identified within this table, please check the Region 10 Superfund list viewable at http://yosemite.epa.gov/R10/cleanup.nsf/sites/cleanuplist.

Operators who discharge / intend to discharge into the receiving waters listed below must first contact the EPA Regional Office before submitting an NOI. Contact information is viewable at: http://yosemite.epa.gov/r10/water.nsf/Stormwater/industrial/.

Similarly, if you have received notice from EPA that the facility to be covered under the MSGP is considered a potential source to a clean up site, you must first contact the Regional EPA office before submitting an NOI.

	Waterbody (HUC code/Watershed)	**Superfund Sites CERCLIS ID Latitude / Longitude Major Contaminants**
ID	St. Joe River; Coeur d'Alene Lake Basin	St. Maries Creosote IDSFN1002095 47.191697 / -116.343000LPAHs, HPAHs

[3] "CERCLA site" means a facility as defined in Section 101(9) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9601(9), that is undergoing a remedial investigation and feasibility study, or for which a Record of Decision for remedial action has been issued in accordance with the National Contingency Plan, 40 C.F.R. Part 300.

WA	Commencement Bay, Puget Sound	Commencement Bay, Near Shore/Tide Flats WAD980726368 47.155998 / -122.245998Dioxins, furans, arsenic, copper, lead, zinc, 4-methyl-phenol, Hex-CB, HPAHs, PCBs, PCE, cadmium, mercury, LPAHs
WA	Duwamish Waterway; Elliott Bay; Puget Sound	Harbor Island (Lead) WAD980722839 47.344584 / -122.210792Lead, arsenic, copper, HPAHs, LPAHs, mercury,PCBs, zinc, TBT
WA	Clam Bay; Puget Sound	Old Navy Dump/ Manchester Lab WA8680030931 47.342798 / -122.325298 PCBs, copper, lead, zinc, silver, 2,4-dimethyl-phenol, PCBs
WA	Elliott Bay; Puget Sound	Pacific Sound Resources WAD009248287 47.345639 / -122.215998LMWPAHs, HMWPAHs, PCBs
WA	Columbia River	Upper Columbia River (T2) WASFN1002171 47.5722 / -118.5846
WA	Puget Sound	Puget Sound Naval Shipyard WA2170023418 47.333298 / -122.384999PCBs, mercury
WA	Puget Sound	Wycoff / Eagle Harbor WAD009248295 47.371798 / -122.310012Mercury, LPAHs, HPAHs,
WA	Duwamish Waterway; Elliott Bay; Puget Sound	Lower Duwamish Waterway (T2) WA0002329803 47.321608 / -122.194040PCBs, PAHs, phthalates, inorganics, mercury, semi-VOCs

2015 Notice of Intent

Los Alamos
NATIONAL LABORATORY
EST. 1943

Environmental Protection Division
Environmental Compliance Programs (ENV-CP)
PO Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-0666

Date: OCT 2 9 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.

- 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.

- 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.

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 Arnswald, 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; Grieggs, 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, Alison Marie
Cc: Lemke, Terrill W; lee.won@epa.gov; lescure.nasrin@epa.gov; emily@avanticorporation.com; farris.erika@epa.gov; Christiane@avanticorporation.com; bius.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.

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 willl 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 A? * ○ 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 * | 5. State * | 6. Zip Code * | 7. Facility County or Similar Govt. Subdivision *

Los Alamos | NM | 87545 | Los Alamos

8. Phone (10-digits, No dashes) * | 9. Extension | 10. E-Mail *

5056671312 | | hbenson@lanl.gov

Operator point of contact information

11. First Name * | 12. Middle Initial | 13. Last Name * | 14. Professional Title *

Holly | | Wheeler | Environmental Professional

B: Facility Information

1. Facility Name *

Los Alamos National Laboratory

☒ Facility address same as facility operator address

2. Street/Location *

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

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 *

Federal Facility (U.S. Government)

13. Estimated area of industrial activity at your facility exposed to stormwater (to the nearest quarter acre) *

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 *

SECTOR AA: FABRICATED METAL PRODUCTS

16. Primary SIC Code *

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 sectors(s) of any co-located industrial activity for which you are requesting permit coverage.

Sector	Subsector *	
SECTOR P: LAND TRANSPORTATION AND WAREHOUSING	P1: Motor Freight Transportation and Warehousing	Delete Sector
SECTOR K: HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES	K1: Hazardous Waste Treatment, Storage, or Disposal Facilities, including those that are operati	Delete Sector
SECTOR A: TIMBER PRODUCTS	A4: Wood Products, Not Elsewhere Classified	Delete Sector
SECTOR D: ASPHALT PAVING AND ROOFING MATERIALS AND LUBRICANTS	D1: Asphalt Paving and Roofing Materials	Delete Sector
SECTOR O: STEAM ELECTRIC GENERATING FACILITIES	O1: Steam Electric Generating Facilities, including coal handling sites	Delete Sector
SECTOR F: PRIMARY METALS	F4: Nonferrous Foundries (Castings)	Delete Sector
SECTOR N: SCRAP RECYCLING FACILITIES	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? * ◯ Yes ◉ 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? * ◯ Yes ◉ 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? * ◉ 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) *
002	+	35.875801	-	106.327538

Lookup Receiving Waters Information

(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)

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? *

(•) 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 *	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? *

○ 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) *
003	+	35.876369	-	106.326492

Lookup Receiving Waters Information

(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)

Delete Outfall

D. Substantially Identical to Any Outfalls Listed Above? *

◉ Yes ○ No

E. Substantially identical to outfall ID *

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? *

◉ Yes ○ 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

Delete Pollutant

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group *: MERCURY

Pollutant *: Mercury, total [as Hg]

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) *
005	+	35.873908	-	106.320709

Lookup Receiving Waters Information

(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)

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 *

006

+

B. Latitude (Decimal Degrees) *

35.874002

-

C. Longitude (Decimal Degrees) *

106.319825

Lookup Receiving Waters Information

(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)

Delete Outfall

D. Substantially Identical to Any Outfalls Listed Above? *

◉ Yes ○ No

E. Substantially identical to outfall ID *

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? *

◉ 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 *

009

+

B. Latitude (Decimal Degrees) *

35.874951

-

C. Longitude (Decimal Degrees) *

106.319263

Lookup Receiving Waters Information

(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)

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 *

007

B. Latitude (Decimal Degrees) *

+ | 35.874095

C. Longitude (Decimal Degrees) *

- | 106.319009

Lookup Receiving Waters Information

(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)

Delete Outfall

D. Substantially Identical to Any Outfalls Listed Above? *

(•) Yes ( ) 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? *

(•) 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) *
008	+	35.874306	-	106.318891

Lookup Receiving Waters Information

(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)

Delete Outfall

D. Substantially Identical to Any Outfalls Listed Above? *

◉ Yes ○ 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? *

◉ 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 *

010

+

B. Latitude (Decimal Degrees) *

35.874014

-

C. Longitude (Decimal Degrees) *

106.318428

Lookup Receiving Waters Information

(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)

Delete Outfall

D. Substantially Identical to Any Outfalls Listed Above? *

◉ Yes ○ 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? *

◉ 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 *

011

+

B. Latitude (Decimal Degrees) *

35.875560

-

C. Longitude (Decimal Degrees) *

106.320764

Lookup Receiving Waters Information

(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)

Delete Outfall

D. Substantially Identical to Any Outfalls Listed Above? *

◉ Yes ○ No

E. Substantially identical to outfall ID *

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? *

◉ 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 *

012

+

B. Latitude (Decimal Degrees) *

35.875506

-

C. Longitude (Decimal Degrees) *

106.320842

Lookup Receiving Waters Information

(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)

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 * | 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? *

( ) 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) *

004 | + | 35.871465 | - | 106.323844

Lookup Receiving Waters Information

(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)

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.) *

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? *

◉ 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 *

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 *

RADIATION | Alpha, total

Delete Pollutant

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group * | Pollutant *

POLYCHLORINATED BIPHENYLS (PCBS) | 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 * | B. Latitude (Decimal Degrees) * | C. Longitude (Decimal Degrees) *

018 | + | 35.872781 | - | 106.317616

Lookup Receiving Waters Information

(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)

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) *
014	+	35.870641	-	106.316865

Lookup Receiving Waters Information

(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)

Delete Outfall

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 *	
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 *	Pollutant *	
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls [PCBs]	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

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

(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)

Delete Outfall

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 *	
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 *	Pollutant *	
RADIATION	Alpha, total	Delete Pollutant

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group *	Pollutant *	
POLYCHLORINATED BIPHENYLS (PCBS)	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 *		B. Latitude (Decimal Degrees) *		C. Longitude (Decimal Degrees) *
015	+	35.871403	-	106.316276

Lookup Receiving Waters Information

(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)

Delete Outfall

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 *	
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 *	Pollutant *	
RADIATION	Alpha, total	Delete Pollutant

Please select the cause group and pollutant for which the waterbody is impaired:

Cause Group *	Pollutant *	
POLYCHLORINATED BIPHENYLS (PCBS)	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 *		B. Latitude (Decimal Degrees) *		C. Longitude (Decimal Degrees) *
016	+	35.872553	-	106.316810

Lookup Receiving Waters Information

(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)

Delete Outfall

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.) *

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:

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 *	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 *	
POLYCHLORINATED BIPHENYLS (PCBS)	Polychlorinated biphenyls [PCBs]	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

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) *
017	+	35.872752	-	106.317329

Lookup Receiving Waters Information

(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)

Delete Outfall

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.) *

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:

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 *	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 *	
POLYCHLORINATED BIPHENYLS (PCBS)	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? *

( ) 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 *: 019

+

B. Latitude (Decimal Degrees) *: 35.872668

-

C. Longitude (Decimal Degrees) *: 106.318428

Lookup Receiving Waters Information

(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)

Delete Outfall

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.) *

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:

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 *: METALS (OTHER THAN MERCURY)

Pollutant *: 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

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

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? *

( ) 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) *
051	+	35.830145	-	106.242675

Lookup Receiving Waters Information

(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)

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.) *

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? *

(•) 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 *: METALS (OTHER THAN MERCURY)

Pollutant *: 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

(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)

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.) *

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? *

○ 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) *
020	+	35.872251	-	106.316273

Lookup Receiving Waters Information

(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)

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:

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 *	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 *	
POLYCHLORINATED BIPHENYLS (PCBS)	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? *

( ) Yes (•) No

Add Another Outfall

Provide the following information about your outfall latitude longitude.

5. Latitude/Longitude Data Source *: GPS

6. Horizontal Reference Datum: 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 *: Holly

2. Middle Initial:

3. Last Name *: Wheeler

4. Professional Title *: Environmental Professional

5. Phone (10-digits, No dashes) *: 5056671312

6. Extension:

7. E-Mail *: 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 *: eprr.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

Spill Log

Spill Log

Table for Tracking Past and Future Spills

Date	Spill Location	What Spilled	Quantity Spilled	Corrective Action Taken	Plans to Prevent Recurrence
6/1/2011	South corner of yard	20% sulfuric acid from lead acid battery	Less than 1 gallon	Affected area cleaned up by hazmat and batteries placed on spill containment	Package batteries for shipment to prevent broken caps
2/22/2012	MRF next to 60-85	Motor oil	Less than 1 pint	Affected area cleaned up by EM & R	Inspect vehicles entering yard
5/14/2015	Inside MRF yard	Rain water with sheen	Approximately 100 gallons	Affected area was sprayed with micro-blaze and affected soil was collected as N. M. Special waste in a 5 gallon bucket	Put covers on metal for recycle bins to minimize exposure to moisture

2015 Non-Stormwater Discharge Certification

NON-STORMWATER DISCHARGE

ASSESSMENT AND CERTIFICATION

Completed by: Leonard F. Sandoval
Title: Deployed Environmental Professional
Date: 7/19/2015

Date of Evaluation	Outfall Directly Observed During the Test (Location)	Identify Potential Significant Sources of Non- Stormwater	Method Used to Test or Evaluate Discharge	Is Non-Storm Water Present?	How Often?	Describe Results from Test for the Presence of Non-Storm Water Discharge
7/19/2015	Outfall 60-MRF-1 ID # 029	None	Visual evaluation of outfall at retention pond	No	NA	None

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 completed. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name & Official Title: Russell Stone DSESH Manager Utl

Signature: Russell Stone

Date Signed: 8/26/2015

2015 Routine Facility Inspection Reports

Stormwater Industrial Routine Facility Inspection Report

General Information			
Facility Name	Insert Name		
NPDES Tracking No.	Insert Tracking No.		
Date of Inspection	Insert Date	**Start/End Time**	Insert Start/End Time
Inspector's Name(s)	Insert Name		
Inspector's Title(s)	Insert Title		
Inspector's Contact Information	Insert Contact Info		
Inspector's Qualifications	Insert qualifications or add reference to the SWPPP		

Weather Information

Weather at time of this inspection?
❑ Clear ❑Cloudy ❑ Rain ❑ Sleet ❑ Fog ❑ Snow ❑ High Winds
❑ Other: Temperature:

Have any previously unidentified discharges of pollutants occurred since the last inspection? ❑Yes ❑No
If yes, describe: Describe

Are there any discharges occurring at the time of inspection? ❑Yes ❑No
If yes, describe: 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	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
2	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
3	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
4	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
5	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
6	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
7	Insert Control Measure	❑Yes ❑No	❑ Maintenance ❑ Repair	Describe Corrective Actions

	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)
	Name		❑ Replacement	
8	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
9	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
10	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions

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**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
2	**Equipment operations and maintenance areas**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
3	**Fueling areas**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
4	**Outdoor vehicle and equipment washing areas**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
5	**Waste handling and disposal areas**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
6	**Erodible areas/construction**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
7	**Non-stormwater/ illicit connections**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
8	**Salt storage piles or pile containing salt**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
9	**Dust generation and vehicle tracking**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
10	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
11	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions

	Area/Activity	Inspected?	Controls Adequate (appropriate, effective, and operating)?	Corrective Action Needed and Notes
12	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions

Non-Compliance

Describe any incidents of non-compliance observed and not described above:

Describe Non-compliance

Additional Control Measures

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

Describe Additional Controls Needed

Notes

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

Additional Notes

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:_____

Stormwater Industrial Routine Facility Inspection Report

General Information			
Facility Name	TA-60 Material Recycling Facility		
NPDES Tracking No.	NMR05000		
Date of Inspection	**10/22/2015**	**Start/End Time**	**11:10 a.m. to 11:35 a.m.**
Inspector's Name(s)	Leonard F. Sandoval		
Inspector's Title(s)	Deployed Environmental Professional		
Inspector's Contact Information	667-3557 or 231-1235		
Inspector's Qualifications	CISEC		

Weather Information

Weather at time of this inspection?
☐ Clear ☑ Partly Cloudy ☐ Rain ☐ Sleet ☐ Fog ☐ Snow ☐ High Winds
☑ Other: Wind 10 mph Temperature: ~58°F with a high of 65°F 100% Chance of precipitation

Have any previously unidentified discharges of pollutants occurred since the last inspection? ☐Yes ☑No
If yes, describe:

Are there any discharges occurring at the time of inspection? ☐Yes ☑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	Eco Blocks	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
2	Angular Rock Rundown	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
3	Retention Pond	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
4	Asphalt Berm	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
5	Angular Rock Sediment Trap	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
6	Terra Tubes	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
7	Outfall 60 MRF-1 ID# 29	☑Yes ☐No	☐ Maintenance ☐ Repair	

	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)
			❑ Replacement	
8		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	
9		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	
10		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ 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**	☑Yes ❑No ❑ N/A	❑Yes ❑No	
2	**Equipment operations and maintenance areas**	☑Yes ❑No ❑ N/A	❑Yes ❑No	
3	**Fueling areas**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
4	**Outdoor vehicle and equipment washing areas**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
5	**Waste handling and disposal areas**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
6	**Erodible areas/construction**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
7	**Non-stormwater/ illicit connections**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
8	**Salt storage piles or pile containing salt**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
9	**Dust generation and vehicle tracking**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
10	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	
11	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	

	Area/Activity	Inspected?	Controls Adequate (appropriate, effective, and operating)?	Corrective Action Needed and Notes
12	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	

Non-Compliance

Describe any incidents of non-compliance observed and not described above: None

Additional Control Measures

Describe any additional control measures needed to comply with the permit requirements: None

Notes

Use this space for any additional notes or observations from the inspection: On the day of the inspection Water & sediment from the retention pond was cleaned out with a patholing down to concrete.

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: Leonard F. Sandoval Deployed Environmental Professional

Signature: Leonard F. Sandoval **Date:** 10/22/2015

Stormwater Industrial Routine Facility Inspection Report

General Information			
Facility Name	TA-60 Material Recycling Facility		
NPDES Tracking No.	NMR05000		
Date of Inspection	**11/13/2015**	**Start/End Time**	**11:14 a.m. to 11:36 a.m.**
Inspector's Name(s)	Leonard F. Sandoval		
Inspector's Title(s)	Deployed Environmental Professional		
Inspector's Contact Information	667-3557 or 231-1235		
Inspector's Qualifications	CISEC		

Weather Information

Weather at time of this inspection?
☐ Clear ☑ Scattered Clouds ☐ Rain ☐ Sleet ☐ Fog ☐ Snow ☐ High Winds
☑ Other: Wind less than 5 mph Temperature: 31°F with a high of 53°F

Have any previously unidentified discharges of pollutants occurred since the last inspection? ☐Yes ☑No
If yes, describe:

Are there any discharges occurring at the time of inspection? ☐Yes ☑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	Eco Blocks	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
2	Angular Rock Rundown	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
3	Retention Pond	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
4	Asphalt Berm	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
5	Angular Rock Sediment Trap	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
6	Terra Tubes	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
7	Outfall 60 MRF-1 ID# 29	☑Yes ☐No	☐ Maintenance ☐ Repair	

	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)
			❑ Replacement	
8		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	
9		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	
10		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ 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**	☑Yes ❑No ❑ N/A	❑Yes ❑No	
2	**Equipment operations and maintenance areas**	☑Yes ❑No ❑ N/A	❑Yes ❑No	
3	**Fueling areas**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
4	**Outdoor vehicle and equipment washing areas**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
5	**Waste handling and disposal areas**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
6	**Erodible areas/construction**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
7	**Non-stormwater/ illicit connections**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
8	**Salt storage piles or pile containing salt**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
9	**Dust generation and vehicle tracking**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
10	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	
11	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	

	Area/Activity	Inspected?	Controls Adequate (appropriate, effective, and operating)?	Corrective Action Needed and Notes
12	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	

Non-Compliance

Describe any incidents of non-compliance observed and not described above: None

Additional Control Measures

Describe any additional control measures needed to comply with the permit requirements: None

Notes

Use this space for any additional notes or observations from the inspection: During the inspection there was standing water in the retention pond with no visible oily sheen.

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: Leonard F. Sandoval Deployed Environmental Professional

Signature: Leonard F. Sandoval **Date:** 11/13/2015

Stormwater Industrial Routine Facility Inspection Report

General Information			
Facility Name	TA-60 Material Recycling Facility		
NPDES Tracking No.	NMR05000		
Date of Inspection	**12/11/2015**	**Start/End Time**	**10:30 a.m. to 10:52 a.m.**
Inspector's Name(s)	Leonard F. Sandoval		
Inspector's Title(s)	Deployed Environmental Professional		
Inspector's Contact Information	667-3557 or 231-1235		
Inspector's Qualifications	CISEC		

Weather Information

Weather at time of this inspection?
☐ Clear ☑ Cloudy ☐ Rain ☐ Sleet ☐ Fog ☐ Snow ☐ High Winds
☐ Other: Wind 5 to 10 mph Temperature: 46°F with a high of 49°F 20% Chance of precipitation

Have any previously unidentified discharges of pollutants occurred since the last inspection? ☐Yes ☑No
If yes, describe:

Are there any discharges occurring at the time of inspection? ☐Yes ☑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	Eco Blocks	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
2	Angular Rock Rundown	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
3	Retention Pond	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
4	Asphalt Berm	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
5	Angular Rock Sediment Trap	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
6	Terra Tubes	☑Yes ☐No	☐ Maintenance ☐ Repair ☐ Replacement	
7	Outfall 60 MRF-1 ID# 29	☑Yes ☐No	☐ Maintenance ☐ Repair	

	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)
			❑ Replacement	
8		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	
9		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	
10		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ 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**	☑Yes ❑No ❑ N/A	❑Yes ❑No	
2	**Equipment operations and maintenance areas**	☑Yes ❑No ❑ N/A	❑Yes ❑No	
3	**Fueling areas**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
4	**Outdoor vehicle and equipment washing areas**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
5	**Waste handling and disposal areas**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
6	**Erodible areas/construction**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
7	**Non-stormwater/ illicit connections**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
8	**Salt storage piles or pile containing salt**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
9	**Dust generation and vehicle tracking**	❑Yes ❑No ☒ N/A	❑Yes ❑No	
10	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	
11	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	

	Area/Activity	Inspected?	Controls Adequate (appropriate, effective, and operating)?	Corrective Action Needed and Notes
12	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	

Non-Compliance

Describe any incidents of non-compliance observed and not described above: None

Additional Control Measures

Describe any additional control measures needed to comply with the permit requirements: During the inspection taps were being securely fastened on several metal for recycle bins to address CAR #850.

Notes

Use this space for any additional notes or observations from the inspection: Several trees were wind blown next to the flume & MSGP sampler. EX-ID 15X-0827 has been submitted to initiate the process for cutting & clearing the fallen trees.

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: Leonard F. Sandoval Deployed Environmental Professional

Signature: Leonard F. Sandoval **Date:** 12/11/2015

2015 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: ☐Apr-May ☐Jun-July ☐Aug-Sep ☐ Oct-Nov

Outfall ID:	"Substantially Identical Outfall"? ☐ Yes ☐ No	If YES identify other Outfalls in the Group:

Person(s) collecting sample (PRINT): Signature :
PPT Member? ☐ Yes ☐ No

Person(s) examining sample (PRINT): Signature :
PPT Member? ☐ Yes ☐ No

Date & Time Discharge Began:	Date & Time Sample Collected:	Date & Time Sample Examined:

Substitute Sample? ☐ Yes ☐ No	If YES, identify quarter/year when sample was originally scheduled to be collected:

Was the sample collected in the first 30 minutes? ☐ Yes ☐ No If No, explain why not:

Nature of Discharge: ☐ Rainfall. Amount_____inches ☐ Snowmelt. Amount_____inches

Previous Storm Ended > 72 hours Before Start of This Storm? ☐Yes ☐ No	If No, Explain: *

PARAMETERS		
Color	☐ None ☐ Other	If Other describe:
Odor ☐ None ☐ Musty ☐ Sewage ☐ Sulfur ☐ Sour ☐ Solvents ☐Petroleum/Gas ☐ Other		If Other, describe the odor:
Clarity: ☐ Clear ☐ Slightly Cloudy ☐ Cloudy ☐ Opaque ☐ Other (describe):		
Floating Solids: ☐ Yes ☐ No		If YES, describe if raw or waste materials(s):
Settled Solids:** ☐ Yes ☐ No		If YES, are solids Fine ☐ Coarse ☐ If Other describe:
Suspended Solids: ☐ Yes ☐ No		If YES, are solids Fine ☐ Coarse ☐ If Other describe:
Foam (gently shake sample): ☐ Yes☐ No		If YES, on the surface ☐or ☐ in the water. Describe color:
Oil Sheen ☐ Yes ☐ No Color of Sheen:		Thickness: Flecks ☐ Globs ☐ Describe if other:
Other Obvious Indicators of Pollution Present in the sample? Yes☐ No☐		If YES describe:

SITE OBSERVATIONS

Potential pollutants found during visual examination? ☐ Yes ☐ No If Yes, list pollutant(s)and if possible indicate the source: If source is identified during collection of sample, please notify Holly Wheeler @ 667-1312

Pollutant	Source	Pollutant	Source

NOTE: A clean up of the site should be conducted if the pollutant source is known. Was proper Notification made? ☐ Yes ☐ 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☐ No☐ If No, explain why not:

Was a Corrective Action Plan identified within 14 days of the observation? Yes☐ No☐ If No, explain why not:

Other Relevant Information: Yes☐ No☐
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.

Training

2015 MSGP Corrective Actions

Presented by

Terrill Lemke and Holly Wheeler

Environmental Protection Division

Compliance Programs (ENV-CP)

December 01, 2015

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

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.

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

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?

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



Questions?

Requests for Other Topics?

ENV-CP

Training Topic: 2015 MSGP Corrective Action Training
Date: December 1, 2015
Place: TA-59-116-117
Training Called By: Sue Terp, ENV-ES DEP Monthly Meeting
Training Given By: Holly Wheeler and Terrill Lemke, ENV-CP

Name	Z#	Organization	Mail Stop	Phone	Cell	Pager
Stephen Cossey	122057	DSESH-TA55	K571	5-8893	500-6614	4-5791
David Paulson	193689	DSESH-LFO	H418	5-8884	930-7347	—
Sammya Cohn	2916203	ENV-ES		5-8866	231-5385	—
Susan Terp	097044	ENV-ES	~~K478~~ J978	5-8889	—	—
Stephanie Hechmer	104588	DSESH-DO	K481	7-4796	695-0727	
Bill O'Neill	240098	DSESH-UI		412-5705 →		
Pattie Baucom	206967	DSESH-LFO	H418	7-3905		
Lauren Massengill	292621	DSESH-STO		7-2964		
Kari Schoenberg	243198	DSESH-STO		7-1623		
Marc Galleges	172470	DSESH-STO	[redacted]	5-9050	500-7466	—

Name	Z#	Organization	Mail Stop	Phone	Cell	Pager
Kelkenny Bileen	178005	DSESH-WFO	C925	665-9306	699-0498	664-1296
Alethea Barnaby	108243	ENV-CP	K-490	699-5836	699-5836	N/A
[signature]	118432	ENV-CP	K-490	7-1312	N/A	N/A
TERRILL LEMKE	120092	ENV-CP	K490	5-2397	699-0725	N/A
Leonard F. Sandoval	114326	DSESH-UI	P908	667-3567	231-1235	N/A

Endangered Species Documentation

Endangered Species Habitat Within Los Alamos National Laboratory

SANTA FE NATIONAL FOREST

LOS ALAMOS TOWNSITE

PUEBLO de SAN ILDEFONSO

BANDELIER NATIIONAL MONUMENT

BANDELIER NATIONAL MONUMENT

WHITE ROCK

SANTA FE NATIONAL FOREST

TA-43 TA-41 TA-02 TA-21 TA-73 TA-74 TA-61 TA-53 TA-60 TA-59 TA-48 TA-64 TA-03 TA-62 TA-58 TA-69 TA-06 TA-22 TA-08 TA-09 TA-35 TA-05 TA-55 TA-50 TA-52 TA-63 TA-40 TA-66 TA-67 TA-14 TA-46 TA-51 TA-18 TA-16 TA-15 TA-36 TA-11 TA-28 TA-37 TA-54 TA-49 TA-68 TA-71 TA-39 TA-70 TA-33 TA-72 TA-57

Los Alamos Canyon
Two-Mile Canyon
Upper Two-Mile Canyon
Sandia Canyon
Mortandad Canyon
Pajarito Canyon
Bulldog Gulch
Starmers Gulch
Canon de Valle
Three-Mile Canyon
Water Canyon
Potrillo Canyon
Cañada del Buey
Fence Canyon
Indio Canyon
North Ancho Canyon
Ancho Canyon
Chaquehui Canyon
Rio Grande

501 502 4 126

EAST JEMEZ ROAD

PAJARITO ROAD

To Fenton Hill

Fenton Hill (USFS Owned)

Legend

- Structures
- Land ownership
- LANL Boundary
- Technical Areas
- Major roads
- Paved Roads
- Drainages

Mexican Spotted Owl

HABITAT
- Buffer
- Core

Jemez Mountains Salamander

HABITAT
- Buffer
- Core

Southwestern Willow Flycatcher

HABITAT
- Buffer
- Core

Elevation (ft)
- 5,331 - 5,500
- 5,501 - 5,750
- 5,751 - 6,000
- 6,001 - 6,250
- 6,251 - 6,500
- 6,501 - 6,750
- 6,751 - 7,000
- 7,001 - 7,250
- 7,251 - 7,500
- 7,501 - 7,750
- 7,751 - 8,000

Elevations outside LANL boundary are shown in muted colors.

N W E S

0 0.25 0.5 1 Miles

0 0.5 1 2 Kilometers

PROJECTION: New Mexico State Plane Coordinates, Central Zone, North America Datum 1983, Units Feet.

Disclaimer: This map was created as an overview map of endangered species habitat at LANL. All other uses for this map should be confirmed with the Environmental Stewardship Services Group.

Map Produced by OIO-DO-GIS Team
Date: February 21, 2014.
Map Document Reference: X:\Projects\14-Projects\14-0020\14-0020

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

December 9, 2013

Cons. #02ENNM00-2014-I-0014

Geoffrey L. Beausoleil, Acting Manager
National Nuclear Security Administration, Los Alamos Field Office
Department of Energy
Los Alamos, New Mexico 87544

Dear Mr. Beausoleil:

Thank you for your biological assessment entitled, "Biological Assessment of the Effects of Implementing the Jemez Mountains Salamander Site Plan on Federally Listed Threatened and Endangered Species at Los Alamos National Laboratory" (BA); the request for informal consultation and conferencing received on July 25, 2013 and supplemental information supplied in the "Jemez Mountains Salamander (*Plethodon neomexicanus*) Los Alamos National Laboratory (LANL) Site Plan" (Site Plan); and emails dated November 19 and December 3, 2013. The Department of Energy (DOE) requested concurrence with the determination of effects for the endangered Jemez Mountains salamander (*Plethodon* neomexicanus) (salamander) pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. § 1531 *et seq.*). Your proposed action consists of implementing the Site Plan, and includes of the incorporation of this Site Plan into LANL's Habitat Management Plan (HMP). The HMP was consulted upon in 1999 (Consultation #2-22-981-336) as the primary mechanism to ensure compliance with the ESA at LANL. The actions described in the Site Plan and analyzed in the BA, and supplemental emails are hereby incorporated by reference. You determined that implementing the Site Plan "may affect, is not likely to adversely affect" the salamander, and includes placing restrictions on certain types of work in areas identified as core habitat for the salamander on LANL property with the purpose of ensuring that effects to the salamander from those actions identified in the Site Plan are insignificant and discountable.

The Site Plan does not include any areas within designated salamander critical habitat, indicating that no critical habitat will be affected. The Site Plan has modeled and field validated the model to identify the areas on LANL property with the highest potential to be occupied by salamanders based on habitat features for the salamander. Each area identified by the modeling is termed "Area of Environmental Interest" (AEI) and consists of a "core area" and a "buffer area". The core area habitat is defined as suitable habitat where the salamander occurs or may occur at LANL. The core area habitat consists of sections of north-facing slope that contain the required

micro-habitat to support salamanders. The buffer area is 328 feet (100 meters) wide extending outward from the edge of the core area. Only the Los Alamos Canyon AEI is known to be occupied based on surveys. Surveys for the salamander are known to have a very low detection rate for occupied areas and DOE has assumed that all AEIs at LANL are occupied at all times by the salamander.

Within the Site Plan, DOE has assessed activities that could cause habitat alteration and includes any action that alters the soil structure, vegetative components necessary to the species, water quality, or hydrology in undeveloped areas of an AEI. If an activity were to take place outside of the AEI the activity will be assessed if it will have effects inside the AEI core. Within the core areas, only activities specified within the Site Plan and those that have no effect in the core areas (e.g. no habitat alterations or effects within the core areas) will be conducted without further consultation with the Service. Habitat alterations also include soil pits for soil samples deeper than 6 inches (15.2 centimeters) using either hand or mechanized augers. Within the Site Plan, DOE is proposing fuels management practices to reduce wildfire risk and maintenance of utility corridors within the AEIs. The likelihood that salamanders may be affected by the actions in the Site Plan is very low. To ensure that effects to the salamander are insignificant and discountable, the Site Plan incorporates the following conservation measures as restrictions to the identified work:

Fuels Management Practices to Reduce Wildfire Risk

a. Within undeveloped core areas, thinning trees to a level of 80% canopy cover or higher may occur; tree thinning below 80% canopy cover is not part of the action under this consultation.
b. Large logs on the ground will be left in place and not chipped.
c. Large trees that are felled will be left as large logs on the ground
d. When appropriate, smaller trees and understory shrubs that may be thinned will be dispersed and left on-site to aid in soil moisture retention.
e. In buffer areas, thinning of trees may occur to the current LANL-approved prescription level; clear-cutting will not occur.
f. Thinning activities will not occur during the rainy season when salamanders are surface active, between July 1 – October 31. Thinning activities may occur earlier in October if freezing temperatures are present.
g. In the unlikely event that a salamander is observed surface active during thinning activities, all activities shall cease, and the Service will be notified.

Utility Corridors

a. Cutting trees that threaten power lines may occur within 26 feet (8 meters) of either side of an existing utility line at LANL
b. New utility lines and utility lines requiring clearance of a right-of-way greater than 52 feet (16 meters) total in core habitat is not part of the action under this consultation.

Habitat alterations other than the fuels management practices and utility corridor maintenance described above will not occur in undeveloped core areas under the guidelines of the Site Plan or this consultation. The Service concurs with DOE's determination regarding the salamander for the following reasons:

Within the Site Plan, DOE has placed the above detailed restrictions to ensure that any effects to the salamander and its habitat remain insignificant and discountable. Canopy cover will remain at 80% or greater in undeveloped core areas and fire management actions will occur outside of the salamander surface activity period. Maintaining utility line corridors in areas with existing infrastructure (the utility lines) by removing individual hazard trees is not expected to have any measurable effect on salamanders or their potential habitat. Consequently, we concur that potential effects to the salamander from the proposed action will be insignificant and discountable.

This concludes section 7 consultation regarding the proposed action. If monitoring or other information results in modification or the inability to complete all aspects of the proposed action, consultation should be reinitiated. Please contact the Service if: 1) future surveys detect listed, proposed or candidate species in habitats where they have not been previously observed; 2) the proposed action changes or new information reveals effects of the proposal to listed species that have not been considered in this analysis; or 3) a new species is listed or critical habitat designated that may be affected by the action.

Thank you for your concern for endangered and threatened species and New Mexico's wildlife habitats. In future correspondence regarding this project, please refer to consultation #02ENNM00-2014-I-0014. If you have any questions, please contact Michelle Christman of my staff at (505) 761-4715.

Sincerely,

for 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

U.S. Fish & Wildlife Service

MSGP

IPaC Trust Resource Report

Generated July 27, 2015 07:29 PM MDT



US Fish & Wildlife Service

IPaC Trust Resource Report

Project Description

NAME

MSGP

PROJECT CODE

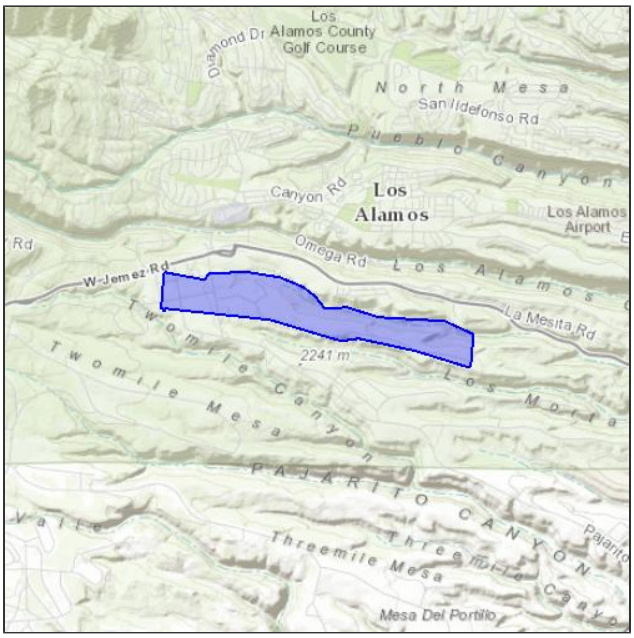
LXATM-TI5EJ-BAJEQ-3NC5E-SOGYTE

LOCATION

Los Alamos County, New Mexico

DESCRIPTION

Facilities that discharge to Sandia Canyon within TA-3 and TA-60. Industrial facilities subject to the MSGP. July, 2015.



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?spcode=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?spcode=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?spcode=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?spcode=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?spcode=A0BX

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 Haliaeetus leucocephalus — **Bird of conservation concern**
Season: Wintering
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008

Bendire's Thrasher Toxostoma bendirei — **Bird of conservation concern**
Season: Breeding

Brewer's Sparrow Spizella breweri — **Bird of conservation concern**
Season: Migrating
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HA

Brown-capped Rosy-finch Leucosticte australis — **Bird of conservation concern**
Season: Wintering

Burrowing Owl Athene cunicularia — **Bird of conservation concern**
Season: Breeding

Cassin's Finch Carpodacus cassinii — **Bird of conservation concern**
Year-round

Flammulated Owl Otus flammeolus — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0DK

Fox Sparrow Passerella iliaca — **Bird of conservation concern**
Season: Wintering

Golden Eagle Aquila chrysaetos — **Bird of conservation concern**
Year-round
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0DV

Grace's Warbler Dendroica graciae — **Bird of conservation concern**
Season: Breeding

Juniper Titmouse Baeolophus ridgwayi — **Bird of conservation concern**
Year-round

Lewis's Woodpecker Melanerpes lewis — **Bird of conservation concern**
Year-round

Loggerhead Shrike Lanius ludovicianus — **Bird of conservation concern**
Year-round
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FY

Mountain Plover Charadrius montanus **Bird of conservation concern**

Season: Breeding

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B078

Olive-sided Flycatcher Contopus cooperi **Bird of conservation concern**

Season: Breeding

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0AN

Peregrine Falcon Falco peregrinus **Bird of conservation concern**

Season: Breeding

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FU

Pinyon Jay Gymnorhinus cyanocephalus **Bird of conservation concern**

Year-round

Prairie Falcon Falco mexicanus **Bird of conservation concern**

Year-round

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0ER

Swainson's Hawk Buteo swainsoni **Bird of conservation concern**

Season: Breeding

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B070

Williamson's Sapsucker Sphyrapicus thyroideus **Bird of conservation concern**

Season: Breeding

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FX

Willow Flycatcher Empidonax traillii **Bird of conservation concern**

Season: Breeding

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=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 tuberficid 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

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Author(s):	Environmental Protection Division Resources Management Team
Intended for:	Reference purposes
Date:	March 2014



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ACRONYMS

AEI	Area of Environmental Interest
BA	biological assessment
Bd	Batrachochytrium dendrobatidis
BSL-3	Biosafety Level 3
COPCs	chemicals of potential concern
DARHT	Dual-Axis Radiographic Hydrodynamic Test (Facility)
dB	Decibel
DDT	(dichloro-diphenyl-trichloroethane)
DOE	U.S. Department of Energy
EPA	Environmental Protection Agency
ESA	Endangered Species Act of 1973
fc	foot candles
FR	Federal Register
GIS	geographic information system
HMP	Threatened and Endangered Species Habitat Management Plan
HVAC	heating, ventilation, and air conditioning
LANL	Los Alamos National Laboratory
NEPA	National Environmental Policy Act
NMED	New Mexico Environment Department
NPDES	National Pollutant Discharge Eliminations System
PCBs	polychlorinated biphenyls
PR-ID	Permits and Requirements Identification
SME	subject matter expert
USFWS	U.S. Fish and Wildlife Service

I. THREATENED AND ENDANGERED SPECIES HABITAT MANAGEMENT PLAN GENERAL OVERVIEW

1.0 INTRODUCTION

Los Alamos National Laboratory's (LANL) Threatened and Endangered Species Habitat Management Plan (HMP) was prepared to fulfill a commitment made in the U.S. Department of Energy's (DOE) "Final Environmental Impact Statement for the Dual-Axis Radiographic Hydrodynamic Test Facility Mitigation Action Plan" (DOE 1996). The HMP received concurrence from the U.S. Fish and Wildlife Service (USFWS) in 1999 (USFWS consultation numbers 2-22-98-I-336 and 2-22-95-I-108). In this 2014 update, we retained the management guidelines from the 1999 HMP for listed species, updated some descriptive information, and added the Jemez Mountains salamander (*Plethodon neomexicanus*), which was federally listed in September 2013 (USFWS consultation number 02ENNM00-2014-I-0014).

2.0 ROLE OF SITE PLANS IN THE HMP

The purpose of the HMP is to provide a management strategy for the protection of threatened and endangered species and their habitats on LANL property. The HMP consists of site plans for federally listed threatened or endangered species with a moderate or high probability of occurring at LANL. The following federally listed threatened or endangered species currently have site plans at LANL: Mexican Spotted Owl (*Strix occidentalis lucida*), Southwestern Willow Flycatcher (*Empidonax trailii extimus*), and the Jemez Mountains salamander. Site plans provide guidance to ensure that LANL operations do not adversely affect threatened or endangered species or their habitats.

3.0 DESCRIPTION OF AREAS OF ENVIRONMENTAL INTEREST

Suitable habitats for federally listed threatened and endangered species have been designated as Areas of Environmental Interest (AEIs). AEIs are geographical units at LANL that are managed for the protection of federally listed species and consist of core habitat areas and buffer areas. The purpose of the core habitat is to protect areas essential for the existence of the specific threatened or endangered species. This includes the appropriate habitat type for breeding, prey availability, and micro-climate conditions. The purpose of buffer areas is to protect core areas from undue disturbance and habitat degradation.

Site plans identify restrictions on activities within the AEIs. Allowable activities are activities that the USFWS has reviewed and provided concurrence that these activities are not likely to adversely affect federally listed species. Activities discussed in site plans include day-to-day activities causing disturbance (hereafter referred to as "disturbance activities"), such as access into an AEI, and long-term impacts, such as habitat alteration.

3.1 Definition and Role of Developed Areas in AEI Management

Summary: Habitat alteration is not restricted in developed areas unless it impacts undeveloped core areas of an AEI (e.g., noise and light impacts on a core area). Current ongoing disturbance activities are not restricted in developed areas. Disturbance activities not currently ongoing are

restricted when impacts occur to undeveloped core areas of an AEI that are occupied by a threatened or endangered species.

Developed areas include all building structures, paved roads, improved gravel roads, paved and unpaved parking lots, and firing sites. The extent of developed areas in each AEI was determined using two methods. First, LANL geographic information system (GIS) analysts placed a 15 m (49 ft) border around all buildings and parking lots. For paved and improved gravel roads, the developed area was defined as the area to a roadside fence, if one exists within 9 m (30 ft) of the road, or 5 m (15 ft) on each side of the road, if there is no fence within 9 m (30 ft). If an area of highly fragmented habitat was enclosed by roads, a security fence, or connected buildings, that area was also classified as developed. Developed areas at firing sites were defined as a circle with a 91-m (300-ft) radius from the most centrally located firing pad. Second, LANL GIS analysts overlaid scanned orthophotos onto a map of the Los Alamos area and digitized all areas that appeared developed. These two information sources were overlaid and combined, so that areas classified as developed by either method were considered developed in final maps and analyses. Some areas were confirmed by ground surveys, such as the firing sites. Developed areas are contained in the HMP GIS database.

Developed areas are located in the core and/or buffer of some AEIs. However, developed areas do not constitute suitable habitat for federally listed species. Current ongoing activities in developed areas constitute a baseline condition for the AEIs and are not restricted. New activities including further development within already existing developed areas are not restricted unless they impact undeveloped portions of an AEI core. For example, if light or noise from a new office building in a developed area were to raise levels in an undeveloped core area, those light and noise levels would be subject to the guidelines on habitat alterations. If a proposed action within a developed area does not meet site plan guidelines, it must be individually reviewed for compliance with the Endangered Species Act of 1973 (ESA).

Building a new structure or clearing land within a previously designated developed area in an AEI core does not add to the size of the developed area. New structures in core areas will not be given any developed-area border unless they are individually reviewed for ESA compliance.

Development occurring in the developed area in an AEI buffer can be given a 15 m (49 ft) developed-area border at the discretion of the project leader or facility manager. To expand the size of a developed area in a buffer based on new developments, please contact a LANL biological resources subject matter expert (SME) (http://int.lanl.gov/environment/bio/controls/index.shtml).

3.2 General Description of Buffer Areas and Allowable Buffer Area Development

Summary: Limited future development is allowed in the currently undeveloped DOE-controlled buffer area under the guidelines of this HMP as long as it does not alter habitat in the undeveloped AEI core (including light and noise guidelines). Development beyond the cap established for each AEI, or greater than 2 ha (5 ac) in size including the developed-area border, requires independent review for ESA compliance.

The purpose of buffer areas is to protect core areas from undue disturbance or habitat degradation. The current levels of development in buffer and core areas represent baseline conditions for this

HMP. No further development is allowed in the core area under the guidelines of this HMP. A limited amount of development is allowed in buffer areas. Under the guidelines of this HMP, individual development projects are limited to 2 ha (5 ac) in size, including a 15 m (49 ft) developed-area border around structures and a 5 m (15 ft) developed-area border around paved and improved gravel roads. Projects greater than 2 ha (5 ac) in area require individual review for ESA compliance (see exceptions for fuels management activities and utility corridor maintenance). New development projects in AEI buffer areas must be reported to LANL biological resources SMEs for tracking (http://int.lanl.gov/environment/bio/controls/index.shtml). Descriptions of each of the AEIs give the total area in each buffer area available for development.

3.3 Emergency Actions

Summary: Contact DOE and LANL biological resources SMEs as soon as possible.

If safety and/or property is immediately threatened by something occurring within an AEI (for example, wildfire, water line breakage, etc.) managers may activate emergency actions. Contact a LANL biological resources SME (http://int.lanl.gov/environment/bio/controls/index.shtml), the Environmental Stewardship Group (1-505-665-8855), or the DOE Los Alamos Field Office (Field Office; 1-505-667-6819) as soon as possible. If the emergency occurs outside of regular business hours, contact the Emergency Management Office (1-505-667-6211). This office will then communicate with the appropriate LANL and DOE Field Office personnel.

4.0 IMPLEMENTATION OF SITE PLANS

4.1 Roles and Responsibilities

Summary: LANL's facility managers and operational staff are responsible for ensuring that activities are reviewed for compliance with all applicable site plans. Figure 1 illustrates the process for utilizing site plans. If activities follow approved guidance, there is no requirement for additional ESA regulatory compliance. However, additional National Environmental Policy Act (NEPA), cultural resources, wetlands, or other regulatory compliance actions may be required.

If an activity or project occurs outside of all LANL AEIs and will not impact habitat within an AEI, it does not have to be reviewed for ESA compliance, unless it is a large project. Projects that are larger than 2 ha (5 ac) or cost more than $5 million require an individual ESA compliance review, even if they are not located within an AEI.

LANL's facility managers are responsible for determining if operations within their geographic and/or programmatic area of responsibility comply with the guidelines in these site plans. Submission of a Permits and Requirements Identification (PR-ID) for a new or modified project is required under Program Description 400 (LANL 2013) and allows managers to identify the requirements within their project area. Deployed environmental professionals and core LANL biological resources SMEs are available to support facility managers. If activities follow site plan guidelines, they do not require any additional ESA regulatory compliance action. However, NEPA, cultural resources, wetlands, or other regulatory compliance actions are not addressed in site plans and additional compliance actions may be required. It is the responsibility of the project leader or facility management staff to ensure that all requirements are satisfied. If you have

questions, contact biological, cultural, NEPA, or other environmental SMEs. Contacts can be found at http://int.lanl.gov/environment/compliance/ier/index.shtml.

A single facility may have one or more AEIs within its boundary and the AEIs may be for different species. Some AEIs overlap. In areas where overlap occurs, project managers must follow the guidelines for AEIs of all involved species.

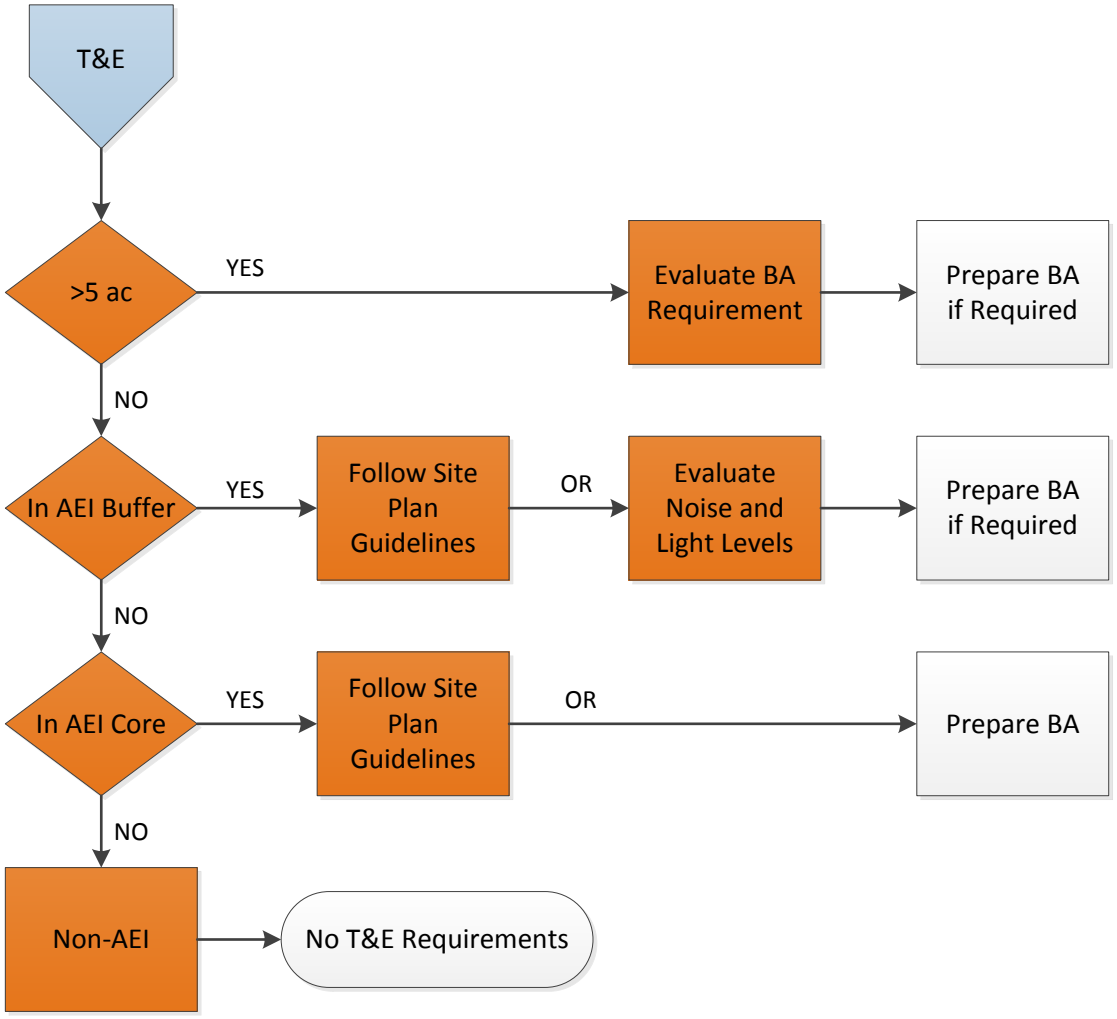

Figure 1. Process flowchart for determining site plan requirements.

4.2 If an Activity Does Not Meet Site Plan Guidelines

Summary: Activities or projects that do not meet all applicable site plan guidelines must be evaluated individually for compliance with the ESA.

If a project reviewer determines that an activity or project cannot meet the guidelines in applicable site plans, LANL biological resources SMEs evaluate that activity individually for compliance with the ESA. Results of the evaluation of potential impacts allow LANL biological resources SMEs to make recommendations to the DOE Field Office Biological Resources Program Manager

regarding the need for USFWS consultation. An evaluation may result in 1) a DOE Field Office determination that there is no possibility of adverse effects and the activity can proceed, 2) a DOE Field Office suggestion for modifications of the action to avoid adverse effects so that it can proceed, or 3) a DOE Field Office decision to prepare a biological assessment (BA) for the activity and submit it to the USFWS for concurrence. Fieldwork and preparation of a BA can take a few months with an additional 2 to 12 months for DOE Field Office review and then final USFWS concurrence.

4.3 Dissemination of Information

Although information about threatened and endangered species is not classified, it is considered sensitive information. It is in the best interest of threatened and endangered species to restrict specific knowledge about their locations. Habitat locations of threatened and endangered species are not considered sensitive.

5.0 CHANGES IN THE HMP SINCE IMPLEMENTION

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 number22420-2006-I-0010).

In 2012, the USFWS concurred with DOE's proposal to modify the habitat boundaries for the Los Alamos Canyon Mexican Spotted Owl AEI due to changes from the fire response activities after the Las Conchas wildfire (USFWS consultation number 02ENNM00-2012-IE-0088).

In 2013, the USFWS concurred with the DOE's new site plan for the Jemez Mountains salamander and its addition to LANL's HMP (USFWS consultation number 02ENNM00-2014-I-0014).

6.0 DATA MANAGEMENT

The data used in the implementation of the HMP is stored in a GIS database at LANL.

II. AREA OF ENVIRONMENTAL INTEREST SITE PLAN FOR THE MEXICAN SPOTTED OWL

1.0 SPECIES DESCRIPTION—MEXICAN SPOTTED OWL

1.1 Status

In 1993, the USFWS determined the Mexican Spotted Owl to be a threatened species under the authority of the ESA, as amended (58 Federal Register [FR] 14248). In 1995, the USFWS released its final recovery plan for the owl (USFWS 1995), which was revised in 2012 (USFWS 2012). The USFWS most recently designated critical habitat for Mexican Spotted Owl in 2004 (69 FR 53181).

1.2 General Biology

The Mexican Spotted Owl is found in northern Arizona, southeastern Utah, and southwestern Colorado south through New Mexico, west Texas, and into Mexico. It is the only subspecies of Spotted Owl recognized in New Mexico (USFWS 1995).

The Mexican Spotted Owl generally inhabits mixed conifer and ponderosa pine (*Pinus ponderosa;* Lawson & C. Lawson) - Gambel oak (*Quercus gambelli;* Nutt.) forests in mountains and canyons. High canopy closure, high stand diversity, multilayered canopy resulting from an uneven-aged stand, large, mature trees, downed logs, snags, and stand decadence as indicated by the presence of mistletoe are characteristic of Mexican Spotted Owl habitat. Some owls have been found in second-growth forests (i.e., younger forests that have been logged); however, these areas were found to contain characteristics typical of old-growth forests. Mexican Spotted Owls in the Jemez Mountains seem to prefer cliff faces in canyons for their nest sites (Johnson and Johnson 1985). The recovery plan for the Mexican Spotted Owl recommends that mixed conifer and pine-oak woodland types on slopes greater than 40 percent be protected for the conservation of this owl.

A mated pair of adult Spotted Owls may use the same home range and general nesting areas throughout their lives. A pair of owls requires approximately 800 ha (1,976 ac) of suitable nesting and foraging habitat to ensure reproductive success. Incubation is carried out by the female. The incubation period is approximately 30 days, and most eggs hatch by the end of May. Most owlets fledge in June, 34 to 36 days after hatching (USFWS 1995). The owlets are "semi-independent" by late August or early September, although juvenile begging calls have been heard as late as September 30. Young are fully independent by early October. The non-breeding season runs from September 1 through February 28. Although seasonal movements vary among owls, most adults remain within their summer home ranges throughout the year.

The diet of Mexican Spotted Owls nesting in canyons consists primarily of woodrats (*Neotoma* spp.) and mice (*Peromyscus* spp.) with lesser amounts of rabbits, birds, reptiles, and arthropods (Willey 2013). The relative abundance of prey types in Mexican Spotted Owl pellets collected at LANL are listed in Table A-1 in the Appendix. Ganey and Balda (1994) found core areas of individuals (i.e., where owls spent 60 percent of their time) averaged 134 ha (331 ac), and core areas for pairs averaged 160 ha (395 ac).

1.3 Threats

The Mexican Spotted Owl was listed as threatened because of destruction and modification of habitat caused by timber harvest and fires, increased predation on owls associated with habitat fragmentation, and a lack of adequate protective regulations.

2.0 IMPACT OF HUMAN ACTIVITIES

2.1 Introduction

The primary threats to Mexican Spotted Owls on DOE property around LANL property are 1) impacts to habitat quality from LANL operations and 2) disturbance of nesting owls. This section provides a review and summary of scientific knowledge of the effects of various types of human activities on the Mexican Spotted Owl and provides an overview of the current levels of activities at LANL.

2.2 Impacts on Habitat Quality

2.2.1 Development

The type of habitat used by Mexican Spotted Owls, late seral stage forests with large trees, are usually not found in large quantities near developed areas or near areas that have had recent agricultural or forest product extraction land uses. Therefore, Mexican Spotted Owls are generally not found near developments. Whether it is the development itself or a lack of suitable habitat that discourages colonization of these areas by Mexican Spotted Owls is unknown.

Areas of LANL vary from remote undeveloped areas to heavily developed and/or industrialized facilities. Most LANL facilities are situated atop mesas, primarily in the northern and western portion of the DOE property. LANL is bounded by developed residential, industrial, and retail areas along its northern boundary (the town of Los Alamos) and by residential and retail development along a portion of its eastern boundary (the town of White Rock). Three major paved roads traverse LANL from northeast to southwest. Sandia, Pajarito, and Los Alamos canyons have paved roads within AEIs, and several AEIs have dirt roads along at least a portion of the canyon bottom. AEIs containing paved or dirt roads in the canyon bottoms have not been occupied at LANL (Hathcock et al. 2010).

2.2.2 Ecological Risk

There is no specific information on the impact of chemicals on the Mexican Spotted Owl, although experience with other raptor species suggests that exposure to polychlorinated biphenyls (PCBs), dichloro-diphenyl-trichloroethane (DDT) and its derivatives, and other organophosphate or organochlorine pesticides would probably be harmful. Exposure to other chemicals could also be harmful (Cain 1988).

LANL completed three ecological risk assessments that included the Mexican Spotted Owl between 1997 and 2009. The ecological risk assessment process involves using computer modeling to assess potential effects to animals from chemicals of potential concern (COPCs) that have been detected in the environment. All of the following ecological risk assessments concluded that, on average, no appreciable impact is expected to Mexican Spotted Owls from COPCs (Gallegos et al. 1997; Gonzales et al. 2004; Gonzales et al. 2009).

2.2.3 Disturbance

2.2.3.1 Pedestrians and Vehicles

Based on work with other raptors, LANL biological resources SMEs assume that Mexican Spotted Owls would likely be disturbed by the approach of either pedestrians or vehicles. At an equal distance, pedestrians are frequently more disturbing to raptors than vehicles (Grubb and King 1991). Brown and Stevens (1997) reported that during surveys in Grand Canyon National Park, 22 times more Bald Eagles were found in canyon reaches with low human recreational use compared to reaches with moderate to high human recreational use. Human activity 100 m (328 ft) from Bald Eagle nests in Alaska caused clear and consistent changes in behavior of breeding eagles (Steidl and Anthony 2000).

Swarthout and Steidl (2001) found that both juvenile and adult roosting Mexican Spotted Owls were unlikely to alter their behavior in the presence of a single hiker at distances greater than 55 m (180 ft). Swarthout and Steidl (2003) concluded that cumulative effects of high levels of short-duration recreational hiking near Mexican Spotted Owl nests may be detrimental.

Many canyon bottoms and mesa tops at LANL have dirt roads traversing them. Most of these roads are gated. However, these roads are accessible to LANL employees and some of them are accessible to the public on foot or by bike. LANL biological resources SMEs have found that AEIs are occupied less often if there is recreational access into a canyon (Hathcock et al. 2010).

2.2.3.2 Aircraft

Ground-based disturbances appear to impact raptor reproductive success more than aerial disturbances (Grubb and King 1991). Grubb and Bowerman (1997) concluded that an exclusion of aircraft within 600 m (1,968 ft) of Bald Eagle nest sites would limit Bald Eagle response frequency to 19 percent.

Delaney et al. (1999) found for Mexican Spotted Owls that chainsaws consistently elicited higher response rates than helicopters at similar distances. Owl flush rates did not differ between nesting and non-nesting seasons. No owls flushed when noise stimuli (helicopter or chainsaws) were at distances greater than 105 m (344 ft). Distance was generally a better predictor of owl response to helicopter overflights than sound level.

LANL is restricted airspace, and planes infrequently fly less than 609 m (2,000 ft) above ground level. The County of Los Alamos operates an airport along the northern edge of LANL. The airport is located on the southern rim of Pueblo Canyon. Most flights approach and depart to the east of the airport, over the Rio Grande.

2.2.3.3 Explosives

There is no specific information on the reaction of Mexican Spotted Owls to explosives detonation currently available. Explosive blasts set off 120 to 140 m (393 to 459 ft) from active Prairie Falcon (*Falco mexicanus*) nests caused perched Prairie Falcons to flush from perches 79 percent of the time, and, in 26 percent of the cases, caused incubating Prairie Falcons to flush from nests. Measured sound levels at aerie entrances during blasts ranged from 129 to 141 decibel (dB) (Holthuijzen et al. 1990). Explosives blasting for dam construction 560 to 1,000 m (1,837 to 3,280 ft) from active Prairie Falcon nests caused a change in behavior 26 percent of the time, and

birds flushed in 17 percent of all cases. No incubating birds flushed (Holthuijzen et al. 1990). Brown et al. (1999) found little activity change in roosting or nesting Bald Eagles and no population-level impacts from weapons detonations at the Aberdeen Proving Ground. Holthuijzen et al. (1990) found that a 167-g (5.89-oz) charge of Kinestik produced noise levels between 138 and 141 dB at 100 m (328 ft), and that a 500-g (17.6-oz) charge of TNT produced noise levels between 144 and 146 dB at 100 m (328 ft). A 20-kg (44-lb) charge of TNT produced noise levels that measured 163 dB at 100 m (328 ft) (Paakkonen 1991).

Measurements of noise levels during explosives testing were conducted at three locations at LANL using quantities of high explosives ranging from 4.5 to 67.5 kg (10 to 148 lb) of TNT during six shots. Noise levels increased during the test from a background level of 31 dB(A)[1] to a range between 64 and 71 dB(A) during shots at a distance of 1.8 km (1.1 mi). At a distance of 4.3 km (2.67 mi), noise levels rose from a background range of 35 to 64 dB(A) to a range of 60 to 63 dB(A) (Vigil 1995). At a distance of 6.7 km (4.16 mi), noise levels rose from a background range of 38 to 51 dB(A) to a range of 60 to 71 dB(A) (Burns 1995). LANL biological resources SMEs estimated that the noise from a shot at the Dual-Axis Radiographic Hydrodynamic Test (DARHT) Facility would be 150 dB(A) at the source and 80 dB(A) at 400 m (1,312 ft) (Keller and Risberg 1995). LANL biological resources SMEs found that Mexican Spotted Owl AEIs located within the explosives testing buffer area were occupied more frequently than AEIs in other locations (Hathcock et al. 2010). This is likely due to the strict access control in explosives areas which limit human activity and development in the canyon bottoms.

2.2.3.4 Other Sources of Noise

Major noise-producing activities at LANL include automobile and truck traffic and noise associated with office buildings, construction activities, a live-fire range, and explosives testing. Also, there is noise associated with aircraft traffic at the Los Alamos County airport. Construction and maintenance activities involved with operations at LANL are fairly common. In addition, implementation of the 2005 Compliance Order on Consent (NMED 2005) issued by the New Mexico Environmental Department (NMED) has resulted in an increased frequency of drilling groundwater monitoring wells in protected habitat at LANL. Also, forest fuels management operations use chainsaws, chippers, and other noise-generating equipment. The 2010 National Pollutant Discharge Elimination System (NPDES) Individual Permit (EPA 2010) issued by the Environmental Protection Agency (EPA) requires sediment control features such as berms and small rock check dams to be installed at various sites with stormwater runoff; these are sometimes installed in protected habitat. LANL biological resources SMEs conducted a study of noise levels in canyons and found that the primary sources of noise exceeding 55 dB(A) were cars and trucks. Readings taken near flowing water were up to 11 dB(A) higher than readings taken elsewhere. The average dB(A) in canyons near paved roads ranged from 41 to 62, with maximum values ranging from 62 to 74. Away from paved roads 1.6 km (1 mi) or more, average dB(A) in canyons ranged from 37 to 50, with all but one average below 45. Maximum dB(A) away from paved roads ranged from 38 to 76 [76 dB(A) was measured during a thunder clap] (Huchton et al. 1997).

[1] Sound can be measured as decibels (dB), C-weighted dB [dB(C)], or A-weighted dB [dB(A)]. The dB(A) measurement best resembles the response of the human ear by filtering out lower and higher frequency sound not normally heard by the human ear.

Noise measurements were conducted by LANL biological resources SMEs at the Los Alamos County airport and in Bayo and Pueblo canyons, including the Los Alamos County Sewage Treatment Facility, in December 1997. Sound levels near the airport runway during the maximum use time (6:30 to 7:30 am) had background values averaging 54 dB(A). Noise during plane arrivals ranged from 47 to 63 dB(A). No measurements were collected during plane take-off. Sound measurements conducted in the bottoms of Pueblo and Bayo canyons ranged from 37 to 40 dB(A) in most areas of the canyon. At the sewage treatment facility parking lot during a working day, the average dB(A) during a three-minute period was 46 (range 45 to 49). At the intersection of the road going into Pueblo Canyon with State Road 502, the average dB(A) during a three-minute period was 60 (range 41 to 70).

LANL biological resources SMEs conducted sound measurements at successive distances from an industrial area near a canyon rim, into the canyon, and to the opposite rim, using a C-weighted decibel scale (Keller and Foxx 1997). Measurements of noise levels using the C-weighted decibel scale are greater than if measured using A-weighted decibels. The average background noise on the mesa was 65.8 dB(C) [with a range of 43–81 dB(C)]. The average background noise in the canyon bottom was 62.3 dB(C) [with a range of 54–78 dB(C)]. The average background noise at the bottom of the north-facing slope was 53.8 dB(C) [with a range of 48–64 dB(C)]. Measurements were taken mid-day.

LANL biological resources SMEs measured sound levels from various pieces of construction equipment used at project sites at LANL over 5-minute intervals at distances of 6 to 31 m (20 to 100 ft) (Knight and Vrooman 1999). Average values ranged from 58.5 dB(A) to 80.9 dB(A). Peak values ranged from 75.7 to 155.4 dB(A). Additional data were collected by other LANL operators on specific pieces of construction equipment and on the Security Computer Complex construction site fence perimeter at Technical Area 3 before and during construction (Knight and Vrooman 1999). The average noise levels before construction began was 56.6 dB(A), and the average during construction was 82.1 dB(A).

LANL biological resources SMEs conducted a series of sound measurements at LANL to investigate background noise levels around AEIs (Vrooman et al. 2000). Background noise levels were significantly higher in daytime than in nighttime. AEIs with greater than 10 percent developed area in their buffers had significantly higher levels of background noise than undeveloped AEIs. Mean background sound levels were 51.3 dB(A) in developed AEIs and 39.6 dB(A) in undeveloped AEIs. The LANL biological resources project review process uses the individual AEI background measurements from Vrooman et al. (2000) to screen project activities for increases more than 6 dB(A) above background.

LANL biological resources SMEs took sound level measurements of heavy equipment use associated with concrete recycling on Sigma Mesa at LANL in 2004 (Hansen 2004). At this location, background noise levels at two different locations were 55.2 and 58.8 dB(A). Operation of a dump truck hauling and dumping concrete increased noise levels above background by a mean of 22.7 dB(A) at 30 m (98 ft) and 2.4 dB(A) at 80 m (262 ft). Additional sound level measurements were taken in the same general area on Sigma Mesa in 2005 as part of a BA for the operation of an asphalt batch plant (Hansen 2005). Measurements were taken on the north rim of Mortandad Canyon (south of the asphalt batch plant at distances of approximately 30 to 122 m (100 to 400 ft), at the bottom of Mortandad Canyon, approximately 183 to 244 m (600 to 800 ft) from the asphalt

batch plant, and on the south rim of Mortandad Canyon approximately 305 m (1,000 ft) from the asphalt batch plant. Background noise levels at the various locations ranged from 41.1 to 48.7 dB(A). The only locations with increases greater than 3 dB(A) during operation of the asphalt batch plant were the locations on the north rim of Mortandad Canyon, within 122 m (400 ft) of the asphalt batch plant. Noise from the operation of the asphalt batch plant was not detected in the bottom of Mortandad Canyon or on the south rim.

LANL biological resources SMEs took sound level measurements around the LANL Biosafety Level 3 (BSL-3) Laboratory with the heating, ventilation, and air conditioning (HVAC) system on and with it off (Hansen 2009). The area to the north of the BSL-3 is developed, the area to the south is not. Background noise levels north of the facility ranged from 53.6 to 57.6 dB(A). Background noise levels south of the facility ranged from 41.6 to 49.7 dB(A). Noise from the HVAC system was detected at 25 m (82 ft) from the facility on both sides, but was not detected at 81 m (266 ft) on the north side, or at 107 m (351 ft) on the south side.

Overall, these studies appear to show that areas adjacent to or within developed areas or paved roads are likely to have daytime average background noise levels between 45 and 63 dB(A). Less disturbed areas are likely to have average background noise levels between 37 and 50 dB(A).

2.2.3.5 Artificially Produced Light

There is no information available on the effects of artificially produced light on Mexican Spotted Owls. Under the Los Alamos County Code, commercial site development plans are reviewed to ensure that lighting serves the intended use of the site while minimizing adverse impacts to adjacent residential property (Section 16-276). Section 16-276 of the County Code includes light source measurement limitations by zoning district. The code allows off-site light to be 0.5 foot candles (fc) in residential areas. By comparison, full moonlight measures 0.1 fc, and a crescent moon was measured at 0.01 fc. Table A-2 in the Appendix presents preliminary light measurements in fc.

Preliminary surveys were conducted for light levels within Los Alamos Canyon at the Omega Reactor (Keller and Foxx 1997). The Omega Reactor was brightly lit for purposes of security; therefore, total light intensity was greater than the average street lighting. Measurements were conducted at a light pole with an open parking lot at the reactor as the source. Trees did not obscure the area. Using the relationship of light intensity reducing as a square of the distance, calculations using the field data indicated that at 30 m (98 ft) from the source the light levels would be equivalent or nearly equivalent to full moonlight.

3.0 AEI GENERAL DESCRIPTION FOR MEXICAN SPOTTED OWL

An AEI consists of two areas—a core and a buffer. The core of the habitat is defined as suitable canyon habitat from rim to rim and 100 m (328 ft) out from the top of the canyon rim. The buffer area is 400 m (1,312 ft) wide extending outward from the edge of the core area. Although adult Mexican Spotted Owls may be found within their home range anytime throughout the year, the primary threat from disturbance to the owls is during the breeding season when owl pairs are tied to their nest sites. Therefore, management of disturbance in Mexican Spotted Owl AEIs is concentrated on the breeding season.

3.1 Method for Identifying a Mexican Spotted Owl AEI

The original location of each Mexican Spotted Owl AEI was identified using a habitat model developed by Johnson (1998) that classified nesting and roosting habitat for Mexican Spotted Owls using topographic characteristics and vegetative diversity. LANL biological resources SMEs compared the results from the Johnson (1998) model to a different model identifying slopes >40 percent in mixed conifer and ponderosa pine cover types at LANL. Areas identified from the Johnson (1998) model application to LANL that were over five contiguous 30 × 30 m (97 × 98 ft) pixels in size, were above 1,980 m (6,496 ft) in elevation, and that had mixed conifer or ponderosa pine forest cover, were considered suitable Mexican Spotted Owl habitat. Where suitable habitat was identified, AEI core area boundaries were established to include the canyons and 100 m (328 ft) outward from the canyon rims.

A new Mexican Spotted Owl habitat model was developed and refined for application on LANL following the Cerro Grande wildfire (Hathcock and Haarmann 2008). This model incorporated finer-scale vegetation characteristics into the Mexican Spotted Owl habitat quality assessment. This model was used to redelineate the boundaries of the Mexican Spotted Owl AEIs at LANL in 2005 following wildfire, drought, and a regional bark beetle outbreak (USFWS consultation number 22420-2006-I-0010).

The new core boundaries were delineated with an area approximately 0.4 km (0.25 mi) from the edge of the nearest suitable habitat, up and down canyon. Core boundaries were established along readily recognizable geologic features or anthropogenic features in the terrain wherever possible to facilitate the ease of identification of core boundaries when in the field.

3.2 Location and Number of Mexican Spotted Owl AEIs

There are currently five Mexican Spotted Owl AEIs on LANL, each encompassing one or more canyons. In general, the AEI cores are centered in canyons on the western side of LANL. The canyons with AEIs are Cañon de Valle, Water, Pajarito, Los Alamos, Sandia, Mortandad, and Three-Mile. AEI boundaries are maintained in the LANL biological resources program GIS database.

4.0 AEI MANAGEMENT

4.1 Overview

This AEI management section provides guidelines for LANL operations to reduce or eliminate the threats to Mexican Spotted Owls from 1) habitat alterations that reduce habitat quality and 2) disturbance of breeding or potentially breeding owls. Habitat alterations are considered for all AEIs and for both core and buffer areas. Disturbance activities to owls are considered only for occupied AEIs and only for impacts on core areas. Developed areas (see Part I, Section 3.1) that have ongoing baseline levels of activities and are not suitable habitat for Mexican Spotted Owls have different restrictions than undeveloped core or buffer areas. Therefore, the location of the disturbance activity within the AEI, the occupancy status of the AEI, and the type of activity all affect whether or not the activity is allowable. AEIs for different species may overlap, and an activity must meet the guidelines of all applicable site plans to be allowable.

4.2 Definition and Role of Occupancy in AEI Management

Summary: The occupancy status of an AEI affects what disturbance activities are allowable in different areas (core, buffer, developed) of the AEI. All Mexican Spotted Owl AEIs are considered occupied during March 1 through August 31 or until surveys show the AEI to be unoccupied. See the Activity Table (Table 1, Section 4.5.2) for restrictions on occupied undeveloped core and buffer areas, and Part I, Section 3.1 for restrictions on developed areas.

Occupancy simply refers to whether or not an AEI is occupied during a species' period of sensitivity. For Mexican Spotted Owls, LANL is primarily concerned with protecting the owls from disturbance during the breeding season. Because individuals may colonize suitable habitat, all Mexican Spotted Owl AEIs are treated as though they are occupied from March 1 through August 31 or until surveys show an AEI to be unoccupied. Mexican Spotted Owl surveys are conducted from late March through June. In general, surveys in areas with ongoing or proposed projects are completed by May 15. If a nest is located during surveys, then the AEI can be treated as unoccupied except for the area within a 400 m (1,312 ft) radius of the nest site. Because owls are not as sensitive to disturbance during the non-breeding season, Mexican Spotted Owl AEIs are treated as unoccupied from September 1 to February 28.

The occupancy status of an AEI affects what activities are allowable in the AEI. Although activities causing habitat alterations are restricted in all AEIs, disturbance activities are restricted only in occupied AEIs. The Activity Table (Table 1, Section 4.5.2) provides dates and levels of allowable disturbance activities within occupied Mexican Spotted Owl AEIs under the guidelines of this site plan. Contact a LANL biological resources SME to find out the current occupancy status of an AEI (http://int.lanl.gov/environment/bio/controls/index.shtml).

4.3 Introduction to AEI Management Guidelines

Summary: The habitat alterations section and the activities section give the guidelines for habitat alteration and disturbance activities, respectively, for Mexican Spotted Owl AEIs. The flow chart (see Figure 1) provides a quick reference to determine what, if any, guidelines need to be consulted for a specific activity. Protective measures give management practices that should be applied when working or considering work in AEIs. LANL biological resources SMEs are available to answer questions and provide advice (http://int.lanl.gov/environment/bio/controls/index.shtml).

Sections 4.4 and 4.5 provide the guidelines for habitat alterations and allowable activities in AEI core and buffer areas. Section 4.4 describes what and where habitat alterations are allowed under the guidelines of this site plan. Section 4.5 describes what, when, and where disturbance activities are allowed in occupied AEIs under the guidelines of this site plan. If an activity does not meet the restrictions given in the guidelines, the activity must be individually reviewed for ESA compliance. This site plan only provides guidelines for Mexican Spotted Owl AEIs. If an activity is desired in an area with overlapping AEIs, all applicable site plans must be consulted. AEI maps show the location of all AEIs in an area. Section 4.6 describes management practices that should be applied when working or considering work in an AEI. LANL biological resources SMEs are available to answer questions and provide advice (http://int.lanl.gov/environment/bio/controls/index.shtml).

4.4 Definition of and Restrictions on Habitat Alterations

4.4.1 Definition of Habitat Alterations

Habitat alteration includes any action that alters the soil structure, vegetative components necessary to the species, prey quality and quantity, water quality, hydrology, or noise or light levels in undeveloped areas of an AEI. Long-term means the alteration lasts for more than one year. For physical disturbances, in general, any activity that can be accomplished by one person with a hand tool is generally not considered habitat alteration; any activity that requires mechanized equipment on a landscape is habitat alteration. An actual activity may take place outside of the AEI and will be considered habitat alteration if consequences of the activity have effects inside the AEI core.

The habitat components most important to Mexican Spotted Owls include vegetative structure, food quality and quantity, and disturbance levels, including noise and light. The forest structure within a canyon designated as a Mexican Spotted Owl AEI is important because it provides roost sites and a suitable habitat for nesting and foraging. Trees along the canyon rim are used for foraging and territorial calling, and they shelter the canyon interior from light and noise disturbances.

A long-term change in light or noise levels within the undeveloped core of an AEI is considered to be a habitat alteration if it increases average noise levels by $\geq$6 dB(A) during any portion of the 24-hour day, or it increases average light levels by $\geq$0.05 fc at night. Changes in noise and light levels are measured at the core area boundary if the source is outside the core area, or at 10 m (33 ft) from the source if the source is inside the undeveloped core area. Impacts of changes in developed areas on undeveloped cores are measured at the developed area boundary if it is within the core, or at the core area boundary if the developed area is outside of the core.

4.4.2 Fuels Management Practices to Reduce Wildfire Risk

The recovery plan for the Mexican Spotted Owl lists stand-replacing wildfires as a primary threat to their habitat and encourages land managers to reduce fuel levels and abate fire risks in ways compatible with owl presence on the landscape (USFWS 1995). Within undeveloped core areas, on slopes >40 percent, in the bottoms of steep canyons, and within 30 m (100 ft) of a canyon rim, thinning of trees <22 cm (9 in) diameter at breast height, treatment of fuels, and prescribed and natural prescribed fires are allowed. Exceptions allowing trees >22 cm (9 in) to be thinned within 30 m (100 ft) of buildings are granted to protect facilities. Large logs (>30 cm [11.8 in] midpoint diameter) and snags should be retained. Thinning within core areas not meeting the characteristics listed above, and in buffer areas, may include trees of any size to achieve 8 m (25 ft) spacing between tree crowns. However, clear cutting is not allowed in undeveloped core areas.

For health and safety reasons, any trees within 30 m (100 ft) of buildings, but outside a developed area, may be thinned to achieve 8 m (25 ft) spacing between crowns. Habitat alterations including thinning are not restricted in developed areas. However, LANL biological resources SMEs encourage the retention of trees and snags along canyon rims if the rim is in a developed area. Because of the extreme fire danger associated with firing sites and the potential impact of a fire on Mexican Spotted Owl habitat, firing sites and burn areas are treated separately for the purposes of fuels management. Trees within 380 m (1,246 ft) of firing sites and burn areas in both core and

buffer areas may be thinned to a 15 m (49 ft) spacing between trees everywhere except on slopes >40 percent or in the bottoms of steep canyons. Any tree over 22 cm (9 in) diameter at breast height within 380 m (1,246 ft) of a firing site may be delimbed to a height of 2 m (6 ft) to help prevent crown fires.

In historically occupied core areas, fuels treatment may not exceed 10 percent of the undeveloped core area and is not allowed within 400 m (1,312 ft) of nesting areas. In occupied core areas, forest management activities must take place during the nonbreeding season (September 1 to February 28) (USFWS 1995). Fuels management activities that are allowable in core areas have to be reported to LANL biological resources SMEs for tracking.

4.4.3 Utility Corridors

Habitat alterations such as cutting down trees that threaten power lines are allowed within 8 m (26 ft) of either side of an existing utility line in all areas of an AEI (Trujillo and Racinez 1995). New utility lines and utility lines requiring clearance of a right-of-way greater than 16 m (52 ft) total must be individually reviewed for ESA compliance. Disturbance activities must follow the guidelines given in the Activities Table (Table 1, Section 4.5.2) for occupied AEIs.

4.4.4 Restrictions on Habitat Alterations

Summary: Habitat alterations other than fuels management practices and utility corridor maintenance are not allowed in undeveloped core areas. Habitat alterations in buffer areas are restricted to 2 ha (5 ac) per project, with a maximum cap on development in the buffer for each AEI. Habitat alterations other than fuels management and utility corridor maintenance must be reported to LANL biological resources SMEs for tracking (http://int.lanl.gov/environment/bio/controls/index.shtml).

Habitat alterations other than the fuels management practices and utility corridor maintenance described above are not allowed in undeveloped core areas under the guidelines of this site plan. If a project or activity is planned that would alter habitat in an undeveloped core area, it must be individually evaluated for ESA compliance. Habitat alterations in undeveloped buffer areas other than the fuels management activities and utility corridor maintenance described above are restricted to 2 ha (5 ac) in area per project and are subject to other restrictions including light and noise effects in the core (see Section 2.2.3). Projects in the buffer over 2 ha (5 ac) in size will require individual ESA compliance review.

Habitat alterations in a buffer area other than the fuels management and utility corridor maintenance described above must be reported to LANL's biological resources SMEs for tracking (http://int.lanl.gov/environment/bio/controls/index.shtml). There is a cumulative maximum area that can be developed in each AEI's buffer. Once that cumulative area is reached, all habitat alterations in a buffer will require individual ESA reviews for compliance.

4.5 Definition of and Restrictions on Disturbance Activities

4.5.1 Definitions of Disturbance Activities

LANL biological resources SMEs considered six categories of activities that might cause disturbance in an AEI. Most of the categories were first identified in the document "Peregrine

Falcon Habitat Management in the National Forests of New Mexico," prepared for the United States Forest Service (Johnson 1994). LANL biological resources SMEs added explosives detonation, other light production, and other noise production to provide the most comprehensive list of activities possible, thereby reducing the need for individual review of activities for ESA compliance. The categories of activities are people, vehicles, aircraft, other light production, other noise production, and explosives detonation. LANL biological resources SMEs have defined low, medium, and high levels of impact for these activities except for explosives detonation. Activity levels for explosives detonation have been designed to follow the guidelines agreed upon by LANL, DOE, and USFWS in the DARHT BA (Keller and Risberg 1995). Restrictions on explosives detonation are described in the definition of the activity, but are not included in the Activity Table (Table 1, Section 4.5.2). These six categories of activities are restricted only in AEIs that are classified as occupied.

People—includes any entry of people into an AEI on foot.

- Low impact is the presence of three or fewer people per project and duration of one day or less during a breeding season.
- Medium impact is the exceedance of either the number of people or the duration criteria.
- High impact is the exceedance of both the number of people and the duration criteria.

Vehicles—includes the entry of any two-axle highway vehicle, all-terrain vehicle, or motorized machinery into an AEI by any route other than a paved road or an improved gravel road.

- Low impact is the presence of two or fewer vehicles per project and duration of one day or less during a breeding season.
- Medium impact is the exceedance of either the number of vehicles or the duration criteria.
- High impact is the exceedance of both the number of vehicles and the duration criteria.

Aircraft—includes the operation of any aircraft below an elevation of 600 m (2,000 ft) above the highest ground level in the local vicinity.

- Low impact is the presence of one single-engine airplane and the duration of one day or less during a breeding season.
- Medium impact is the exceedance of either the number of aircraft or the duration criteria.
- High impact is the exceedance of both the number of aircraft and the duration criteria.

Any use of helicopters, jet airplanes, and propeller airplanes with two or more engines is classified as medium impact or above, depending on duration.

Other Light Production—includes any activity not previously listed that causes additional light to occur in an AEI core area. For example, plans for construction of a new building at the edge of a developed area may call for lighting at night to facilitate nighttime work that impacts an undeveloped core area.

- Low impact is the increase of light intensity by ≤0.05 fc and a duration of one night or less per project per breeding season.
- Medium impact is the exceedance of either the intensity or duration criteria.
- High impact is the exceedance of both the intensity and duration criteria.

Measurements for increases in light are taken at the AEI core area boundary closest to the light source if the source is outside the core and at 10 m (33 ft) from the source if the source is inside the core. Light measurements for developed areas are taken at the edge of the developed area if the developed area is within an AEI core or at the closest core boundary if the developed area is outside of an AEI core.

Other Noise Production—includes any activity not previously listed except for explosives detonation that causes additional noise to occur in an AEI. For example, operation of machinery creates noise.

- Low impact is increasing noise levels in an AEI core by 6 dB(A) or less for one day or less per project per breeding season.
- Medium impact is the exceedance of either the level or the duration criteria.
- High impact is the exceedance of both the level and the duration criteria.

Measurements for increases in noise are taken at the AEI core boundary closest to the noise source if the source is outside the core and at 10 m (33 ft) from the source if the source is inside the core. Noise measurements for developed areas are taken at the edge of the developed area if the developed area is within an AEI core or at the closest core boundary if the developed area is outside of an AEI core.

Explosives Detonation—includes the use of high explosives for any purpose. LANL biological resources SMEs did not define low, medium, and high levels of this activity because of the difficulty of determining levels for a shot before actually doing the shot. For the purpose of explosives detonation near Mexican Spotted Owl AEIs, occupied habitat is defined as the area within 400 m (1,312 ft) of the current year's nest/roost sites or the previous year's nest site if a current site has not been identified. No explosives detonation will take place within 400 m (1,312 ft) of nest/roost sites in occupied habitat between March 1 and August 31. Explosives detonation at night at sites within 400 to 800 m (1,312 to 2,624 ft) of a nest site in occupied habitat is restricted to once a month from March 1 and August 31.There are no restrictions on daytime explosives testing between 400 and 800 m (1,312 to 2,624 ft). There are no restrictions between September 1 and February 28 or in unoccupied habitat. Explosives detonation adjacent to AEIs that have not previously been recorded by LANL as occupied will have no restrictions unless surveys detect Mexican Spotted Owls. Explosives tests not allowed under the guidelines of this site plan must be individually reviewed for ESA compliance.

4.5.2 Activity Table

The dates shown in the Activity Table (Table 1) are the dates between which the activity in the row is restricted under the guidelines of this site plan. All AEIs are considered occupied from March 1 to August 31 or until surveys show an AEI to be unoccupied. If owls are detected, AEIs

are considered occupied until August 31 within 400 m (1,312 ft) of the nest site. Consult with LANL biological resources SMEs to find out occupancy status of AEIs and what locations are within 400 m (1,312 ft) of nest sites (http://int.lanl.gov/environment/bio/controls/index.shtml).

Table 1. Restrictions on Activities in Undeveloped Occupied Mexican Spotted Owl AEIs

		Core	Buffer
People			
	Low	No Restrictions*	No Restrictions
	Medium	March 1 to August 31	No Restrictions
	High	March 1 to August 31	No Restrictions
Vehicles			
	Low	No Restrictions	No Restrictions
	Medium	March 1 to August 31	No Restrictions
	High	March 1 to August 31	No Restrictions
Aircraft			
	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
Other Light Production			
	Low	March 1 to August 31	No Restrictions**
	Medium	March 1 to August 31	No Restrictions**
	High	March 1 to August 31	No Restrictions**
Other Noise Production			
	Low	March 1 to August 31	No Restrictions**
	Medium	March 1 to August 31	No Restrictions**
	High	March 1 to August 31	No Restrictions**
Explosives Detonation (see text in Section 4.5.1)			

*Entry is restricted in core areas that are occupied within 400 m (1,312 ft) of the nest site from March 1 to August 31. If the current nest has not been located, entry is restricted within 400 m (1,312 ft) of the previous year's nest site.

**Noise or light production in the buffer is restricted if the activity would violate core area restrictions on noise or light.

4.6 Protective Measures

Summary: This section provides a list of management practices to apply in Mexican Spotted Owl AEIs.

- Timing of projects must take into account that projects in core areas or projects that violate restrictions for occupied buffer areas must stop on February 28 each year until occupancy status of the AEI is determined.
- Every reasonable effort should be made to reduce the noise from explosives testing within 800 m (2,624 ft) of occupied habitat. Methods to reduce noise could include contained shots, noise shields in the direction of AEI cores, etc. For night shots, every reasonable effort should be made to limit the amount of light directed into AEI core areas.

- Put signs on dirt roads and trails leading into AEIs labeling them as restricted access areas and providing a number to contact for access restrictions.
- Keep disturbance and noise to a minimum.
- Avoid unnecessary disturbance to vegetation (e.g., excessive parking areas or equipment storage areas, off-road travel, materials storage areas, crossing of streams or washes).
- Avoid removal of vegetation along drainage systems and stream channels.
- Avoid all vegetation removals not absolutely necessary.
- Appropriate erosion and runoff controls should be employed to reduce soil loss. The controls must be put in place and periodically checked throughout the life of projects.
- All exposed soils must be revegetated as soon as feasible after construction to minimize erosion.
- In the Los Alamos Canyon AEI, development should be focused away from undeveloped areas on the western end of the AEI.

5.0 LEVELS OF DEVELOPMENT IN AEI CORE AND BUFFERS

5.1 Allowable Habitat Alteration in the Buffer Areas

The following quantifications of development and guidance for allowable habitat alteration in buffer areas were published and consulted on in the 1999 version of the HMP. Most AEIs changed in dimensions during the 2005 redelination of the habitats, and many have experienced additional development. Development in buffer habitat was not addressed during the 2005 consultation. Many projects were reviewed and received USFWS concurrence between 1999 and 2014.

LANL biological resources SMEs have provided the current development status for each of the AEIs at the end of each paragraph. The percent developed numbers were derived with the original size of the AEIs.

Cañon de Valle—In 1999, 16.3 ha (40.3 ac, 2.9 percent) of the core was developed and 52.2 ha (129 ac, 6.8 percent) of the DOE-controlled buffer was developed. For this AEI, it was recommended that only an additional 25.30 ha (62.5 ac) of the AEI buffer be developed. The 1999 HMP stated that once this cap is reached or a large-scale project is proposed, additional consultation with USFWS would be required. By 2011, 28 ha (69.2 ac) of the core and 84 ha (207.5 ac) of the buffer had been developed.

Pajarito—In 1999, there were 6.7 ha (16.5 ac, 5.5 percent) of the core developed and 75.1 ha (186.5 ac, 16.7percent) developed in the buffer. LANL biological resources SMEs recommended only an additional 35 ha (86.4 ac) of the buffer be developed before additional USFWS consultations take place. The 1999 HMP stated that once the cap is reached or a single large-scale project is proposed, additional consultation would be required. By 2011, 27 ha (66.7 ac) of the core and 89 ha (220 ac) of the buffer had been developed.

Los Alamos—In 1999, there were 77.16 ha (190 ac) of the core developed and 167.2 ha (413.1 ac) developed in the buffer. For this AEI, LANL biological resources SMEs recommended only an

additional 28.6 ha (70.6 ac, 5.9 percent) of the DOE-owned buffer be developed before additional USFWS consultations take place.

Because this AEI is so heavily developed, additional development was restricted to a few selected areas within the buffer. Development outside of these areas requires individual review for ESA compliance. A large percentage of this AEI was removed in the 2005 and 2013 BAs. By 2011, 94 ha (232.2 ac) of the core and 181 ha (447.3 ac) of the buffer had been developed.

Sandia-Mortandad—In 1999, 98.4 ha (243.2 ac) of this AEI on DOE lands were developed, including 29 ha (71.7 ac, 10.7 percent) of the core and 75.1 ha (185.6 ac, 16.7 percent) of the buffer. For this AEI, LANL biological resources SMEs recommended only an additional 38.1 ha (94.1 ac) of the buffer be developed before additional USFWS consultations take place. Once this cap is reached or a single large-scale project is proposed, additional consultation will be required. By 2011, 45 ha (111.2 ac) of the core and 83 ha (205.1 ac) of the buffer had been developed.

Three Mile—In 1999, 25.3 ha (62.5 ac) of this AEI on DOE lands were developed, including 3.8 ha (9.4 ac, 2.8percent) of the core and 21.5 ha (51.1 ac, 7.3 percent) of the buffer. For this AEI, LANL biological resources SMEs recommended only 64.3 ha (158.8 ac) additional area of buffer be developed before additional USFWS consultations take place. Once this cap is reached or a single large-scale project is proposed, additional consultation will be required. By 2011, 12 ha (29.6 ac) of the core and 37 ha (91.4 ac) of the buffer had been developed.

III. AREA OF ENVIRONMENTAL INTEREST SITE PLAN FOR THE SOUTHWESTERN WILLOW FLYCATCHER

1.0 SPECIES DESCRIPTION—SOUTHWESTERN WILLOW FLYCATCHER

1.1 Status

In 1995, the USFWS designated the Southwestern Willow Flycatcher as a federally endangered species (60 FR 10693). The USFWS most recently designated critical habitat for the Southwestern Willow Flycatcher in 2005 (70 FR 60885). The most recent recovery plan was published for Southwestern Willow Flycatcher in 2002 (USFWS 2002).

1.2 General Biology

The Southwestern Willow Flycatcher is one of four subspecies of the Willow Flycatcher. The historic range of the Southwestern Willow Flycatcher included Arizona, California, Colorado, New Mexico, Texas, Utah, and Mexico. Currently, this flycatcher breeds in riparian habitats from southern California to Arizona and New Mexico, plus southern Colorado, Utah, Nevada, and far western Texas. In winter it is found in southern Mexico, Central America, and northern South America (USFWS 2002).

Southwestern Willow Flycatchers are present in New Mexico from early May through mid-September and breed from late May through late July (Finch and Kelly 1999; USFWS 2002; Yong and Finch 1997). The flycatcher's nesting cycle is approximately 28 days. Three or four eggs are laid at one-day intervals, and incubation begins when the clutch is complete. The female incubates eggs for approximately 12 days, and the young fledge about 13 days after hatching.

Southwestern Willow Flycatchers typically raise one brood per year (USFWS 2002). Because arrival dates vary, northbound migrant Willow Flycatchers (of all subspecies) pass through areas where Southwestern Willow Flycatchers have already begun nesting. Similarly, southbound migrants (of all subspecies) in late July and August may occur where Southwestern Willow Flycatchers are still breeding. Therefore, it is only during a short period of the breeding season (approximately June15 through July 20) that one can assume that a Willow Flycatcher seen within Southwestern Willow Flycatcher range is probably of that subspecies (USFWS 2002).

The Southwestern Willow Flycatcher only nests along rivers, streams, and other wetlands. It is found in close association with dense stands of willows (*Salix* spp.), arrowweed (*Pluchea* spp.), buttonbush (*Cephalanthus* spp.), tamarisk (*Tamarix* spp.), Russian olive (*Eleagnus angustifolia* L.), and other riparian vegetation, often with a scattered overstory of cottonwood (*Populus* spp.) (USFWS 2002). The size of vegetation patches or habitat mosaics used by Southwestern Willow Flycatchers varies considerably and ranges from as small as 0.8 ha (1.9 ac) to several hundred hectares (Hatten and Paradzick 2003). The Southwestern Willow Flycatcher nests in thickets of trees and shrubs approximately 2 to 15 m (6 to 49 ft) tall, with a high percentage of canopy cover and dense foliage from 0 to 4 m (0 to 13 ft) above ground. Regardless of the plant species composition or height, occupied sites always have dense vegetation in the patch interior (Allison et al. 2003; USFWS 2002).

The Southwestern Willow Flycatcher is an insectivore. It forages within and occasionally above dense riparian vegetation, taking insects on the wing and gleaning them from foliage. The flycatcher's prey includes flies, bees, wasps, ants, beetles, moths, butterflies, grasshoppers, crickets, dragonflies, damselflies, and spiders (Durst et al. 2008; Wiesenborn and Heydon 2007).

1.3 Threats

The current population of Southwestern Willow Flycatchers in the United States is estimated at 1,214 territories (Durst et al. 2006). The distribution of breeding groups is highly fragmented, with groups often separated by considerable distances. This subspecies has suffered declines attributed to extensive loss of its cottonwood-willow habitat and to poor productivity resulting from brood parasitism by Brown-headed Cowbirds (*Molothrus ater*) (USFWS 2002).

2.0 IMPACT OF HUMAN ACTIVITIES

2.1 Introduction

The primary threats to the Southwestern Willow Flycatcher on LANL property are 1) impacts on habitat quality from LANL operations and 2) disturbance of nesting flycatchers. This section includes a review and summary of the known effects of various types of human activities to the Southwestern Willow Flycatcher and an overview of the current levels of activities at LANL within species habitat.

2.2 Impacts on Habitat Quality

2.2.1 Development

Throughout the Southwest, riparian habitats are rare and tend to be small and separated by vast expanses of arid lands. The Southwestern Willow Flycatcher has experienced extensive loss and

modification of its habitat resulting from urban and agricultural development, water diversion and impoundment, channelization of waterways, livestock grazing, off-road vehicle and other recreational uses, and hydrological changes resulting from these and other land uses (USFWS 2002). River and stream impoundments, groundwater pumping, and overuse of riparian areas have altered as much as 90 percent of the Southwestern Willow Flycatcher's habitat (USFWS 2002). Loss of cottonwood-willow riparian forests has had widespread impact on the distribution and abundance of bird species associated with that forest. Development itself may be tolerated if the habitat is left intact.

Because watercourses at LANL tend to be intermittent to ephemeral, riparian habitat is uncommon. There has been extensive degradation of the riparian zone along the Rio Grande caused by feral cattle grazing and flood control operations of Cochiti Lake. There are other riparian/wetland areas on LANL associated with canyon bottoms, the most significant one being Pajarito wetlands in the lower end of Pajarito Canyon. A major paved road traverses the wetlands area in Pajarito Canyon.

2.2.2 Ecological Risk

There is no specific information on the impact of chemicals on Southwestern Willow Flycatcher.

2.2.2.1 Ecorisk Assessment

LANL completed two ecological risk assessments that included the Southwestern Willow Flycatcher between 1997 and 2009. The ecological risk assessment process involves using computer modeling to assess potential effects to animals from COPCs that have been detected in the environment. The ecological risk assessments concluded that, in general, there is a small potential for effects to Southwestern Willow Flycatcher from COPCs (Gonzales et al. 1998; Gonzales et al. 2009).

An ecotoxicological risk assessment for the Southwestern Willow Flycatcher, centered on the Pajarito wetlands, found that between 7 and 16 percent of 100 hypothetical nest sites examined had hazard indices >1.0 and <10.0, depending on the foraging scenario (Gonzales et al. 1998). This indicates a small potential for impacts from chemicals. The primary chemicals driving the risk scenario were pentachlorophenol, aluminum, radium-226, calcium, and thorium-228. Aluminum, radium, and thorium are naturally occurring substances in northern New Mexico.

2.2.3 Disturbance

2.2.3.1 Pedestrians and Vehicles

There is no specific information on the reactions of Southwestern Willow Flycatchers to pedestrians and vehicles available. The recovery plan for the Southwestern Willow Flycatcher recommends providing protected areas, reducing unpredictable activities providing visual barriers, and reducing noise disturbance (USFWS 2002).

2.2.3.2 Aircraft

There is no specific information on the reaction of Southwestern Willow Flycatchers to aircraft available.

LANL lies within restricted airspace and planes infrequently fly less than 609 m (2,000 ft) above ground level. The County of Los Alamos operates an airport along the northern edge of LANL. The airport is located on the southern rim of Pueblo Canyon. Most flights approach and depart to the east of the airport, over the Rio Grande.

2.2.3.3 Explosives

There is no specific information on the reaction of Southwestern Willow Flycatchers to explosives detonation available. The Southwestern Willow Flycatcher AEI is not located close to any explosives testing sites at LANL.

2.2.3.4 Other Sources of Noise

LANL biological resources SMEs do not have good information on the effects of noise, including machinery operation, on Southwestern Willow Flycatchers. However, Southwestern Willow Flycatchers are probably not as sensitive to disturbance as some other threatened or endangered species (USFWS 2002). For a description of noise levels at LANL, see Part I, Section 2.2.3.

2.2.3.5 Artificially Produced Light

There is no information on the effects of artificially produced light on Southwestern Willow Flycatchers available. Under the Los Alamos County Code, commercial site development plans are reviewed to ensure that lighting serves the intended use of the site while minimizing adverse impacts to adjacent residential property (Section 16-276). Section 16-276 of the County Code includes light source measurement limitations by zoning district. The code allows off-site light to be 0.5 fc in residential areas. By comparison, full moonlight measures 0.1 fc, and a crescent moon was measured at 0.01 fc.

3.0 AEI GENERAL DESCRIPTION FOR SOUTHWESTERN WILLOW FLYCATCHER

The AEI consists of two types of areas—core and buffer. Core areas represent wetland areas with suitable vegetation for nesting, primarily dense willows. The buffer area is the area within 100 m (328 ft) of core areas. The Southwestern Willow Flycatcher AEI on LANL consists of two separate core areas. For purposes of this site plan, both core areas and associated buffers are considered one AEI unit.

3.1 Method for Identifying the Southwestern Willow Flycatcher AEI

The core areas were defined by the presence of riparian habitat and suitable wetland vegetation. These areas were identified in 1994 during a survey of wetlands at LANL and mapped using a global positioning system receiver. Wetlands without stands of dense willows at least 2 m (7 ft) tall and 30 m (98 ft) wide were not included in the AEI. The buffer area is the area within 100 m (328 ft) of the core areas.

3.2 Location of the Southwestern Willow Flycatcher AEI

LANL has one AEI for Southwestern Willow Flycatcher. It is composed of two core areas with associated buffers. The AEI core areas are located in the bottom of Pajarito Canyon, on the eastern side of LANL adjacent to Pajarito Road and State Road 4. The boundaries of the Southwestern

Willow Flycatcher AEI are maintained in the biological resources program GIS database at LANL.

4.0 AEI MANAGEMENT

4.1 Overview

This AEI management section provides guidelines for LANL operations to reduce or eliminate the threats to the Southwestern Willow Flycatcher from 1) habitat alterations that reduce habitat quality and 2) disturbance of breeding or potentially breeding flycatchers. Habitat alterations are considered for all AEIs and for both core and buffer areas. Disturbance activities to flycatchers are considered only for occupied AEIs and only for impacts on core areas. Developed areas (see Part I, Section 2.3) with ongoing baseline levels of activities and are not suitable habitat for Southwestern Willow Flycatchers have different restrictions than undeveloped core or buffer areas. Therefore, the location of the disturbance activity within the AEI, the occupancy status of the AEI, and the type of activity all affect whether or not the activity is allowable. AEIs for different species may overlap, and an activity must meet the guidelines of all applicable site plans to be allowable. Protective measures are described as management practices that should be followed when working in AEIs.

4.2 Definition and Role of Occupancy in AEI Management

Summary: The occupancy status of an AEI affects what disturbance activities are allowable in different areas (core, buffer, developed) of the AEI. The Southwestern Willow Flycatcher AEI is considered occupied during May 15 through September 15 or until the surveys show the AEI to be unoccupied. See the Activity Table (Table 2, Section 4.5.2) for restrictions on occupied undeveloped core and buffer areas, and Part I, Section 2.3 for restrictions on developed areas.

Occupancy simply refers to whether or not an AEI is occupied during a species' period of sensitivity. For Southwestern Willow Flycatchers, LANL biological resources SMEs are primarily concerned with protecting the birds from disturbance during the breeding season. Because individuals may colonize suitable habitat, the Southwestern Willow Flycatcher AEI is treated as though it is occupied from May 15 through September 15 or until surveys show an AEI to be unoccupied. Southwestern Willow Flycatcher surveys are conducted during May, June, and July. Because Southwestern Willow Flycatchers migrate south for the winter, the AEI is treated as unoccupied from September 16 to May 14.

The occupancy status of an AEI affects what activities are allowable in the AEI. Although activities causing habitat alterations are always restricted, disturbance activities are restricted only in occupied AEIs. Table 2 provides dates and levels of disturbance activities allowable in the occupied Southwestern Willow Flycatcher AEI under the guidelines of this site plan. The dates in Table 2 indicate the time period during which the activity is restricted. Contact a LANL biological resources SME to find out the current occupancy status of an AEI (http://int.lanl.gov/environment/bio/controls/index.shtml).

4.3 Introduction to AEI Management Guidelines

Summary: The habitat alterations section (Section 4.4) and the activities section (Section 4.5) gives the guidelines for habitat alteration and disturbance activities, respectively, for the

Southwestern Willow Flycatcher AEI. The flow chart (see Figure 1) provides a quick reference to determine what, if any, guidelines need to be consulted for a specific activity. Protective measures give management practices that should be applied when working or considering work in AEIs. LANL biological resources SMEs are available to answer questions and provide advice (http://int.lanl.gov/environment/bio/controls/index.shtml).

Sections 4.4 and 4.5 provide the guidelines for habitat alterations and allowable activities in AEI core and buffer areas. The flow chart (see Figure 1) provides a quick reference that should be used to determine whether a project or activity will affect an AEI and what sections of the site plan need to be consulted. The section on habitat alterations (Section 4.4) describes what and where habitat alterations are allowed under the guidelines of this site plan. The section and table on allowable activities (Section 4.5 and Table 2) describe what, when, and where disturbance activities are allowed in occupied AEIs under the guidelines of this site plan. If an activity does not meet the restrictions given in the guidelines, the activity must be individually reviewed for ESA compliance. This site plan only provides guidelines for the Southwestern Willow Flycatcher AEI. If an activity is desired in an area with overlapping AEIs, all applicable site plans must be consulted. Section 4.6 describes management practices that should be applied when working or considering work in an AEI. LANL biological resources SMEs are available to help interpret site plans and answer questions (http://int.lanl.gov/environment/bio/controls/index.shtml).

4.4 Definition of and Restrictions on Habitat Alterations

4.4.1 Definition of Habitat Alterations

Habitat alteration includes any action that alters over the long-term the soil structure, vegetative components necessary to the species, prey quality and quantity, water quality, hydrology, or noise or light levels in undeveloped areas of an AEI. Long-term means the alteration lasts for more than one year. Habitat alteration includes any activity that removes vegetative components important to the Southwestern Willow Flycatcher (primarily trees and shrubs). An actual activity may take place outside of the AEI and will be considered habitat alteration if consequences of the activity have effects inside the AEI core.

The habitat components most important to flycatchers include vegetative structure, food quality and quantity, and disturbance levels, including noise and light. The thickets of certain trees and shrubs along wetlands are important because they provide roost sites and a suitable habitat for nesting and foraging.

4.4.2 Fuels Management Practices to Reduce Wildfire Risk

Thinning within undeveloped buffer areas may include trees of any size to achieve 7.6 m (25 ft) spacing between tree crowns. However, clear cutting is not allowed in undeveloped buffer areas. No fuels management practices are allowed in core areas. Habitat alterations including thinning are not restricted in developed areas. All fuels management activities in developed and buffer areas must follow the guidelines in the Activity Table (Table 2, Section 4.5.2) if the AEI is occupied.

4.4.3 Utility Corridors

Habitat alterations such as cutting down trees that threaten power lines are allowed within 8 m (26 ft) of either side of an existing utility line in all areas of an AEI (Trujillo and Racinez 1995).

New utility lines and utility lines requiring clearance of a right-of-way greater than 16 m (52 ft) total must be individually reviewed for ESA compliance. Disturbance activities must follow the guidelines given in the Activities Table for occupied AEIs.

4.4.4 Restrictions on Habitat Alterations

Summary: Habitat alterations other than the utility corridor maintenance described above are not allowed in undeveloped core areas under the guidelines of this site plan. Habitat alteration in buffers is limited. If a project or activity is planned that would alter habitat in an undeveloped core area, it must be individually evaluated for ESA compliance. Habitat alterations in a buffer area other than fuels management activities or utility corridor maintenance must be reported to a LANL biological resources SME for tracking (http://int.lanl.gov/environment/bio/controls/index.shtml).

4.5 Definition of and Restrictions on Disturbance Activities

4.5.1 Definition of Disturbance Activities

LANL biological resources SMEs considered five categories of activities that might cause disturbance in an AEI. Most of the categories were first identified in the document "Peregrine Falcon Habitat Management in the National Forests of New Mexico" prepared for the U.S. Forest Service (Johnson 1994). Other light production and other noise production were included to provide the most comprehensive list of activities possible, reducing the need for individual review of activities for ESA compliance. The categories of activities are people, vehicles, aircraft, other light production, and other noise production. The impact of explosives detonation on this species is not considered here because there are no explosives testing sites within 2 km (1.25 mi) of potential nesting habitat. Low, medium, and high levels of impact for these activities are considered here. The following categories of activities are restricted only in AEIs that are classified as occupied.

People—includes any entry of people into an AEI on foot.

- Low impact is the presence of three or fewer people per project and duration of one day or less during a breeding season.
- Medium impact is the exceedance of either the number of people or the duration criteria.
- High impact is the exceedance of both the number of people and the duration criteria.

Vehicles—includes the entry of any two-axle highway vehicle, all-terrain vehicle, or motorized machinery into an AEI by any route other than a paved road or an improved gravel road.

- Low impact is the presence of two or fewer vehicles per project and duration of one day or less during a breeding season.
- Medium impact is the exceedance of either the number of vehicles or the duration criteria.
- High impact is the exceedance of both the number of vehicles and the duration criteria.

Aircraft—includes the operation of any aircraft below an elevation of 600 m (2,000 ft) above the highest ground level in the local vicinity.

- Low impact is the presence of one single-engine airplane and duration of one day or less during a breeding season.
- Medium impact is the exceedance of either the number of aircraft or the duration criteria.
- High impact is the exceedance of both the number of aircraft and the duration criteria.

Any use of helicopters, jet airplanes, and propeller airplanes with two or more engines is classified as medium impact or above, depending on duration.

Other Light Production—includes any activity not previously listed that causes additional light to occur in an AEI core area (e.g., plans for construction of a new building at the edge of a developed area may call for lighting at night to facilitate nighttime work that impacts an undeveloped core area).

- Low impact is the increase of light intensity by up to 0.05 fc and a duration of one night or less per project per breeding season.
- Medium impact is the exceedance of either the intensity or duration criteria.
- High impact is the exceedance of both the intensity and duration criteria.

Measurements for increases in light are taken at the AEI core area boundary closest to the light source, if the source is outside the core, and at 10 m (33 ft) from the source if the source is inside the core. Light measurements for developed areas are taken at the edge of the developed area if the developed area is within an AEI core, or at the closest core boundary, if the developed area is outside of an AEI core.

Other Noise Production—includes any activity not previously listed except for explosives detonation that causes additional noise to occur in an AEI. For example, operation of machinery causes noise.

- Low impact is increasing noise levels in an AEI core by 6 dB(A) or less for one day or less per project per breeding season.
- Medium impact is the exceedance of either the level or the duration criteria.
- High impact is the exceedance of both the level and the duration criteria.

Measurements for increases in noise are taken at the AEI core boundary closest to the noise source if the source is outside the core, and at 10 m (33 ft) from the source if the source is inside the core. Noise measurements for developed areas are taken at the edge of the developed area if the developed area is within an AEI core, or at the closest core boundary if the developed area is outside of an AEI core.

4.5.2 Activity Table

Disturbance activities are of concern only when Southwestern Willow Flycatchers occupy an AEI. The AEI is always considered occupied between May 15 and September 15, or until surveys show the AEI to be unoccupied. The Southwestern Willow Flycatcher AEI is always considered unoccupied between September 16 and May 14, when flycatchers have migrated for the winter.

For occupancy status of an AEI after completion of surveys, contact a LANL biological resources SME (http://int.lanl.gov/environment/bio/controls/index.shtml).

Table 2. Restrictions on Activities in Undeveloped Occupied Southwestern Willow Flycatcher AEI

		Core	Buffer
Restrictions on Occupied Habitat			
People			
	Low	No Restrictions	No Restrictions
	Medium	May 15 to August 15	No Restrictions
	High	May 15 to September 15	No Restrictions
Vehicles			
	Low	May 15 to September 15	No Restrictions
	Medium	May 15 to September 15	No Restrictions
	High	May 15 to September 15	No Restrictions
Aircraft			
	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
Other Light/Noise Production			
	Low	May 15 to September 15	No Restrictions*
	Medium	May 15 to September 15	No Restrictions*
	High	May 15 to September 15	No Restrictions*

*Noise or light production in the buffer is restricted if the activity would violate core area restriction on noise or light.

4.6 Protective Measures

Summary: This section provides a list of management practices to apply in the AEI.

- No wetland vegetation will be removed outside of developed areas.
- Appropriate erosion and runoff controls should be employed to reduce soil loss.
- Avoid unnecessary disturbance to vegetation (e.g., excessive parking areas or equipment storage areas, off-road travel, materials storage areas, crossing of streams or washes).
- Avoid removal of vegetation along drainage systems and stream channels.
- Avoid all vegetation removals not absolutely necessary.
- Appropriate erosion controls must be put in place and periodically checked throughout the life of any projects.
- All exposed soils must be revegetated as soon as feasible after disturbance to minimize erosion.

5.0 SOUTHWESTERN WILLOW FLYCATCHER AEI DESCRIPTION

5.1 Pajarito Canyon Southwestern Willow Flycatcher AEI

5.1.1 Allowable Habitat Alteration in the Buffer Area

Since the purpose of the buffer area is to help maintain the core area as suitable Southwestern Willow Flycatcher habitat, habitat alteration in the buffer area will be extremely limited. There are two areas in which restrictions on habitat alteration are relaxed.

1. The mesa top of Mesita del Buey. This mesa top can be developed as long as restrictions on impacts to the core area are met.

2. Pajarito Road within the AEI. Mowing of upland vegetation is allowed up to 5 m (15 ft) from Pajarito Road, or to the fence, if the fence is within 9 m (30 ft). Vegetation must cover the roadsides to prevent sediment runoff, so mowed plants should be at least 5 cm (2 in) high. LANL biological resources SMEs encourage the growth of willow throughout the AEI—even the area along Pajarito Road—to enhance habitat. If, within this area, it is absolutely necessary to remove new willow growth (i.e., to improve visibility for human safety), LANL biological resources SMEs recommend that only willows at or above the level of the roadway surface be mowed.

IV. AREA OF ENVIRONMENTAL INTEREST SITE PLAN FOR THE JEMEZ MOUNTAINS SALAMANDER

1.0 SPECIES DESCRIPTION—JEMEZ MOUNTAINS SALAMANDER

1.1 Status

The Jemez Mountains Salamander (*Plethodon neomexicanus*) was listed in New Mexico as endangered under the Wildlife Conservation Act of New Mexico in 2006 (NMDGF 2006). In September 2012 the USFWS proposed the Jemez Mountains Salamander as endangered under the ESA (FR 2012) and the final listing as endangered was on 10 September 2013 (FR 2013a)

1.2 General Biology

The Jemez Mountains Salamander is endemic to the Jemez Mountains of north-central New Mexico and is found in Los Alamos, Rio Arriba, and Sandoval counties (Stebbins and 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

the species with food and cover. Underground habitat in forest or meadow areas contains interstitial spaces provided by (a) igneous rock with fractures or loose rocky soils, (b) rotted tree root channels, or (c) burrows of rodents or large invertebrates (Degenhardt et al. 1996; FR 2013b).

Plethodontid salamanders, which lack both lungs and gills, breathe through the mucous membranes in their mouth and throat and through their moist skin. The Jemez Mountains Salamander is completely terrestrial and does not use standing surface water for any life stage (FR 2012). Present in its habitat year-round, the Jemez Mountains Salamander spends most of its life underground, but can be found on the surface when conditions are warm and wet, approximately July through October. During this time, the Jemez Mountains Salamander can be found under rocks, bark, and moss mats and inside and under logs (Ramotnik 1986, Everett 2003). The Jemez Mountains Salamander eats invertebrates, including ants, mites, and beetles, and is thought to lay its eggs underground (FR 2013b).

1.3 Threats

Principal threats to habitat include historical fire exclusion and suppression and severe wildland fires; forest composition and structure conversions; post-fire rehabilitation; forest and fire management; roads, trails, and habitat fragmentation; recreation; and disease (FR 2012).

2.0 IMPACT OF HUMAN ACTIVITIES

2.1 Introduction

Primary threats to the Jemez Mountains Salamander on LANL property are impacts to habitat quality or destruction of individual salamanders caused by LANL or Los Alamos County operations. Forested LANL property is also subject to impacts from severe wildland fire and wildfire suppression.

2.2 Impacts on Habitat Quality

2.2.1 Development

Property at LANL varies from remote isolated land to heavily developed and/or industrialized. Most of the large developed areas at LANL are found on mesa tops, generally in the northern and western portion of LANL. The areas of Jemez Mountains Salamander habitat currently most impacted by development occur in Los Alamos Canyon. There is a secondary paved road (West Road) in the bottom of the canyon that exits the canyon on the north-facing slope through Jemez Mountains Salamander habitat. The canyon bottom also contains a recreational ice rink operated by Los Alamos County on an inholding owned by Los Alamos County. Development that reduces the occurrence of primary constituent elements of Jemez Mountains Salamander in core habitat would likely have a negative impact on the species.

2.2.2 Pedestrians and Vehicles

Many canyon bottoms and mesa tops at LANL have dirt roads traversing them. Most of these roads are gated; however, many of these roads are accessible to LANL employees and the public on foot or by bike. Some areas, such as Los Alamos Canyon, are frequently used by hikers and dog owners on active and historic trails which traverse the canyon, through Jemez Mountains

Salamander habitat in places. Maintenance of roads and trails in the habitat may have a negative impact on the species.

2.2.3 Severe Wildland Fire and Wildfire Suppression

Stand-replacing wildfires significantly change forest composition and structure, and reduce canopy cover. Even ground wildfires may reduce the volume of fallen logs and large woody debris. Large areas of historic Jemez Mountains Salamander habitat have been impacted by stand-replacing wildfires associated with current forest stocking conditions, drought, and high temperatures (FR 2012). Forested habitats on LANL are also subject to severe wildland fires. To mitigate wildfire risks, some areas of LANL have been treated for fuels reduction and creation of fuel breaks both pre-emptively and during active wildfire suppression. Both wildfires and wildfire suppression activities can negatively impact the primary constituent elements of Jemez Mountains Salamander core habitat.

2.3 Impacts on Individual Salamanders

2.3.1 Disease

The amphibian pathogenic fungus *Batrachochytrium dendrobatidis* (Bd) was found in a wild-caught Jemez Mountains Salamander in 2003 (Cummer et al. 2005) on the east side of the species' range and again in another Jemez Mountains Salamander in 2010 on the west side of the species' range (FR 2012). Bd causes the disease chytridiomycosis, whereby the Bd fungus attacks keratin in amphibians. In adult amphibians, keratin primarily occurs in the skin. The symptoms of chytridiomycosis can include sloughing of skin, lethargy, morbidity, and death. Chytridiomycosis has been linked with worldwide amphibian declines, die-offs, and extinctions, possibly in association with climate change (Pounds et al. 2006). Chytridiomycosis may be a threat to the Jemez Mountains Salamander because this disease is a threat to many other species of amphibians and the pathogen has been detected in the Jemez Mountains Salamander (FR 2012).

As part of a cooperative study with the New Mexico Department of Game and Fish between 2007 and 2013, various amphibian species including the canyon tree frog (*Hyla arenicolor*), western chorus frog (*Pseudacris triseriata*), Woodhouse's toad (*Anaxyrus woodhousii*), tiger salamander (*Ambystoma tigrinum*), and Jemez Mountains Salamander were tested for Bd infection at LANL. To date, all sampling has been negative for Bd infection (Fresquez et al. 2013).

2.3.2 Destruction of Individual Salamanders

During periods of the year when Jemez Mountains Salamander are on the soil surface, when conditions are warm and wet (generally July to October), they are vulnerable to injury and mortality from soil-disturbing activities, including operation of heavy equipment in core habitat. They also are at risk to be found and collected by people.

3.0 AEI GENERAL DESCRIPTION FOR JEMEZ MOUNTAINS SALAMANDER

The AEI consists of two areas, a core area and a buffer area. The core habitat is defined as suitable habitat where the Jemez Mountains Salamander occurs or may occur at LANL. The core habitat consists of sections of north-facing slope that contain the required micro-habitat to support Jemez

Mountains Salamander. The buffer area is 100 m (328 ft) wide extending outward from the edge of the core area.

3.1 Method for Identifying a Jemez Mountains Salamander AEI

The first step in identifying potential Jemez Mountains Salamander at LANL was to use a GIS to model habitat. Early modeling efforts by Hathcock (2008) identified areas of potential habitat and that model was further refined. The following parameters were modeled in the GIS:

- Elevation: 7,000 ft (2,150 m) and above
- Slope: Greater than 20 degrees
- Aspect: north-facing +/- 20 degrees
- Land cover: Mixed conifer
- Land use: Undeveloped
- Modeled habitat is only selected if it is greater than five contiguous 30 × 30 m (98 × 98 ft) pixels in size

Once this habitat layer was developed, a second layer was modeled that examined the level of shade in the habitat, also known as an illumination index. Since the Jemez Mountains Salamander needs cool moist conditions, an illumination index model would further highlight areas where this habitat type may occur or further reinforce the areas selected by the GIS modeling. The illumination index describes the amount and extent of solar radiation reaching the Earth's surface at a given point. This takes into account the topography that may cast shadows. The illumination model was developed using the 5 m (16 ft) resolution digital elevation model hillshade and using the Surface toolbox in ArcToolbox (Environmental Science Research Institute, Redlands, California) using the highest height of the sun on June 21 at 1:00 pm, altitude of 74.4 and Azimuth of 178.4, when the sun would be at its maximum height. These procedures were based on work done by Reilly et al. (2009).

Once this modeling was complete, LANL biological resources SMEs performed field validation to verify the suitability of the modeled habitat. The goal was to verify that mixed conifer was still the dominant cover class in the selected area. The GIS analysis used data from a landcover map created by McKown et al. (2003). There have been changes in habitat since this landcover map was published from fire and extreme drought effects. Since LANL is on the extreme edge of Jemez Mountains Salamander lower elevational range, a key component in this part of its range is soil moisture content. During field validation, evidence of a moist mixed conifer habitat versus a dry mixed conifer habitat was noted. One of the key indicators used to delimit areas of moist versus dry mixed conifer during the field validation was the presence of white fir (Evans et al. 2011) combined with a high canopy cover.

Field validation of the model occurred in May 2013, or decisions were based on earlier field visits to the sites from other projects. Each field validation consisted of LANL biological resources SMEs walking down all of the modeled habitat polygons to look for the presence of indictor features. If a polygon of modeled habitat contained white fir, indicating a moist wet conifer type habitat, a high canopy closure, and other signs of high habitat quality such as dead logs, moss or

other areas that could be used as cover by the Jemez Mountains Salamander, then the polygon was marked for retention in the final core habitat. Polygons that did not contain the necessary habitat requirements were omitted.

After the field validation was complete, the final core habitat boundaries that LANL would recognize were hand digitized using ArcGIS (Environmental Science Research Institute, Redlands, California) by LANL biological resources SMEs in and around the validated modeled polygon and areas between polygons if appropriate. The final identified core habitat at LANL occurs on the north-facing slopes of canyons. Toward the rim of the canyon the core boundaries end where the mixed conifer ends. In the canyon bottoms the core boundary extends to the edge of the stream channel. The upstream and downstream core boundaries end where the mixed conifer ends. A buffer habitat was extended around the core to a distance of 100 m (328 ft) outward. The LANL Fenton Hill satellite facility in the Jemez Mountains off of New Mexico Highway 126 is on land leased to DOE by the Santa Fe National Forest. The entire footprint is considered to be developed core habitat for the Jemez Mountains Salamander, since proposed critical habitat is adjacent to the facility.

3.2 Location and Number of Jemez Mountains Salamander AEIs

The identified Jemez Mountains Salamander core habitats were grouped by canyon system into AEIs, which contain contiguous and noncontiguous habitat areas. The largest contiguous section of habitat at LANL is in Los Alamos Canyon. There are two noncontiguous areas of habitat in Two-mile Canyon, four in Pajarito Canyon, one contiguous area in Cañon de Valle, and the entire Fenton Hill facility.

4.0 AEI MANAGEMENT

4.1 Overview

This AEI management section provides guidelines for LANL operations to reduce or eliminate the threats to the Jemez Mountains Salamander from habitat alterations that reduce habitat quality. Habitat alterations are considered for all AEIs and for both core and buffer areas. Developed areas that have ongoing baseline levels of activities and are not suitable habitat for Jemez Mountains Salamander have different restrictions than undeveloped core or buffer areas. AEIs for different species may overlap, and an activity must meet the guidelines of all applicable site plans to be allowable. Protective measures are described as management practices that should be followed when working in AEIs.

4.2 Definition and Role of Occupancy in AEI Management

Occupancy simply refers to whether or not an AEI is occupied by the Jemez Mountains Salamander. The Los Alamos Canyon AEI is known to be occupied based on past surveys. Surveys for the Jemez Mountains Salamander are known to have a very low detection rate for occupied areas, so at LANL all AEIs are assumed to be occupied at all times. If needed, site-specific surveys will be conducted by federally permitted LANL biological resources SMEs.

4.3 Definition and Role of Developed Areas in AEI Management

Developed areas include all building structures, paved roads, improved gravel roads, and paved and unpaved parking lots. The majority of Jemez Mountains Salamander core habitat is in undeveloped areas, except for the satellite facility at Fenton Hill and a small amount of habitat in Los Alamos Canyon where West Road crosses the habitat. Generally, developed areas will not have restrictions; however, some of the undeveloped sections within the footprint of Fenton Hill may have restrictions because they may contain Jemez Mountains Salamanders when they move to the surface between July and October. Any project that occurs within developed core habitat will be evaluated by LANL biological resources SMEs for ESA compliance.

4.4 General Description of Core and Buffer Areas and Allowable Area Development

The purpose of buffer areas is to protect core areas from habitat degradation. The current levels of development in buffer and core areas represent baseline conditions for this site plan. No further development is allowed in the core area under the guidelines of this site plan. Any development in a buffer area will be reviewed by LANL biological resources SMEs to ensure that there are no impacts to the core habitat.

4.5 Emergency Actions

If safety and/or property are immediately threatened by something occurring within an AEI (for example, wildfire, water line breakage, etc.) please contact a LANL biological resources SME (1-505-665-3366) as soon as possible. If the emergency occurs outside of regular business hours, contact the Emergency Management Office (1-505-667-6211). This office will then communicate with the appropriate LANL personnel.

4.6 Introduction to AEI Management Guidelines

Section 4.7 provides the guidelines for habitat alterations and allowable activities in AEI core and buffer areas. It describes what and where habitat alterations are allowed under the guidelines of this site plan. If an activity does not meet the restrictions given in the guidelines, the activity must be individually reviewed for ESA compliance. This site plan only provides guidelines for the Jemez Mountains Salamander AEIs. If an activity is desired in an area with overlapping AEIs, all applicable site plans must be consulted. AEI maps show the location of all AEIs in an area. LANL biological resources SMEs are always available to help interpret site plans and answer questions (http://int.lanl.gov/environment/bio/controls/index.shtml).

4.7 Definition of and Restrictions on Habitat Alterations

4.7.1 Definition of Habitat Alterations

Habitat alteration includes any action that alters the soil structure, vegetative components necessary to the species, water quality, or hydrology in undeveloped areas of an AEI. An actual activity may take place outside of the AEI and will be considered habitat alteration if consequences of the activity have effects inside the AEI core. Habitat alterations would also include soil pits for soil samples deeper than 15 cm (6 in) using either hand or mechanized augers. Any activity that might disturb the soil will need to be reviewed by LANL biological resources SMEs.

The habitat components most important to the Jemez Mountains Salamander include soil structure and vegetative structure. The forest structure within an area designated as a Jemez Mountains Salamander AEI is important because it provides the necessary moist, cool microclimate.

4.7.2 Fuels Management Practices to Reduce Wildfire Risk

One of the primary threats to the Jemez Mountains Salamander is wildfire (FR 2012), but they also require habitat with a high canopy cover which makes fuels reduction challenging. Within undeveloped core areas, thinning trees to a level of 80 percent canopy cover or higher is approved. Trees may not be thinned below 80 percent canopy cover without further ESA review by LANL biological resources SMEs. Large logs on the ground should be left in place and not chipped. Understory thinning that does not reduce total canopy cover below 80 percent is permitted. Large trees that are felled should be left as large logs on the ground. Smaller trees and understory shrubs that may be thinned should be dispersed and left on-site to aid in soil moisture retention. Thinning activities should not occur during the rainy season between July to October (or when freezing temperatures begin, whichever comes first) when the Jemez Mountains Salamander is found on the surface.

In buffer areas, thinning of trees can occur to the current LANL-approved prescription level (LAAO 2000). LANL biological resources SMEs are available to provide guidance and mark trees for thinning (http://int.lanl.gov/environment/bio/controls/index.shtml).

4.7.3 Utility Corridors

Habitat alterations such as cutting down trees that threaten power lines are allowed within 8 m (26 ft) of either side of an existing electrical utility line at LANL under existing guidelines and engineering controls (Hathcock 2013). This level is approved in all areas of an AEI. New utility lines and utility lines requiring clearance of a right-of-way greater than 16 m (52 ft) total in core habitat must be individually reviewed for ESA compliance.

4.7.4 Restrictions on Habitat Alterations

Habitat alterations other than the fuels management practices and utility corridor maintenance described above are not allowed in undeveloped core areas under the guidelines of this site plan. If a project or activity is planned that would alter habitat in an undeveloped core area, it must be individually evaluated for ESA compliance. Habitat alterations in buffer areas must be reviewed by LANL biological resources SMEs to ensure that there are no impacts to core habitat.

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APPENDIX

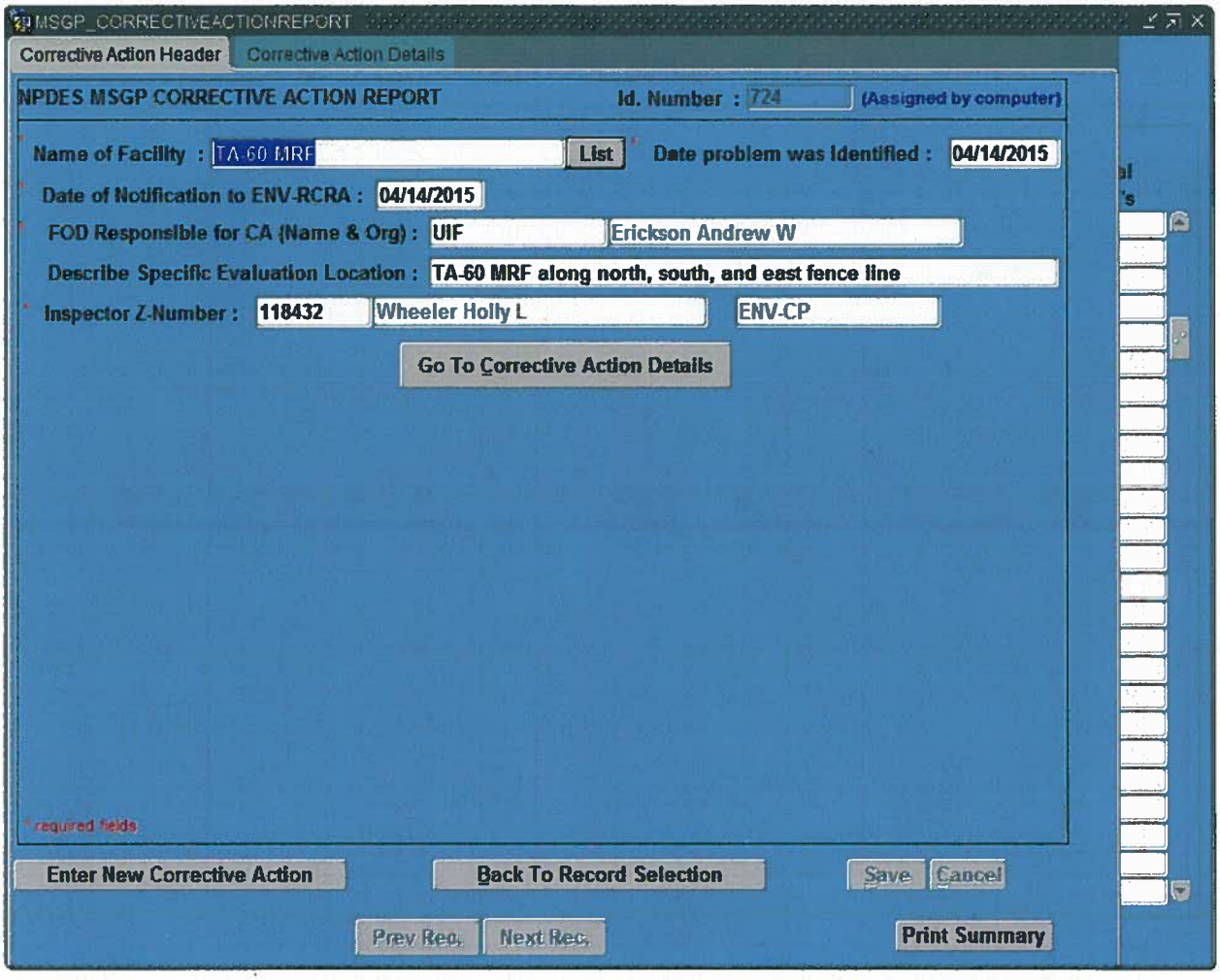
Table A-1. The percentage of each food type found in Mexican Spotted Owl food remains at LANL

Species	Relative Abundance
Neotoma spp.	26.22
Peromyscus spp.	10.22
Microtus 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

Corrective Actions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List
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Date of Notification to ENV-RCRA : 04/14/2015
FOD Responsible for CA (Name & Org) : UIF
Erickson Andrew W
Describe Specific Evaluation Location : TA-60 MRF along north, south, and east fence line
Inspector Z-Number : 118432
Wheeler Holly L
ENV-CP
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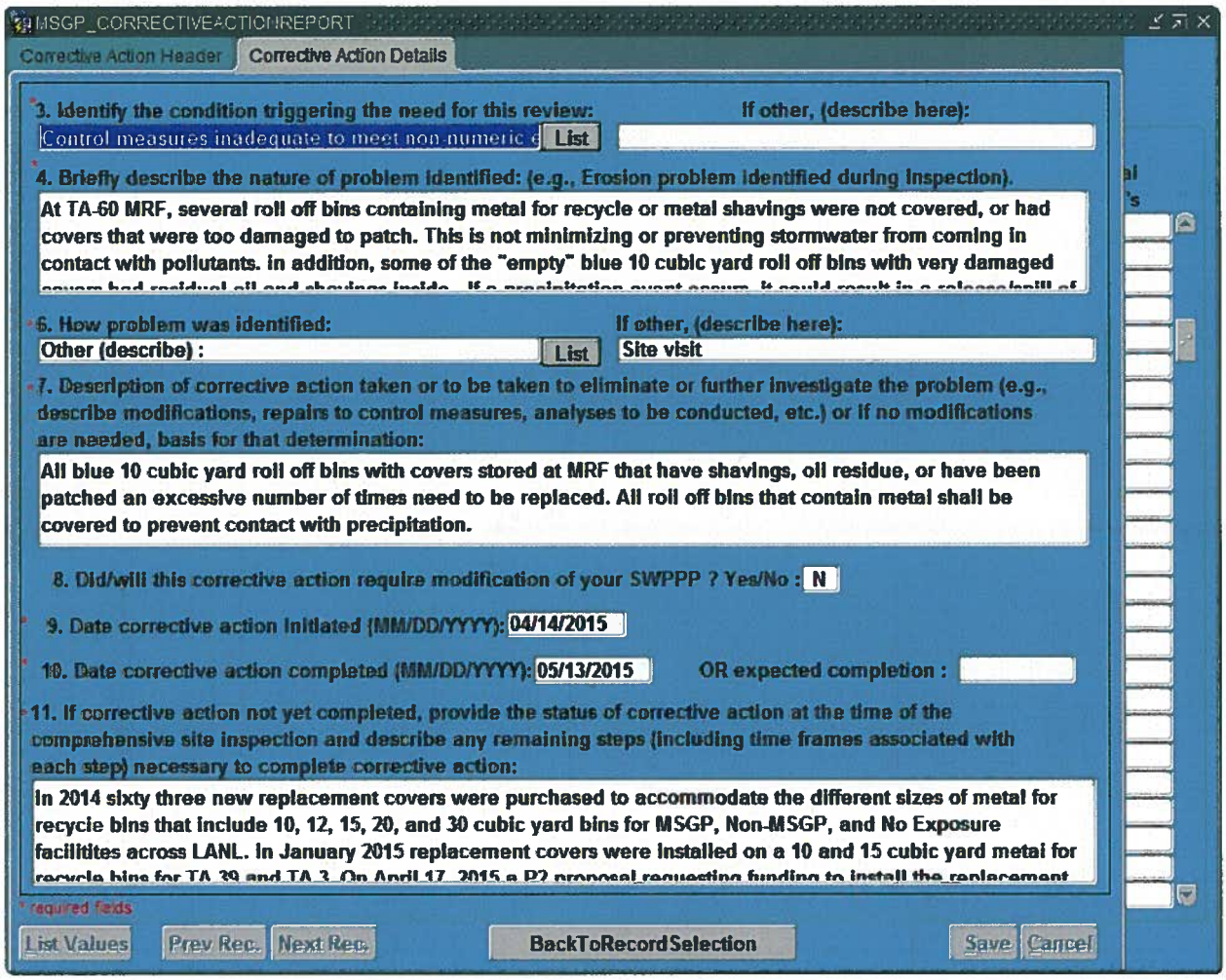
Next Rec.
Print Summary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Corrective Action Details
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Control measures inadequate to meet non-numeric
List
If other, (describe here):
4. Briefly describe the nature of problem identified: (e.g., Erosion problem identified during inspection).
At TA-60 MRF, several roll off bins containing metal for recycle or metal shavings were not covered, or had covers that were too damaged to patch. This is not minimizing or preventing stormwater from coming in contact with pollutants. in addition, some of the "empty" blue 10 cubic yard roll off bins with very damaged
6. How problem was identified:
Other (describe) :
List
If other, (describe here):
Site visit
7. Description of corrective action taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications, repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:
All blue 10 cubic yard roll off bins with covers stored at MRF that have shavings, oil residue, or have been patched an excessive number of times need to be replaced. All roll off bins that contain metal shall be covered to prevent contact with precipitation.
8. Did/will this corrective action require modification of your SWPPP ? Yes/No :
N
9. Date corrective action initiated (MM/DD/YYYY):
04/14/2015
10. Date corrective action completed (MM/DD/YYYY):
05/13/2015
OR 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:
In 2014 sixty three new replacement covers were purchased to accommodate the different sizes of metal for recycle bins that include 10, 12, 15, 20, and 30 cubic yard bins for MSGP, Non-MSGP, and No Exposure facilitites across LANL. In January 2015 replacement covers were installed on a 10 and 15 cubic yard metal for
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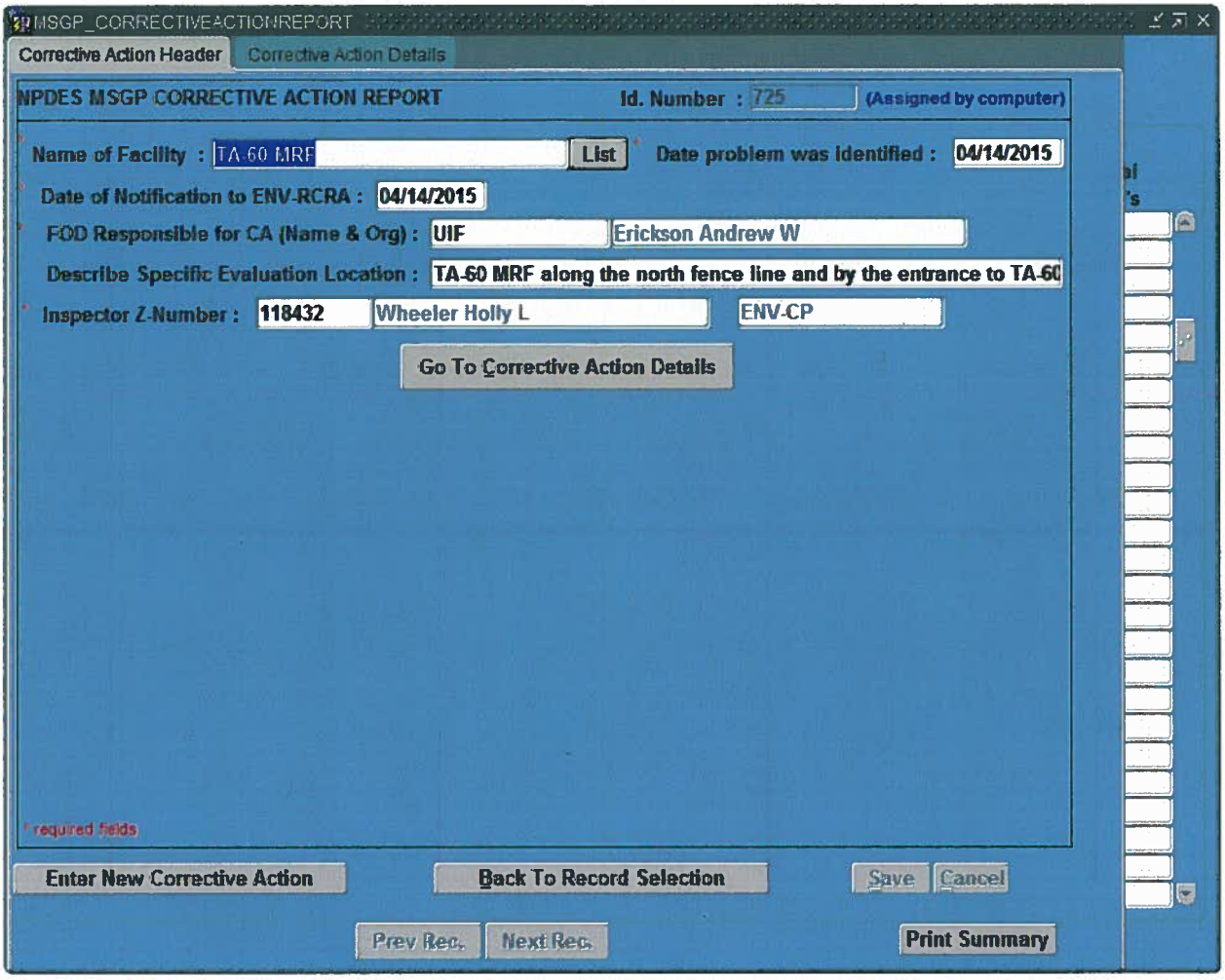
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Date of Notification to ENV-RCRA : 04/14/2015
FOD Responsible for CA (Name & Org) : UIF
Erickson Andrew W
Describe Specific Evaluation Location : TA-60 MRF along the north fence line and by the entrance to TA-60
Inspector Z-Number : 118432
Wheeler Holly L
ENV-CP
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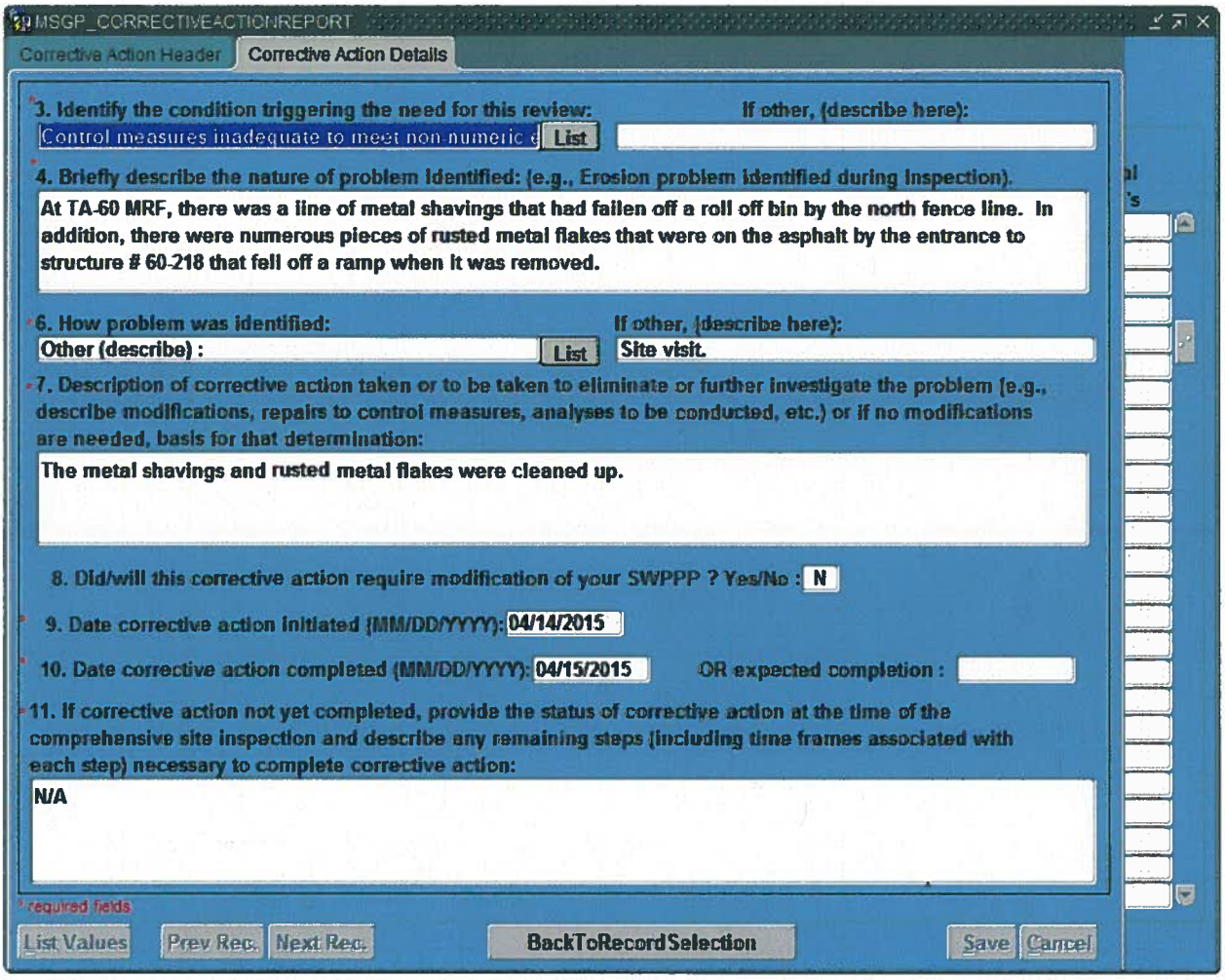
Print Summary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Corrective Action Details
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Control measures inadequate to meet non-numeric
List
If other, (describe here):
*4. Briefly describe the nature of problem identified: (e.g., Erosion problem identified during inspection).
At TA-60 MRF, there was a line of metal shavings that had fallen off a roll off bin by the north fence line. In addition, there were numerous pieces of rusted metal flakes that were on the asphalt by the entrance to structure # 60-218 that fell off a ramp when it was removed.
*6. How problem was identified:
Other (describe) :
List
If other, (describe here):
Site visit.
*7. Description of corrective action taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications, repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:
The metal shavings and rusted metal flakes were cleaned up.
8. Did/will this corrective action require modification of your SWPPP ? Yes/No :
N
* 9. Date corrective action initiated (MM/DD/YYYY):
04/14/2015
* 10. Date corrective action completed (MM/DD/YYYY):
04/15/2015
OR 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:
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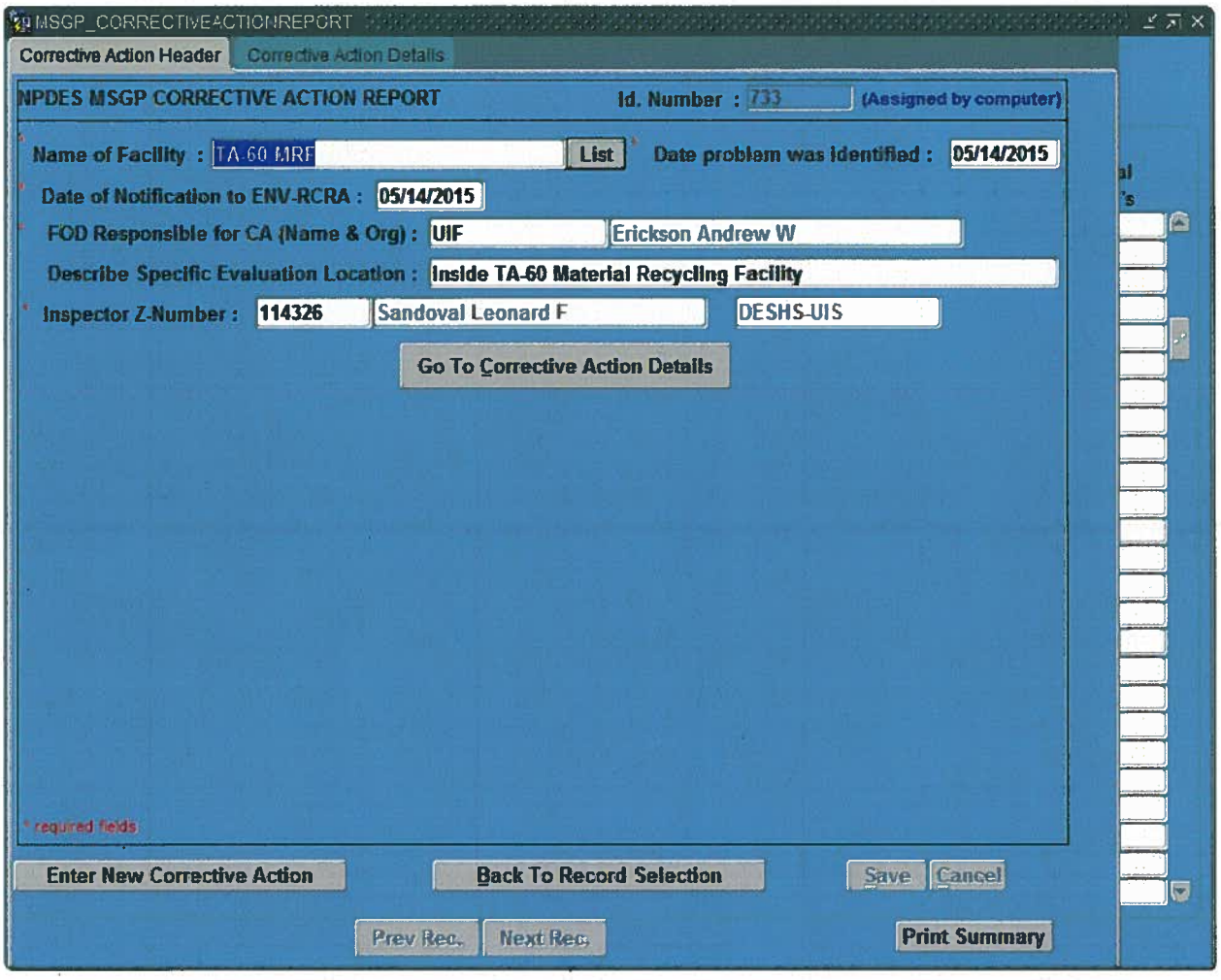
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Date problem was identified : 05/14/2015
Date of Notification to ENV-RCRA : 05/14/2015
FOD Responsible for CA (Name & Org) : UIF
Erickson Andrew W
Describe Specific Evaluation Location : Inside TA-60 Material Recycling Facility
Inspector Z-Number : 114326
Sandoval Leonard F
DESHS-UIS
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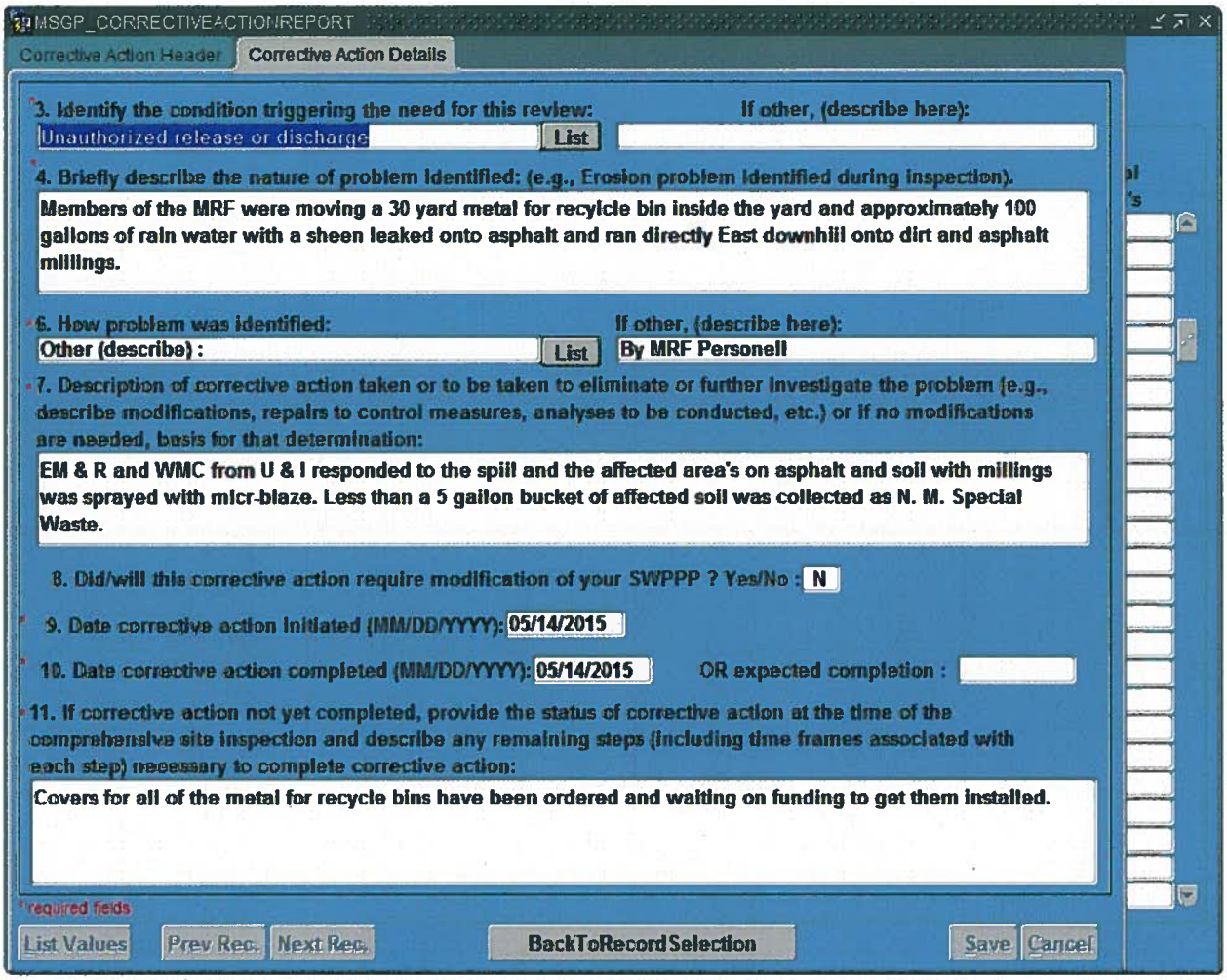
Print Summary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Unauthorized release or discharge
List
If other, (describe here):
4. Briefly describe the nature of problem identified: (e.g., Erosion problem identified during inspection).
Members of the MRF were moving a 30 yard metal for recycle bin inside the yard and approximately 100 gallons of rain water with a sheen leaked onto asphalt and ran directly East downhill onto dirt and asphalt millings.
6. How problem was identified:
Other (describe) :
List
If other, (describe here):
By MRF Personell
7. Description of corrective action taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications, repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:
EM & R and WMC from U & I responded to the spill and the affected area's on asphalt and soil with millings was sprayed with micr-blaze. Less than a 5 gallon bucket of affected soil was collected as N. M. Special Waste.
8. Did/will this corrective action require modification of your SWPPP ? Yes/No :
N
9. Date corrective action initiated (MM/DD/YYYY):
05/14/2015
10. Date corrective action completed (MM/DD/YYYY):
05/14/2015
OR 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:
Covers for all of the metal for recycle bins have been ordered and waiting on funding to get them installed.
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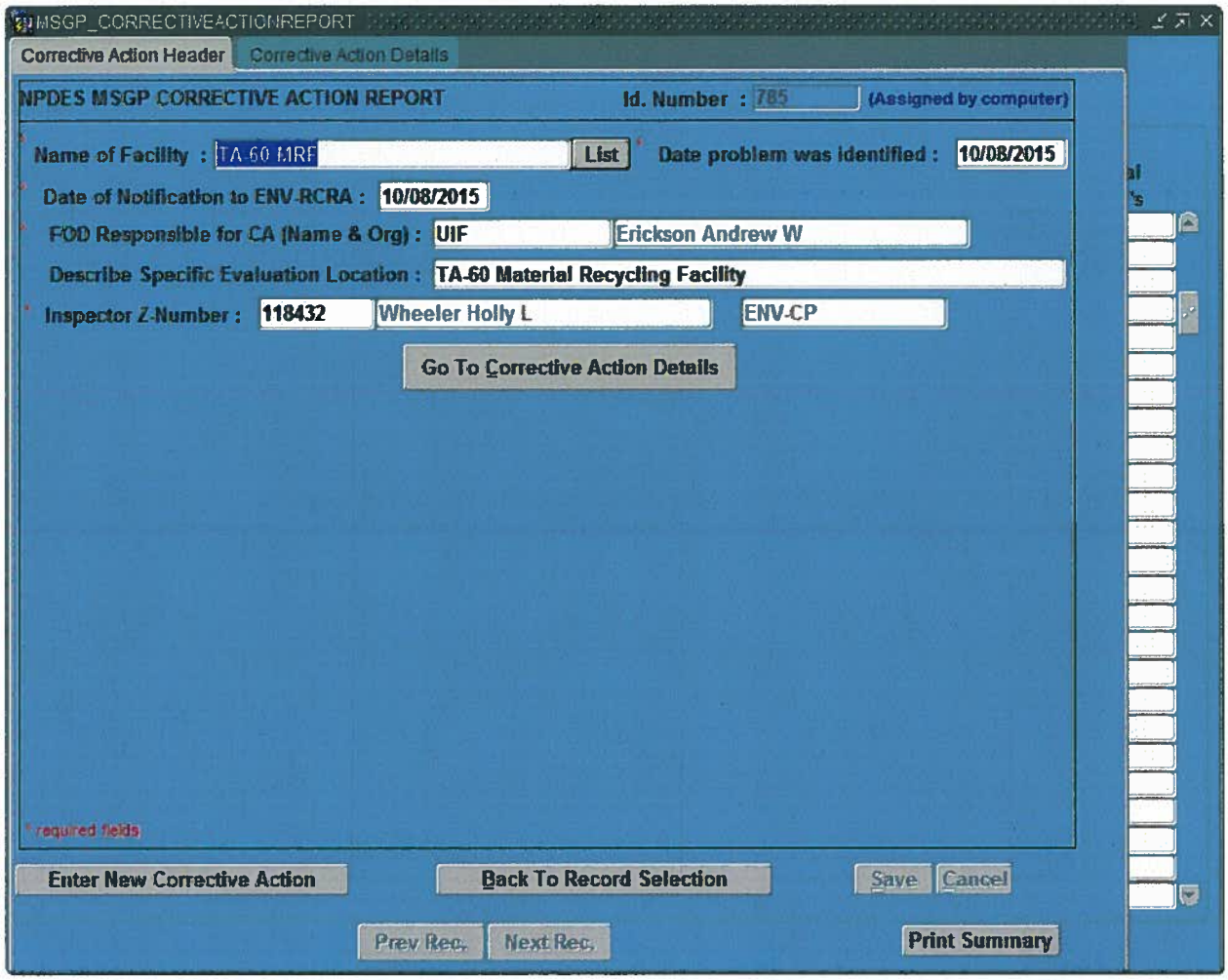
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Date of Notification to ENV-RCRA : 10/08/2015
FOD Responsible for CA (Name & Org) : UIF
Erickson Andrew W
Describe Specific Evaluation Location : TA-60 Material Recycling Facility
Inspector Z-Number : 118432
Wheeler Holly L
ENV-CP
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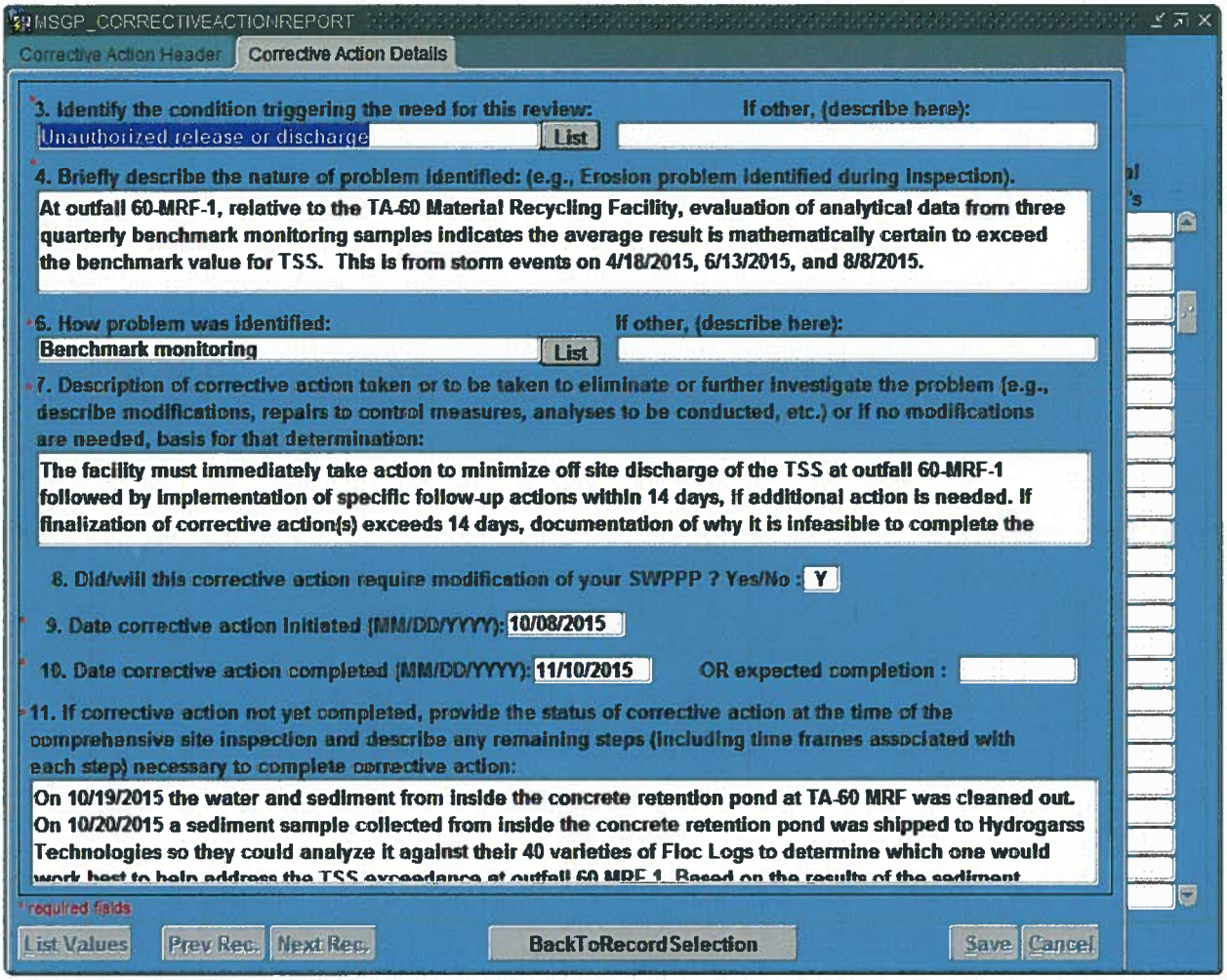
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3. Identify the condition triggering the need for this review: Unauthorized release or discharge [List]

If other, (describe here):

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

At outfall 60-MRF-1, relative to the TA-60 Material Recycling Facility, evaluation of analytical data from three quarterly benchmark monitoring samples indicates the average result is mathematically certain to exceed the benchmark value for TSS. This is from storm events on 4/18/2015, 6/13/2015, and 8/8/2015.

6. How problem was identified: Benchmark monitoring [List]

If other, (describe here):

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

The facility must immediately take action to minimize off site discharge of the TSS at outfall 60-MRF-1 followed by implementation of specific follow-up actions within 14 days, if additional action is needed. If finalization of corrective action(s) exceeds 14 days, documentation of why it is infeasible to complete the

8. Did/will this corrective action require modification of your SWPPP ? Yes/No : Y

9. Date corrective action initiated (MM/DD/YYYY): 10/08/2015

10. Date corrective action completed (MM/DD/YYYY): 11/10/2015 OR 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:

On 10/19/2015 the water and sediment from inside the concrete retention pond at TA-60 MRF was cleaned out. On 10/20/2015 a sediment sample collected from inside the concrete retention pond was shipped to Hydrogarss Technologies so they could analyze it against their 40 varieties of Floc Logs to determine which one would work best to help address the TSS exceedance at outfall 60 MRF 1. Based on the results of the sediment

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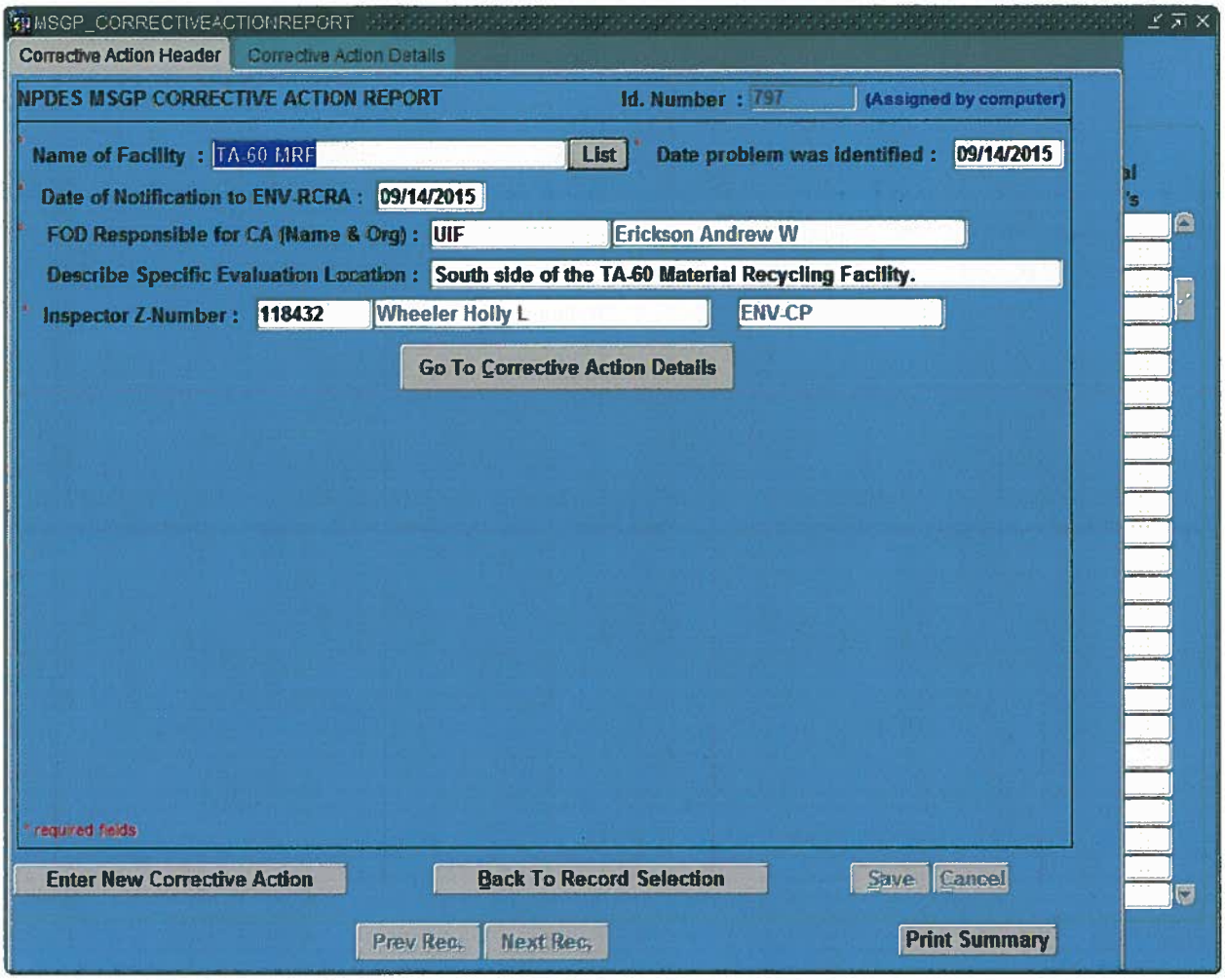
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Date of Notification to ENV-RCRA : 09/14/2015
FOD Responsible for CA (Name & Org) : UIF
Erickson Andrew W
Describe Specific Evaluation Location : South side of the TA-60 Material Recycling Facility.
Inspector Z-Number : 118432
Wheeler Holly L
ENV-CP
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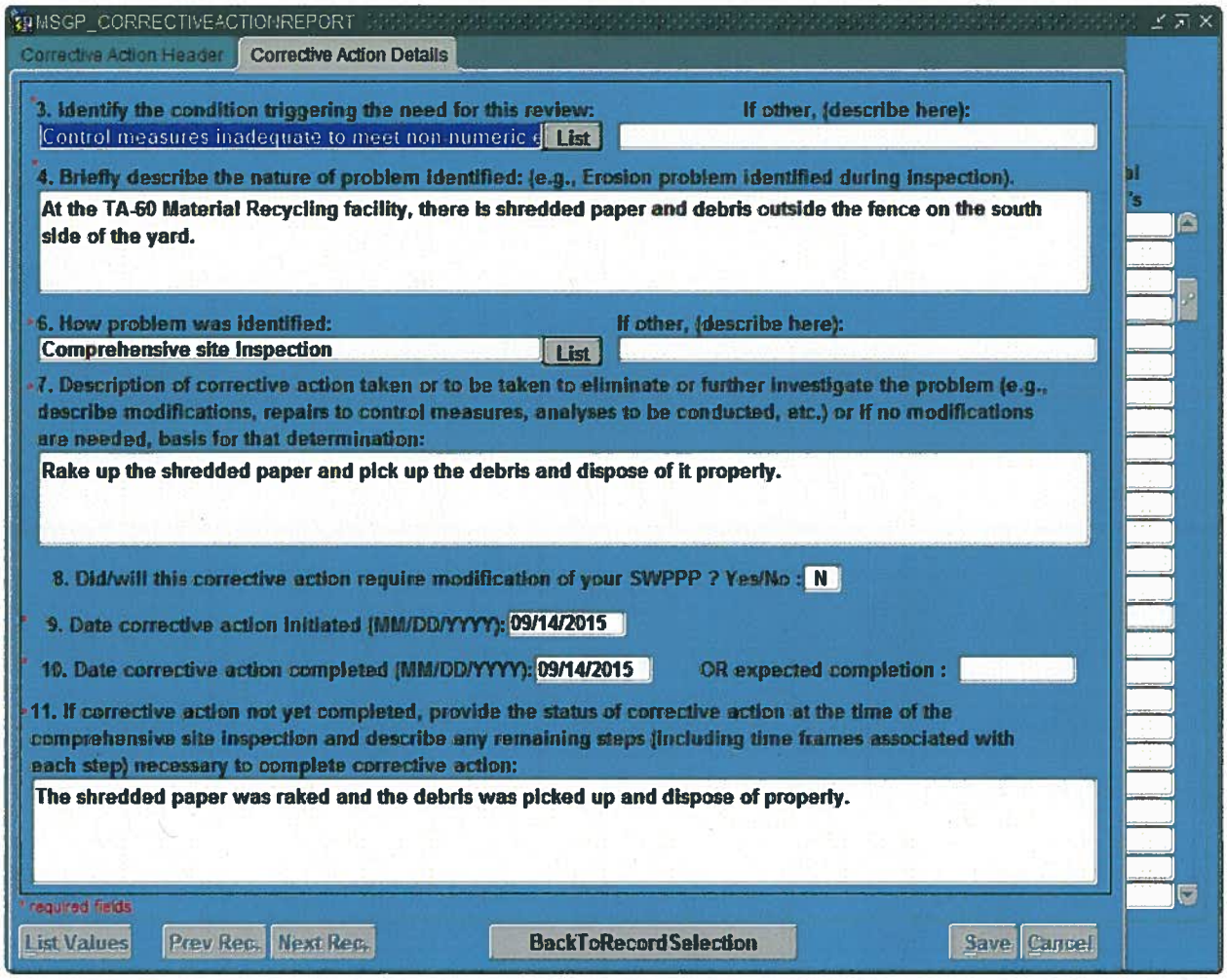
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3. Identify the condition triggering the need for this review:
Control measures inadequate to meet non-numeric
List
If other, (describe here):
4. Briefly describe the nature of problem identified: (e.g., Erosion problem identified during inspection).
At the TA-60 Material Recycling facility, there is shredded paper and debris outside the fence on the south side of the yard.
6. How problem was identified:
Comprehensive site inspection
List
If other, (describe here):
7. Description of corrective action taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications, repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:
Rake up the shredded paper and pick up the debris and dispose of it properly.
8. Did/will this corrective action require modification of your SWPPP ? Yes/No :
N
9. Date corrective action initiated (MM/DD/YYYY):
09/14/2015
10. Date corrective action completed (MM/DD/YYYY):
09/14/2015
OR 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:
The shredded paper was raked and the debris was picked up and dispose of properly.
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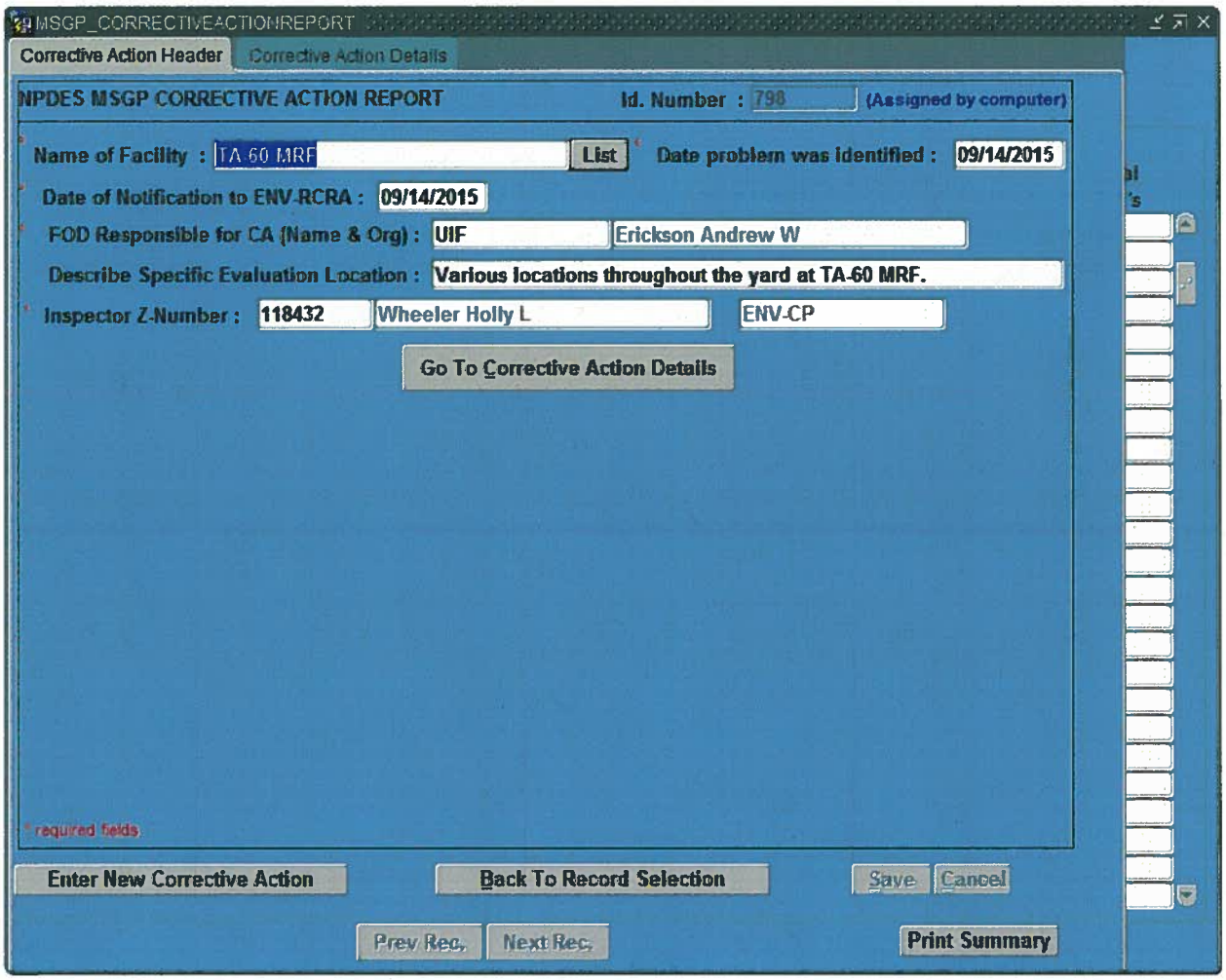
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List
Date problem was identified : 09/14/2015
Date of Notification to ENV-RCRA : 09/14/2015
FOD Responsible for CA (Name & Org) : UIF
Erickson Andrew W
Describe Specific Evaluation Location : Various locations throughout the yard at TA-60 MRF.
Inspector Z-Number : 118432
Wheeler Holly L
ENV-CP
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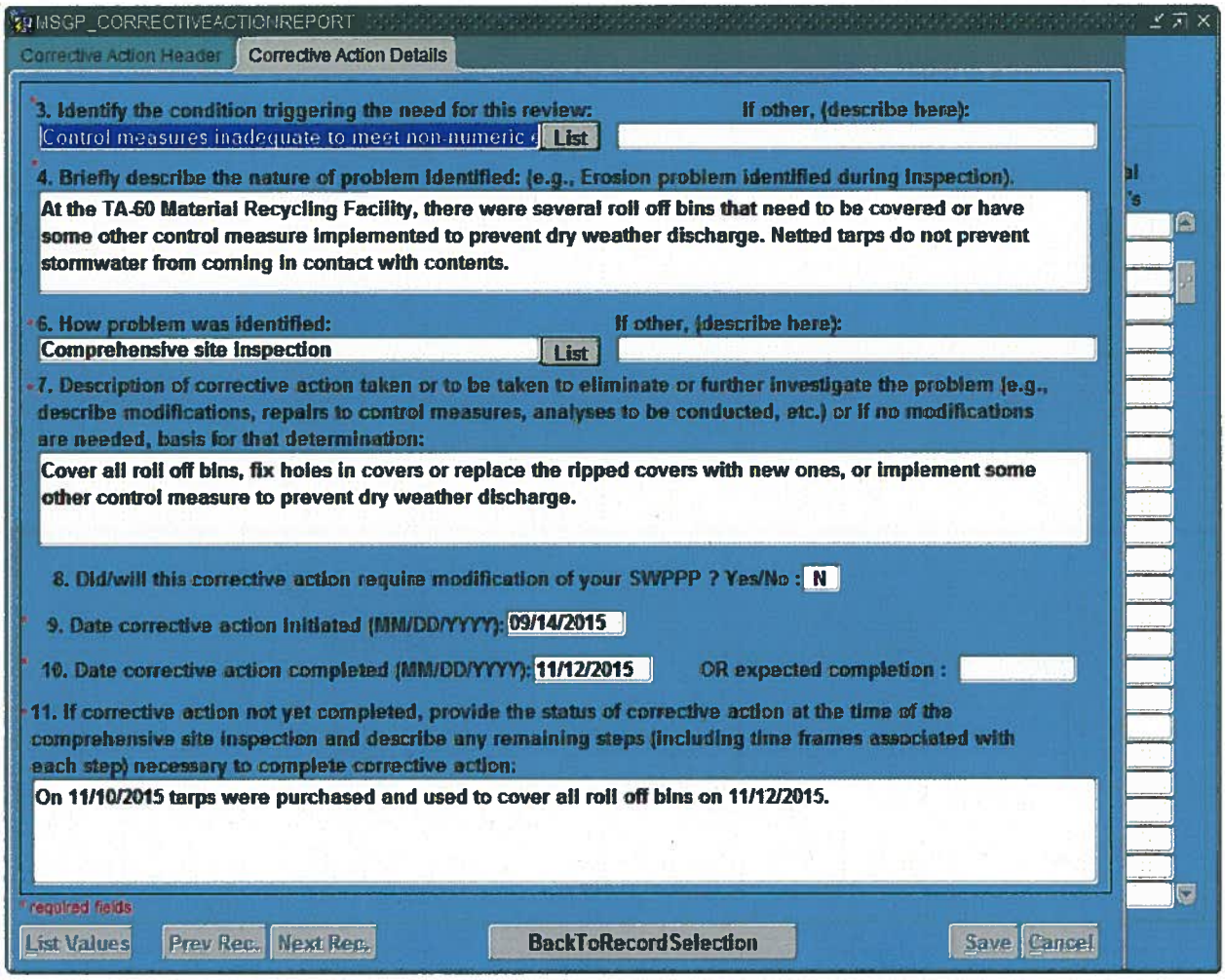
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Control measures inadequate to meet non-numeric
List
If other, (describe here):
4. Briefly describe the nature of problem identified: (e.g., Erosion problem identified during inspection).
At the TA-60 Material Recycling Facility, there were several roll off bins that need to be covered or have some other control measure implemented to prevent dry weather discharge. Netted tarps do not prevent stormwater from coming in contact with contents.
6. How problem was identified:
Comprehensive site inspection
List
If other, (describe here):
7. Description of corrective action taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications, repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:
Cover all roll off bins, fix holes in covers or replace the ripped covers with new ones, or implement some other control measure to prevent dry weather discharge.
8. Did/will this corrective action require modification of your SWPPP ? Yes/No :
N
9. Date corrective action initiated (MM/DD/YYYY):
09/14/2015
10. Date corrective action completed (MM/DD/YYYY):
11/12/2015
OR 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:
On 11/10/2015 tarps were purchased and used to cover all roll off bins on 11/12/2015.
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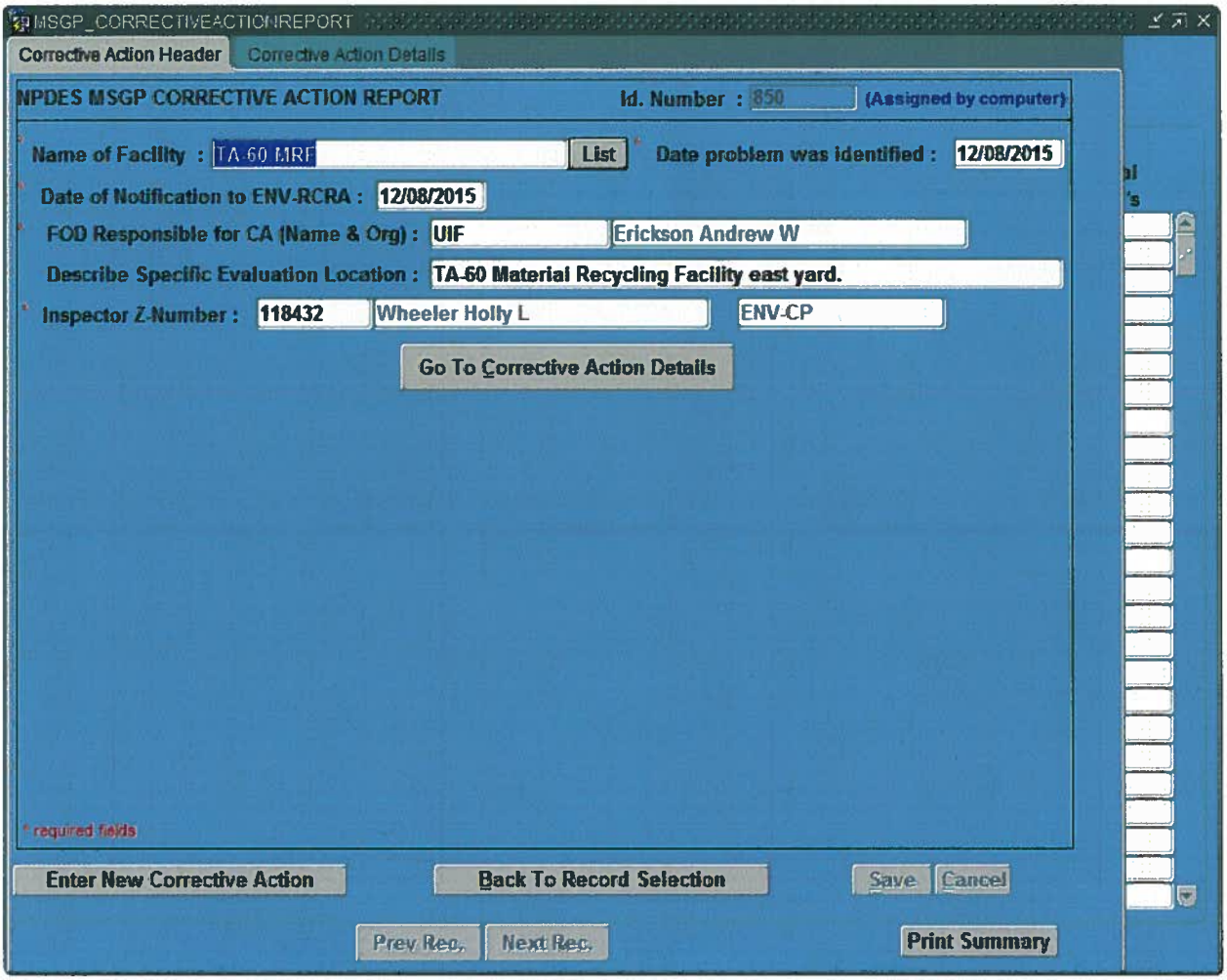
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Date of Notification to ENV-RCRA : 12/08/2015
FOD Responsible for CA (Name & Org) : UIF
Erickson Andrew W
Describe Specific Evaluation Location : TA-60 Material Recycling Facility east yard.
Inspector Z-Number : 118432
Wheeler Holly L
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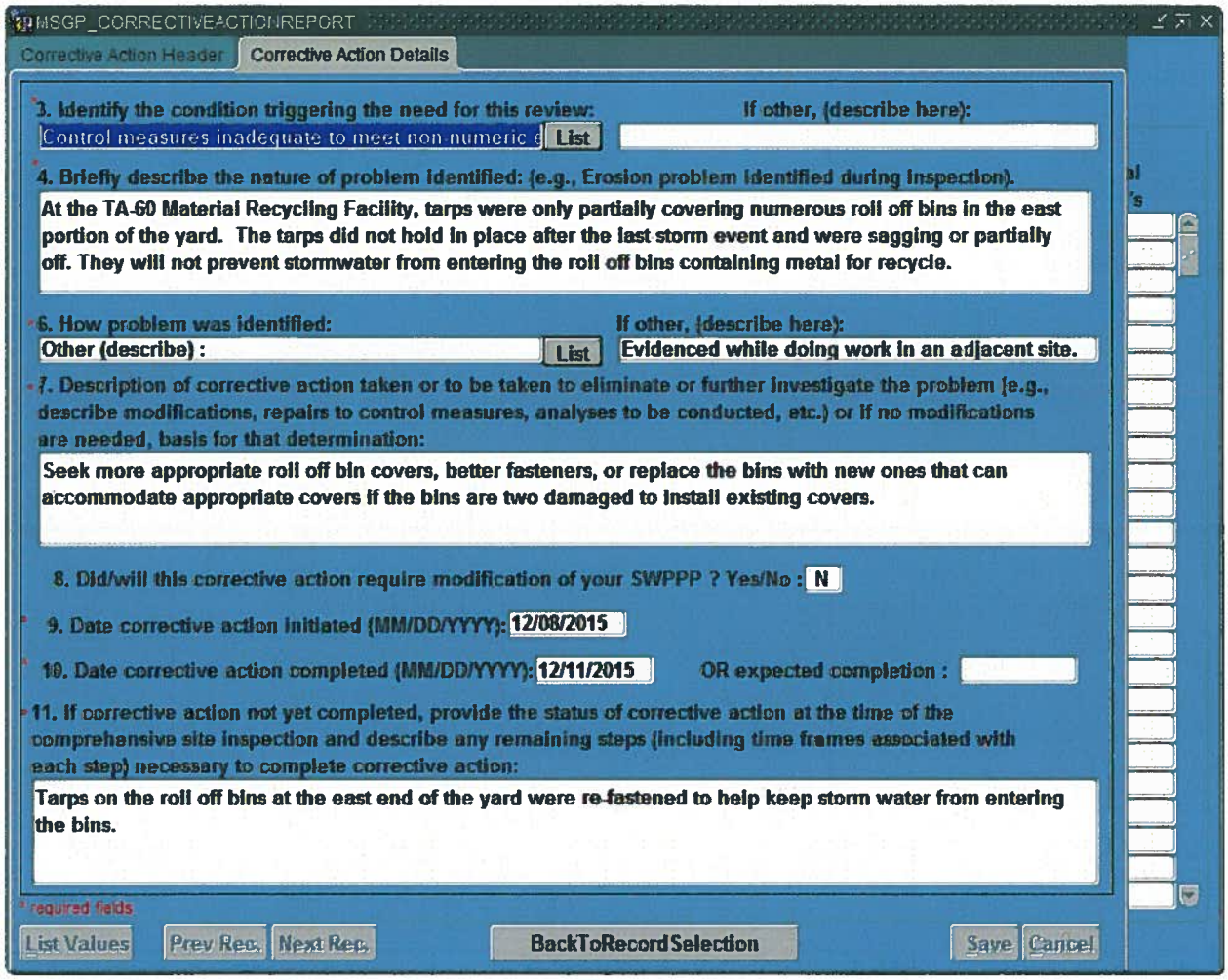
Print Summary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Corrective Action Details
3. Identify the condition triggering the need for this review:
Control measures inadequate to meet non-numeric c
List
If other, (describe here):
4. Briefly describe the nature of problem identified: (e.g., Erosion problem identified during inspection).
At the TA-60 Material Recycling Facility, tarps were only partially covering numerous roll off bins in the east portion of the yard. The tarps did not hold in place after the last storm event and were sagging or partially off. They will not prevent stormwater from entering the roll off bins containing metal for recycle.
6. How problem was identified:
Other (describe) :
List
If other, (describe here):
Evidenced while doing work in an adjacent site.
7. Description of corrective action taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications, repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:
Seek more appropriate roll off bin covers, better fasteners, or replace the bins with new ones that can accommodate appropriate covers if the bins are two damaged to install existing covers.
8. Did/will this corrective action require modification of your SWPPP ? Yes/No :
N
9. Date corrective action initiated (MM/DD/YYYY):
12/08/2015
10. Date corrective action completed (MM/DD/YYYY):
12/11/2015
OR 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:
Tarps on the roll off bins at the east end of the yard were re-fastened to help keep storm water from entering the bins.
* required fields
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Referenced Documents

No. P322-3
Revision: 4

Issued: 12/10/15
Effective Date: 12/10/15

Performance Improvement from Abnormal Events

1.0 PURPOSE

This document defines the process for notification and reporting of abnormal events at Los Alamos National Laboratory (LANL or the Laboratory). The abnormal event process is part of the LANL Contractor Assurance System (CAS), and is focused on effectively driving continuous performance improvement from each event. The intent of the investigative and analysis process is to understand and identify causes (both individual and organizational) that contributed to the event so that deficiencies identified can be addressed and corrected. Analyzing events promotes the values and concepts of a learning organization envisioned in the Integrated Safety Management (ISM) Program Feedback and Improvement function. Events that pose an immediate threat to life or property are subject to additional emergency notification requirements. See Section 2.3.

2.0 AUTHORITY AND APPLICABILITY

2.1 Authority

This document is issued under the authority of the Laboratory Director to direct the management and operation of the Laboratory, as delegated to the Contractor Assurance Officer (CAO), as provided in the Prime Contract. This document derives from the Laboratory Governing Policies, particularly the section on Management Systems, and SD320, *Los Alamos National Laboratory Contractor Assurance System Description Document*.

- Issuing Authority (IA): Contractor Assurance Officer (CAO)
- Responsible Manager (RM): Quality and Performance Assurance (QPA) Division Leader
- Responsible Office (RO): Quality and Performance Assurance–Performance Assurance (QPA-PA)

2.2 Applicability

This document applies to all Laboratory workers, including employees of Los Alamos National Security, LLC (LANS), its contractors/subcontractors, students, guests, affiliates, or visitors. This document applies to work-related events onsite, i.e., within the physical boundaries of LANL, and off-site when the workers are (1) in LANL pay status, and (2) working under LANL procedures and requirements. Events involving LANL workers that occur at another Department of Energy (DOE)/National Nuclear Security Administration (NNSA) contractor site and where the work is under that site's procedures and requirements are managed by that site's abnormal event process.

Abnormal events include all abnormal conditions, accidents, incidents, or deviations from the planned outcome of a workplace activity that did or could have adversely affect(ed) health or safety of workers, the public, the environment, or the integrity of LANL programs or facilities.

Roles assigned in this document are based on P313, *Roles, Responsibilities, Authorities, and Accountability*. Key roles are filled by the Facility Operations Directors (FODs) and trained occurrence investigators from QPA-PA who support the FODs. The term FOD in this document refers to individuals in the Nuclear and High-Hazard Operations Directorate (NHHO). However, for events that do not fall within the boundary of an NHHO-managed FOD Unit, institutional program managers may fill the FOD role as defined in DOE O 232.2, *Occurrence Reporting and Processing of Operations Information*. Examples may include the following:

- construction/demolition project managers for events within their project;
- Subject Matter Experts (SMEs), such as managers from Environmental Protection (ENV) for environmental-related notices of violation, Operations Support-Packaging and Transportation (OS-PT) for P&T-related institutional events, and the Safety Basis Office for institutional-related safety basis issues;
- senior management for wildland fires impacting LANL property;
- institutional program owners such as for the beryllium, crane, hoisting and rigging, and electrical safety programs for multi-facility events or events with institutional impact; and
- the Laboratory Director or designee for Team Investigations.

Although programmatic management or SMEs may assume ownership of the event, the local area FOD and/or the Associate Director for Nuclear and High-Hazard Operations (ADNHHO) should be engaged to provide guidance, the infrastructure, and resources necessary to ensure consistent application of the reporting process.

Management authority and responsibility for execution of the abnormal event process are assigned to the FODs. FODs may delegate responsibilities and authorities for the abnormal event process to Operations Managers or Duty Officers. Facility-owning Responsible Associate Directors (RADs) establish their involvement in the process through agreements with the FODs. QPA-PA maintains details of and procedures for the abnormal event process on the Occurrence Reporting webpage and in the current Functional Series Document (FSD) QPA-PA-FSD-003, *Abnormal Events Handbook*. The FSD describes in detail all the aspects of the LANL abnormal event reporting process, including event discovery, notification, categorization, fact finding, investigation, causal analysis, and final report preparation. Attachment A, *Abnormal Event Categorization Criteria*, of the FSD provides SME guidance (e.g., from health and safety, ENV, Suspect/Counterfeit Items Coordinator [SCIC], Safety Basis, P&T) to assist the FOD/designee with event categorization. The FSD defines the roles and responsibilities for the FODs, occurrence investigators, and the necessary support personnel.

2.3 Precautions and Limitations

Processes related to Operational Emergencies (OEs), security incidents, and the Price-Anderson Amendments Act (PAAA)/Worker Safety and Health (WSH) program are beyond the scope of this document, and in some instances preempt requirements of this document. Examples follow.

Operational Emergencies (OEs). Events requiring emergency response (e.g., explosion, fire, hazardous material release) are subject to categorization, notifications, and response under PD1200, *Emergency Management*, and SEO-DO-PLAN-100, *Hazardous Materials Program Emergency Plan*, available through the Emergency Operations Center at 667-6211, plus any facility-specific emergency management plans and procedures. For the duration of emergency conditions, Security and Emergency Operations (SEO) personnel and procedures take precedence and preempt the requirements of this document.

Workers witnessing or involved in such events must immediately request assistance by calling 911 and/or Security and Emergency Operations-Emergency Management (SEO-EM, 667-6211) as noted in Attachment A, *Abnormal Event Process*.

It is recommended that the FOD/RAD and/or line management contact SEO Division immediately for assistance with severe events that do or might meet OE criteria. SEO personnel manage all verbal and written communications regarding a declared OE, both internal and external to LANL and from declaration through termination of the emergency condition.

After SEO personnel terminate the OE, the FOD regains control of the event scene and the balance of the abnormal event process proceeds according to this document.

Security Incidents. Workers must report incidents of known or potential security concern to the Security Incident Team (SIT) in accordance with requirements in P201-3, *Reporting Known and Potential Incidents of Security Concern. Events strictly of security concern are not subject to the requirements in this document.* For events that present components of security concern but also safety or operational issues, the FOD must work with the SIT to ensure requirements of this document and P201-3 are met. Contact the SIT for assistance with the security incident program.

Price-Anderson Amendments Act/Worker Safety and Health (PAAA/WSH). Events at all levels of severity (Occurrence Reporting and Processing System [ORPS] and Sub-ORPS) are subject to all requirements in this document, but also to additional screening and possibly reporting to the DOE Noncompliance Tracking System (NTS) in accordance with P141, *Price Anderson Amendments Act (PAAA), Worker Safety and Health (WSH), and Classified Information Security (CIS) Enforcement Procedure*. Contact the local PAAA Point of Contact and/or PAAA Coordinators in the QPA PAAA Program Office for assistance with this program.

3.0 PROCEDURE DESCRIPTION

The Laboratory implements a graded approach for investigating and resolving abnormal events. See Table 1 for a summary of the three-tier graded approach, and Attachment A, *Abnormal Event Process*, for the process flow at each of the three tiers.

Table 1. Graded Approach to Abnormal Events

Event Type	Examples	Who Investigates/Resolves
Certain high-profile Occurrence Reporting and Processing System (ORPS)-reportable events (i.e., Operational Emergency [OE], Significance Category [SC]1 or Significance Category Recurring [SCR]) may be subject to a Team Investigation	▪ Fatality, terminal or disabling injury ▪ Criticality accident or near miss ▪ Radiation exposure exceeding limits for a worker or member of the public	▪ A team appointed by the Laboratory Director (DIR) or designee investigates events and resolves concerns. ▪ Management oversees Corrective Action Plan (CAP) and response in accordance with the charter memo (see Section 3.11). In the absence of a charter memo, the Contractor Assurance Officer (CAO) will assign the CAP oversight responsibility. ▪ A team appointed by the Facility Operations Director (FOD)/ Responsible Associate Director (RAD) investigates events and resolves concerns.
Low- to moderate-significance ORPS-	▪ Injury requiring hospitalization	▪ FODs and qualified Quality and Performance Assurance–

reportable events that exceed the ORPS thresholds	▪ Failures of safety-required equipment ▪ Moderate-hazard electrical shock events ▪ Violations of safety requirements	Performance Assurance (QPA-PA) investigators investigate event. ▪ Appropriate Management Review Boards (MRBs) oversee corrective action.
Sub-ORPS events that fall below the ORPS thresholds	▪ Minor workplace incidents or near misses ▪ Minor equipment failures ▪ Operational concerns resulting in pause or stop work	▪ Improvement Responsible Managers (IRMs) from the facility or program where the event occurred investigate event. ▪ Local MRB oversees corrective action.

3.1 Notify Management of an Abnormal Event

Abnormal events at LANL require immediate management notifications. Workers generally witness first hand or discover evidence of abnormal events, and must recognize the abnormality, stabilize the situation to the extent possible and safe to do so (e.g., pause or stop work), and initiate the notifications to their chain of facility and line management.

Workers who are involved in any abnormal event or who discover any abnormal condition must do the following:

- notify their immediate supervisor, or the first immediately available manager in the worker's chain of command; and
- notify the FOD or designee if required by local procedures or if their immediate supervisor is unavailable.

Supervisors and first line managers, group-level managers, and division-level managers who are notified by a worker or in any way become aware of an abnormal event must do the following:

- ensure notification of the FOD/designee for all abnormal events;
- notify the first immediately available manager in their upward chain; and
- follow any additional FOD or RAD expectations for additional notifications.

RADs, upon being notified of an abnormal event in their facility and based on the significance of the event, should do the following:

- consult with the FOD/designee on response to the event and to ensure that compensatory measures for significant conditions adverse to quality are in place prior to the resumption of work;
- notify their Principal Associate Director (PAD);
- notify the DIR; and
- notify affected sponsors or external program managers of the involved facility or project.

The management notifications described above are generally verbal. The FOD is responsible for official written notification of the event in accordance with Section 3.3.

3.2 Categorize the Event

The FOD categorizes all nonemergency abnormal events within two hours of the discovery date/time, or as soon thereafter as reasonably possible. This categorization is critical because it sets the course for the level of investigating and reporting and the subsequent involvement of investigators. The FOD or designee must gather key facts, decide whether an abnormal event has in fact occurred, and categorize the event as either ORPS reportable or Sub-ORPS reportable. Categorization follows the reporting criteria of DOE O 232.2, *Occurrence Reporting and Processing of Operations Information*. DOE reporting and categorization criteria and QPA-PA procedures are found on the Occurrence Reporting webpage. Events falling below the ORPS thresholds are processed as Sub-ORPS. See Section 3.10.

The event categorization establishes the next steps, including the following:

- External notifications to include the DOE/NNSA-Los Alamos Field Office (NA-LA) Facility Representative (FR) and possibly DOE Headquarters Operations Center (HQ OC).
- Reporting timelines.
- Rigor applied to the investigation, causal analysis, and corrective action development.
- Approvals required for the final report.

Categorization places each ORPS-reportable event into a Significance Category (SC) based on DOE requirements as follows:

- OE (as defined in DOE O 151.1C, *Comprehensive Emergency Management System*). Major unplanned or abnormal events or conditions that: involve or affect DOE/NNSA facilities and activities by causing, or having the potential to cause, serious health and safety or environmental impacts; require resources from outside the immediate/affected area or local event scene to supplement the initial response; and, require time-urgent notifications to initiate response activities at locations beyond the event scene. OEs are the most serious occurrences and require an increased alert status for onsite personnel and, in specified cases, for offsite authorities.
- SC 1. Non-OE events that caused actual harm; posed the potential for immediate harm or mission interruption due to safety system failure and required prompt mitigative action; or constituted an egregious noncompliance with regulatory requirements that created the potential for actual harm or mission interruption.
- SC 2. Circumstances that reflected degraded safety margins necessitating prompt management attention along with modified normal operations to prevent an adverse effect on safe facility operations; worker or public safety and health, including significant personnel injuries; regulatory compliance; or public/business interests.
- SC 3. Events or circumstances with localized implications including personnel injury, environmental releases, equipment damage or hazardous circumstances that were locally contained and did not immediately suggest broader systemic concerns.
- SC 4. Events or circumstances that were mitigated or contained by normal operating practices, but where reporting provides potential learning opportunities for others.
- SC R. Recurring occurrences are those identified as recurring, either directly or through periodic analysis of occurrences and other non-reportable events.

If early information is incomplete, the FOD must categorize conservatively (at the higher level being considered) within two hours, then adjust the category at the fact finding (the worker-involved meeting to discuss the abnormal event) or as more information becomes available.

Note: Disputes about categorization may be encountered at any time in the ORPS process but are most common on initial, pre-fact finding categorization or in the management close out portion of the fact finding (see Section 3.3). Differences of opinion are most common in subjective cases falling under Group 10, *Management Concerns/Issues*, but may occur in cases falling under the more objective Groups 1–9 (see QPA-PA-FSD-003, *Abnormal Events Handbook* for definitions of these groups). If consensus on categorization is not possible (e.g., disputes involving the NA-LA FR), the FOD is responsible for coordinating with the RAD and resolving the dispute. If necessary, the FOD and RAD are expected to escalate the decision via the appropriate LANL chain of command. The investigator should remain advisory to this discussion, bringing to the table knowledge of prior similar event categorizations and, as possible, fostering institutional consistency even in the most subjective areas of the categorization process.

Note: If, in the investigator's professional opinion, a reporting decision finalized by the FOD is clearly inconsistent with the objective elements of the DOE reporting criteria, the investigator must advise the FOD of this opinion, explain the technical basis for the opinion, and attempt to negotiate resolution. If the discrepancy remains unresolved, the investigator must report the unresolved disagreement to the QPA-PA Group Leader for his/her advice and possible direct involvement in the discussion with ADNHHO, if necessary.

3.3 Transmit Prompt (E-mail) Event/Incident Notification

As soon as possible after categorization, the FOD or designee sends an Event Notification to key stakeholders both inside and outside LANL with the best available information about the event. The Event Notification is sent to nhhonotification@lanl.gov and includes the following information:

- Date/time of discovery
- Date/time of categorization
- FOD and RAD
- Location of the event (TA/Building; facility name, room)
- Event title and description
- Whether the event is ORPS-reportable or Sub-ORPS
- If ORPS reportable, include the significance category, the event reporting criterion, and whether or not a fact finding will be held.

3.4 Fact Finding for the Event

The fact finding is a discovery and learning opportunity that is the central, first step in launching an effective partnership between workers, supervisors, and managers to understand events and conditions. The purpose of a fact finding is to have workers discuss the various facts surrounding an event and any associated conditions, both positive and negative, with an overall objective to learn and improve.

Fact findings consist of two functional parts: (1) the required worker/responder segment, with the purpose of listening to the story as told by involved workers and responders, understanding and learning about the event, and reviewing compensatory actions already taken; and (2) the management closeout segment for supervisors/managers, where workers/responders are typically excused and discussion focuses on additional immediate or compensatory actions, confirmation and/or determination of categorization, and the scope of the investigation and causal analysis as well as consideration for any extent of condition evaluation.

The FOD has the responsibility and authority for the fact finding process. Fact findings are optional at FOD and/or RAD discretion, based on whether a discussion of the facts surrounding the event provides a reasonable opportunity for organizational learning. Examples of events that may not warrant a fact finding include receipt of Notices of Violation (NOVs), environmental related releases, and discovery of Suspect Counterfeit Items (S/CIs).

All fact findings at the Laboratory should meet the following four key expectations:

- **Conduct fact finding (if held) in a timely manner to ensure reporting requirements are met.** See Table 2 for reporting timelines.
- **Attendance in the worker/responder portion of the fact finding should include those individuals involved in the event, including immediate response personnel.** The FOD is responsible to work with the RAD and ensure that the necessary attendees are identified and invited to the fact finding. Recommended attendance at the worker/responder portion of fact findings is as follows ***(Note:*** an asterisk indicates the minimum recommended attendance):
  - FOD*
  - Involved worker(s)*
  - QPA-PA investigator* (for ORPS)
  - FOD Improvement Management Coordinator (IMC)* (required for Sub-ORPS)
  - Witnesses
  - Key responders*
  - Immediate supervisor/manager of involved worker(s)
  - Key SMEs (e.g., Health Physicist [HP], Industrial Hygienist [IH], electrical Authority Having Jurisdiction [AHJ])
  - PAAA office coordinator (invited)
  - NA-LA FR (invited)
  - Defense Nuclear Facilities Safety Board (DNFSB) representative (invited for nuclear facilities)
  - Nuclear Criticality Safety Committee (invited for all criticality safety-related fact findings)

FODs must invite the PAAA office coordinator, the NA-LA FR, and DNFSB representative to all fact findings (DNFSB representative for nuclear facilities only), but attendance is at their discretion. Phone, e-mail, or pager messages can serve as notification.

Attendance by line management is optional; however, immediate supervisors and managers are encouraged to attend fact findings. It is important to maintain the fact finding as a discovery and learning exercise, not a management briefing, an investigation, or a corrective action session. Therefore, it is the FOD/RAD's authority to manage the attendance size of the fact finding. Additional guidance for fact finding attendance is available in QPA-PA-FSD-003, *Abnormal Events Handbook*.

The PAAA office coordinator, NA-LA FRs, Nuclear Criticality Safety Committee representative (for criticality safety related events), and DNFSB representatives must be invited to all fact findings, but attendance is at their discretion and timely held fact findings will proceed on schedule even in the absence of these parties. These attendance guidelines for LANL fact findings apply equally to all events, from minor to the most severe.

- **Attendees must strive to arrive at the fact finding with relevant documentation (e.g., photos, schematics, change notices, work packages, and/or relevant procedures/policies) to support establishment of the factual information**.
- **The fact finding must be an open discussion forum that exhibits all of the attributes of a positive safety culture**. A healthy fact finding process is one cornerstone of a learning organization and, if well executed, will result in management and employees continually exhibiting all of the positive safety culture attributes of leadership, employee engagement, and organizational learning.

Positive safety culture attributes suggested for all LANL fact findings are listed below. These elements honor Human Performance Improvement (HPI) principles and should be encouraged by managers and attendees involved in all fact findings.

- All individuals directly involved in the event are in attendance.
- The facilitator/FOD, and management in attendance, set and maintain the tone for the fact finding as an open, no-fault, candid, learning environment at all times. If necessary, the facilitator/FOD promptly reminds those in attendance of the ground rules and prevents overt or covert placing of blame. The facilitator/FOD will excuse any individual who will not exhibit this or any other positive safety culture attribute.
- The dialogue is open and professional and all in attendance are treated equally and respectfully.
- There is no evidence of placing blame.
- Directly involved employees do most of the talking with minimal interruptions.
- Management and all attendees are actively listening. Body language and actions suggest genuine interest in hearing and learning from involved workers and responders.
- As a rule, attendees are to refrain from cell phone use, including texting or e-mail, and should not engage in any other distracting behavior during a fact finding. Fact finding attendees, especially management and oversight, do not shift the discussion towards a pre-conceived determination of individual failures in responsibility.
- Attendees do not prevent the free flow of factual information.
- Individuals should be comfortable and willing to speak up regarding the facts, including what they observed.
- The emphasis of the fact finding is on discovery, learning, and understanding the conditions associated with the event, rather than responsibility, cause, or correction.
- Participants demonstrate the intent to question, learn, and engage others to understand all aspects of an event and underlying conditions.
- Attendees discuss what went "right" in addition to what went "wrong."
- FOD/RAD and/or facilitator recognize and commend participants for self-identification of errors and/or the demonstration of behaviors consistent with positive safety culture principles.

Involved workers, responders, managers and SMEs called upon to attend the fact finding must candidly explain the sequence of events leading up to, during, and immediately following the event. Though constructive, technical, and professional debate is considered healthy and is encouraged, participants must remain cordial and professional in their demeanor and must cooperate fully with the FOD and/or fact finding facilitator.

3.5 Open Event Record in the Performance Feedback and Improvement Tracking System (PFITS) and ORPS

For all ORPS-reportable events, the IMC opens a record in PFITS and the QPA-PA investigator as the agent for the FOD or designee enters a parallel record into the DOE ORPS system. PFITS maintenance beginning at this step is according to the locally applied Performance Feedback and Improvement (PFI) processes, administered with support of IMCs.

Note: For Sub-ORPS events where review showed that no significant event or condition occurred or existed, such as a false fire alarm, entry of a record into PFITS is only required if facility and line management determine that additional review and corrective action is required.

Consistency between the ORPS and PFITS systems is ensured at this stage when the IMC attaches the written ORPS Notification Report to the PFITS record. The QPA-PA investigator provides assistance to the FOD in generating the Notification Report, or for SC 4 events, the Notification/Final Report, in the ORPS system. Upon FOD or designee approval, the QPA-PA investigator must submit Notification Reports to the ORPS system according to Table 2.

Table 2. Timeline for Submission of Notification Reports in ORPS System

Significance Category	Timelines*
Operational Emergencies (defined by DOE O 151.1C, *Comprehensive Emergency Management System*)+	▪ Categorize: ASAP ▪ Prompt Notification: 30 min ▪ (15 min if further classified) ▪ Written Notification: Close of Business (COB) the day following the event categorization, not to exceed 90 hours ▪ Final Report: 45 calendar days
Significance Category 1	▪ Categorize: 2 hours ▪ Prompt Notification: 2 hours ▪ Written Notification: COB the day following event categorization, not to exceed 90 hours ▪ Final Report: 45 calendar days
Significance Category R	▪ Categorize: Time of SC R determination ▪ Written Notification: COB 2 business days after event categorization ▪ Final Report: 45 calendar days
Significance Category 2^	▪ Categorize: 2 hours ▪ Prompt Notification: 2 hours ▪ Written Notification: COB the day following event categorization ▪ Final Report: 45 calendar days
Significance Category 3^	▪ Categorize: 2 hours ▪ Prompt Notification: 2 hours ▪ Written Notification: COB 2 business days after the event categorization ▪ Final Report: 45 calendar days

Table 2. Timeline for Submission of Notification Reports in ORPS System	
Significance Category	**Timelines***
Significance Category 4^	▪ Categorize: 2 hours ▪ Prompt Notification: 2 hours (if required) ▪ Written Notification/Final Report: COB 2 business days after the event categorization
+ Categorization and Prompt Notification requirements are in accordance with DOE O 151.1C, *Comprehensive Emergency Management System*. * Categorization Time is from Discovery date, and time. Notification is from Categorization date and time. Written Notification is from Categorization date, and time. ^ Specific Significance Category 2, 3, and 4 occurrences (identified with * in DOE O 232.2, *Occurrence Reporting and Processing of Operations Information,* Attachment 2, *Reporting Criteria*) also require Prompt Notification to the DOE Headquarters Emergency Operations Center (HQ EOC).	

3.6 Investigate

Investigations are required for ORPS-reportable events, and are normally conducted by the QPA-PA investigator. Investigations for Sub-ORPS events are required only for more significant events (see Table 1 for examples). Sub-ORPS investigations, if performed, are generally led by the IRM with assistance from the IMC (see Section 3.10). The most serious events (see Table 1) are investigated by a multidisciplinary team (see Section 3.11). All investigations of abnormal events are graded to the risk or significance of the event, and are performed by individuals trained according to P322-1, *Causal Analysis and Corrective Action Development*. Additional ORPS and causal analysis grading detail is available in the current FSD, QPA-PA-FSD-003, *Abnormal Events Handbook*.

The lead investigator may consult with SMEs, to include HPI Practitioners, as deemed necessary to understand the specific event.

3.7 Determine Causal Factors

Causal analysis is required for ORPS events in SCs OE/1/2/3/R, and is optional for SC 4 or Sub-ORPS events or conditions. ORPS causal analysis is led by the QPA-PA investigator as the agent of the FOD, or by the Team Chair for Team Investigations (see Section 3.11). Causal analysis for Sub-ORPS events is required only for more significant events, in accordance with criteria found in P322-4, *Laboratory Performance Feedback and Improvement Process*.

Generally, the IRM leads the sub-ORPS causal analysis, if performed. The IRM may request assistance from the IMC or other support personnel. HPI-trained personnel may also assist with Sub-ORPS event analysis, as requested by the owning FOD or RAD management (see Section 3.10).

The target for completion of an ORPS causal analysis is 20 business days after categorization of the event. A similar timeframe is recommended but not required for Team Investigations and Sub-ORPS events (see Attachment A, *Abnormal Event Process*). For all abnormal events the causal analysis is performed as described in P322-1, *Causal Analysis and Corrective Action Development.*

3.8 Develop Corrective Actions

Corrective action development in response to identified causal factors is the same for all abnormal events (events requiring Team Investigations, ORPS-reportable events, and Sub-ORPS events) and follows event-related PFI processes within facilities and programs. PFI processes are described in P322-1, *Causal Analysis and Corrective Action Development* and P322-4, *Laboratory Performance Feedback and Improvement Process*.

Recording and tracking of corrective actions occurs in both the DOE ORPS and the LANL PFITS systems. Upon FOD or designee approval, the QPA-PA investigator enters corrective action statements into the ORPS Final Report. The IMC manages detailed action plans and all tracking of actions to closure, including changes to the due date or content of the action, using the PFI process and the PFITS system. For ORPS corrective actions in final reports of OE, SC R, SC 1 or SC 2 significance level, it is at the FOD/RAD discretion to obtain NA-LA FR approval for any target date or corrective action text changes.

ORPS Final Reports are completed within 45 calendar days from categorization of the event (except SC 4, for which Notification/Final Reports are completed in two business days, with corrective actions optional). See Attachment A, *Abnormal Event Process*. Extensions beyond 45 days are coordinated between the FOD and QPA-PA investigator, and require FOD concurrence. Team Investigations follow a schedule established in the charter process. See Section 3.11.

Closure of Sub-ORPS events that are entered into PFITS follows requirements in P322-4. The IMC maintains all material that supports any investigation/evaluation and closure of the Sub-ORPS event in the PFITS record (see Section 3.10).

3.9 Submit Final Report in PFITS and ORPS

For ORPS-reportable events, FODs approve by signature and own the Final Report. QPA-PA staff assist with filling all required Final Report fields and obtaining Derivative Classifier (DC) review. With IMC support, QPA and the FOD ensure recording of the ORPS Final Report in the PFITS system. The PFITS record comprises the official record of corrective actions and concurrence of all assigned action owners.

The QPA-PA investigator enters Team Investigation reports into the ORPS system, but the investigations are also conducted and published in accordance with the conditions of the Team Investigation charter memo. See Section 3.11.

3.10 Sub-ORPS Events

By definition, Sub-ORPS events include all events reported by the FOD in an Event/Incident Notification that do not meet any ORPS threshold. The Laboratory does not publish de minimis criteria or a “floor” for incidents warranting Event/Incident Notification, i.e., Sub-ORPS reporting. FODs are expected to use operational experience, professional judgment, and common sense in their decisions. The ADNHHO is authorized and responsible for guidance and oversight of the Sub-ORPS reporting decision process.

Management notifications (see Section 3.1), categorization by the FOD (see Section 3.2), and Event Notification (see Section 3.3) apply to both ORPS and Sub-ORPS events. Process steps described in Sections 3.4 through 3.9 are carried out for Sub-ORPS events with the roles shifted from the FOD and QPA-PA investigators to responsible managers and IMCs in the facilities and programs. These differences from ORPS-reportable events are noted in each section above. (See Sections 3.1 through 3.9).

The IMC enters sub-ORPS records into PFITS and assigns them the appropriate level of the PFI significance hierarchy based on criteria in P322-4, *Laboratory Performance Feedback and Improvement Process*, and, if applicable, P141, *Price Anderson Amendments Act (PAAA), Worker Safety and Health (WSH), and Classified Information Security (CIS) Enforcement Procedure*.

3.11 Team Investigations

The highest level of investigation, analysis, and corrective action development is reserved for the most significant, high-risk ORPS-reportable occurrences. Team Investigations are undertaken based on LANL prerogative, most commonly for certain OEs and the most serious or recurrent nonemergency events (e.g., SC 1 and SC R [see Table 1 for details]). Team Investigations are chartered formally by the DIR or designee, generally involve more formal investigation and causal analysis methods, and are followed by a more comprehensive corrective action process than routine ORPS investigations. As part of the Team Investigation process, the senior management and ORPS investigator must establish support staff to enter the results of the evaluation into the PFI process, which is typically the IMC of the affected FOD organization.

The sponsoring group should recommend that the following individuals participate in the Team Investigation:

- FOD with responsibility for the facility
- RAD with responsibility for the facility and/or the programmatic activities involved in the event
- ADNHHO
- ORPS investigator and/or assigned causal analyst
- Administrative support
- Technical writer/editor
- SMEs (to include safety experts, technical SMEs, and/or HPI Practitioners)

Note: The charter memo outlines the team membership, the scope of the investigation, the team deliverables, due dates, and the accepting authority for the investigation results. However, small teams may be tasked by a FOD and/or RAD without a charter memo to enhance organizational involvement and learning from the investigation process. For ORPS-reportable events, the QPA-PA investigator enters the results of the Team Investigation into the ORPS system.

When a Team Investigation is declared, the FOD ensures the event scene is preserved and authority for managing access to the scene is formally turned over to the Team Chair.

Team members and consultants are appointed as needed, up to full-time, to the investigation. The Team Chair has authority to enlist additional resources (safety experts, HPI Practitioners, etc.) as deemed necessary. Sponsoring senior management determines and approves any resource and cost allocations for the team's effort. All members of the team fulfill their responsibilities in accordance with the charter memo.

In addition, while not usually stipulated in the investigation charter, management and/or the investigation sponsor and the investigation team must consider the logistics for the investigative effort and should consider development and management of a corrective action plan after the investigation report is accepted.

4.0 RESPONSIBILITIES

4.1 Laboratory Director, Deputy Director, or designated Team Investigation Sponsor

- Initiates formal Team Investigations through a charter memorandum.
- Receives and approves final reports from Team Investigations.
- Assigns RAD or other manager to oversee CAP development following the Team Investigation report submittal and acceptance.

4.2 Associate Directors (as Facility-Owning Responsible Associate Directors [RADs])

- Establish agreement with each sponsored FOD regarding roles, responsibilities, and RAD involvement in the abnormal event process, including categorization, fact finding, corrective action development, and report approval.
- Coordinate with the FOD on an effective PFI process that enables the timely closure of ORPS (45 days) and Sub-ORPS reports and/or records.
- For events warranting Team Investigations in an owned facility, participate as members of the local team and/or appoint a local team to conduct the investigation.
- Ensure that compensatory measures for significant conditions adverse to quality are in place prior to the resumption of work.

4.3 Group- and Division-Level Managers

- Ensure that the appropriate immediate management notifications of abnormal events are made, compliant with facility and organizational expectations.
- Cooperate with FOD, FOD staff, and QPA-PA investigators in all steps of event fact finding, Event Notification, investigation, causal analysis, and corrective action development.
- Participate in the Sub-ORPS process in accordance with FOD/RAD agreements and local PFI processes.

4.4 Supervisors/First Line Managers

- First and foremost, ensure personnel safety as part of any response.
- Ensure timely notification of the FOD and first available line manager (group-level or above) for every abnormal event within their work area or span of supervision.
- Ensure scene stabilization and evidence preservation when safe to do so.
- Cooperate with the FOD, FOD staff, and QPA-PA investigators in all steps of event fact finding, Event Notification, investigation, causal analysis, and corrective action development.

4.5 Workers

- Report to supervisors or first line managers any abnormal event or condition, whether within or beyond the bounds of the assigned work area.
- Participate candidly and openly when invited to fact findings of abnormal events, or when interviewed as part of the investigation.
- Cooperate with the FOD, FOD staff, and QPA-PA investigators in all steps of event fact finding, Event Notification, investigation, causal analysis, and corrective action development.

4.6 Associate Director for Nuclear and High Hazard Operations (ADNHHO)

- Supports performance of all Team Investigations.
- Responsible for the sub-ORPS reporting decision process.

4.7 Contractor Assurance Officer

- Support performance of all Team Investigations.

4.8 Facility Operations Directors (FODs) (as defined in Section 2.2)

- Establish agreement with each sponsoring RAD regarding roles, responsibilities, and RAD involvement in the abnormal event process, including categorization, fact finding, corrective action development, and report approval. Written agreements are recommended but not required.
- Categorize each abnormal event within 2 hours of discovery, or as soon thereafter as reasonably possible.
- Conduct fact findings (if held) in a timely manner to ensure reporting requirements are met. See Table 2 for reporting timelines.
- As soon as possible after categorization, transmit an Event/Incident Notification describing the event to nhhonotification@lanl.gov.
- Ensure that required notifications to NA-LA FRs and DOE HQ OC are made within required timelines.
- Ensure that compensatory measures for significant conditions adverse to quality are in place prior to the resumption of work.
- Manage the abnormal event process for the facility, including immediate communications, fact finding, investigation, causal analysis, and handoff to the local PFI process for corrective action development.
- Review, approve, and assume ownership of the Causal Analysis Report expected by Day 20 from the QPA-PA investigator.
- Approve every written report—from Notification to Final—destined for the DOE ORPS system.
- Coordinate with the RAD on developing an effective PFI process, including MRB structure and IMC staffing, to support the closure of ORPS and Sub-ORPS abnormal event reports.
- Monitor and drive continuous improvement in meeting the target timeline of developing and providing to QPA-PA corrective actions and other report closure information by Day 40 after categorization of each ORPS-reportable event.
- Resolve conflicts or disputes regarding any aspect of the abnormal event process, and provide field managerial support to the assigned QPA-PA investigator.
- For events warranting Team Investigation, participate as requested. For all events of any ORPS SC level that become NTS reportable, support the completion of the investigation, causal analysis, and corrective action development.

4.9 Quality and Performance Assurance–Performance Assurance (QPA-PA)

- Deploys trained occurrence investigators to support FODs in all aspects of the abnormal event process, from categorization to final report.
- Drafts for FOD review and approval all written ORPS reports.

- Submits all FOD-approved ORPS reports in the DOE ORPS system.
- Maintains official records for each ORPS-reportable event from categorization to final report. However, the IMC maintains and tracks to closure all ORPS action records in accordance with P322-4, *Laboratory Performance Feedback and Improvement Process*.
- Monitors and drives continuous improvement in meeting the target timeline of delivering draft Update/Final ORPS reports, complete with investigative findings and causal analysis, by the 20th business day after categorization.
- Provides trained occurrence investigators as requested for Team Investigations.
- Supports the Laboratory Lessons Learned process in response to abnormal events as requested.

5.0 IMPLEMENTATION

The requirements in this document are effective on the date of issue.

6.0 TRAINING

FODs, Deputy FODs, Operations Managers, Duty Officers, and all other FOD Unit personnel assigned specific ORPS responsibilities must complete the following:

- Self-Study of current version of QPA-PA-FSD-003, *Abnormal Events Handbook*
- Course #6206, *Occurrence Investigating and Reporting*
- Additional professional development as directed by ADNHHO

Note: (1) Prior completion of this course satisfies the requirement; refresher completion of Course #6206 is recommended every two years but is not a requirement. (2) If the training is neither grandfathered nor completed within 6 months of issuance of this document, the worker may continue to fulfill his/her roles and responsibilities with written authorization from ADNHHO. The written authorization will include a schedule for completing the required training and will expire if training is not completed as scheduled.

QPA-PA provides occurrence investigators who are trained in accordance with QPA-PA-QP-002, *Occurrence Investigator Training Program*.

Managers and supervisors frequently involved in event investigations or causal analyses should consider additional professional development, including internally or externally offered material on causal analysis or human performance.

7.0 EXCEPTION OR VARIANCE

To obtain an exception or variance to this document, see the following instructions:

- Managers may request an exception or variance from the IA through the RM.
- At the IA's request, the RM will provide a recommendation or supporting information.
- The IA or designee will provide the requester with a written response and copy the RM.

The requesting organization must maintain the official copy of record of the approved correspondence granting the exception or variance.

8.0 DOCUMENTS AND RECORDS

8.1 Office of Record

The Policy Office is the Laboratory Office of Record for this Institutional Document and maintains the administrative record.

QPA-PA is the Laboratory Office of Record for ORPS-reportable events, excluding corrective action records but including categorization records, Team Investigation charters, investigation records, causal analysis records, and all written reports from the initial Event/Incident Notification to the ORPS Final Report.

Responsible FOD and RAD offices are the Laboratory Offices of Record for all records related to Sub-ORPS events, and for records of corrective actions, including change control and closure records, for both Sub-ORPS and ORPS events. PFITS is the record system for all such records. Specific responsibilities are divided between FOD and RAD offices according to local event-related PFI processes.

9.0 DEFINITIONS AND ACRONYMS

9.1 Definitions

See LANL *Definition of Terms*.

Abnormal Event—An accident, incident, or deviation from the planned outcome of a workplace activity that did or could have adversely affected the health or safety of workers, the public, the environment, or the integrity of LANL programs, operations, or facilities.

Facility Operations Director (FOD)—Any individual designated to serve the role of FOD for the abnormal event process. These individuals include not only the NHHO FODs themselves but also any individual in the FOD staff (OM, DO, etc.) to whom the FOD has delegated primary authorities for the portion of the abnormal event process under discussion, and any individual from outside NHHO designated to fill the FOD role. These individuals are generally responsible for a collection of structures/activities or a program and serve the role of FOD for certain events that cannot be assigned to a single FOD Unit. Examples of the FOD role served from outside NHHO include the following:

- construction/demolition project managers for events within their project;
- SMEs (e.g., ENV Division Director) for multi-facility events or events with institutional impact; and
- the Laboratory Director or designee for all Team Investigations.

Facility Operations Director (FOD) Unit—The collected buildings/structures/systems that bound the FOD's span of authority, in accordance with NHHO designations.

Occurrence Report—A documented evaluation of a reportable occurrence that is prepared in sufficient detail to enable the reader to assess its significance, consequences, or implications and to evaluate the actions being proposed or employed to correct the condition or to avoid recurrence.

Responsible Associate Director (RAD)—The Associate Director with overall responsibility and accountability to the Laboratory Director for the safe, secure, and environmentally compliant operations of all work within an assigned set of facilities.

9.2 Acronyms

See LANL *Acronym Master List*.

ADNHHO	Associate Director for Nuclear and High-Hazard Operations
AHJ	Authority Having Jurisdiction
CAO	Contractor Assurance Officer
CAP	Corrective Action Plan
CAS	Contractor Assurance System
COB	Close of Business
DC	Derivative Classifier
DNFSB	Defense Nuclear Facilities Safety Board
DOE	Department of Energy
ENV	Environmental Protection
EOC	Emergency Operations Center
FOD	Facility Operations Director
FR	Facility Representative
FSD	Functional Series Document
HP	Health Physicist
HPI	Human Performance Improvement
HQ	Headquarters
IA	Issuing Authority
IH	Industrial Hygienist
IMC	Improvement Management Coordinator
IRM	Improvement Responsible Manager
JON	Judgment of Need
LANL	Los Alamos National Laboratory
LANS	Los Alamos National Security, LLC
MRB	Management Review Board
NA-LA	DOE/NNSA-Los Alamos Field Office
NHHO	Nuclear and High-Hazard Operations
NNSA	National Nuclear Security Administration
NOV	Notice of Violation
NTS	Noncompliance Tracking System
OC	Operations Center
OE	Operational Emergency
ORPS	Occurrence Reporting and Processing
OS-PT	Operations Support-Packaging and Transportation
PAAA	Price-Anderson Amendments Act
PAD	Principal Associate Director
PFI	Performance Feedback and Improvement
PFITS	Performance Feedback and Improvement Tracking System
QPA	Quality and Performance Assurance
QPA-PA	Quality and Performance Assurance–Performance Assurance

RAD	Responsible Associate Director
RM	Responsible Manager
RO	Responsible Office
SC	Significance Category
S/CI	Suspect/Counterfeit Item
SCIC	Suspect/Counterfeit Items Coordinator
SCR	Significance Category Recurring
SEO	Security and Emergency Operations
SEO-EM	Security and Emergency Operations-Emergency Management
SIT	Security Incident Team
SME	Subject Matter Expert
WSH	Worker Safety and Health

10.0 HISTORY

Revision History		
09/20/06	ISD 322-3.0	Initial Issue, ISD 322-3.0, *Manual for Communicating, Investigating, and Reporting Abnormal Events.*
09/25/06	ISD 322-3.1	Administrative Change. IP300-SD5 replaced and rescinded by IP320.0.
10/15/08	ISD 322-3.2	The following Quick Changes (minor non substantive) were made: Global change to document: QA-OA to ESH-IO. Page 5, Overview, paragraph 3 , add: 1. sentence: Events that do not meet ORPS reporting criteria are reported in the LIMTS system as described in P322-4, *Laboratory Performance Feedback and Improvement Process*. 2. add ESH Integration Office (ESH-IO) to sentence Events that meet a DOE defined reporting criterion are reported and investigated by trained and qualified… Page 5, Overview, paragraph 4, changed to: The Associate Director for Environment, Safety, Health, and Quality is the Issuing Authority (IA) for this document. The ESH-IO Office Manager is the Responsible Manager (RM) and the Occurrence Reporting Team (OR) is the Responsible Office (RO). Page 8, Abnormal Event/Condition Process Outline, change bullet 14 and add bullet 15: ▪ 14) All ORPS corrective actions are entered into LIMTS and tracked as described in P322-4. ▪ 15) ORPS events are trended and analyzed for repetitive events on a quarterly basis. Page 13, bullets 6 and 7: Events that do not meet ORPS reporting criteria are reported in the LIMTS system as described in P322-4. Page 12, Note: Delete note. Page 13, Categorization process, item 2, second bullet, change to: Events that do not meet ORPS reporting criteria are

Revision History		
		reported in the LIMTS system as described in P322-4. Page 14, Preparing for a Critique, item 2, second bullet, add: must be notified. Page 16, item 2, add: and consider extent of condition. Page 17, bullet 4, change to: Events are reported in LIMTS system as described in P322-4.
12/11/08	P322-3, Rev. 0	Renumbered document, ISD 322-3, *Manual for Communicating, Investigating, and Reporting Abnormal Events*.
04/15/09	P322-3, Rev. 1	Quick Change Replace previous IA with newly identified AD. Clarification of existing requirements as documented in detailed individual procedures (pages 5, 7, 10, 12, 15, 17, 18). Revision of flowchart to reflect adherence to P322-4.
07/27/11	P322-3, Rev. 2	Major Revision Change title from "Manual for Communicating, Investigating, and Reporting Abnormal Events," to "Performance Improvement from Abnormal Events." Revise process to achieve consistency with Performance Feedback and Improvement Process changes. Revise organizational roles due to move of ORPS Team from Environment, Safety, Health, and Quality (ESH&Q) to CAO-PF. Change IA, RO, and RM to match organizational restructure.
09/20/12	P322-3, Rev. 3	Changed CAO-PF to Quality and Performance Assurance-Performance Assurance (QPA-PA) throughout document due to reorganization. Clarified language in Section 2.2. Updated links, titles, and acronyms.
12/10/15	P322-3, Rev. 4	Performed three-year review in accordance with PD311, *Requirements System and Hierarchy*. Changed title of notification process and system to Event Notification process and added distribution for said process as nhhonotification@lanl.gov. Changed the name of the worker-involved meeting to discuss the abnormal event from "critique" to "fact finding." Aligned Tables 1 and 2 with QPA-PA-FSD-003, *Abnormal Events Handbook*. Added requirements of NAP-24, *Weapon Quality Policy*, to Sections 3.1 and 4.0. Incorporated Safety Culture attributes into Section 3.4 to include emphasis on learning and eliminating both foregone conclusions and blame-placing. In Section 3.4, added that fact findings are optional at FOD and/or RAD discretion, based on whether a discussion of the facts surrounding the event provides a reasonable opportunity for organizational learning.

Revision History		
		In Section 3.8, added that obtaining NA-LA FR approval of final ORPS report dates/text changes is at FOD/RAD discretion. Updated training section to account for current LANL offerings. Updated links, titles, and acronyms.

11.0 REFERENCES

Prime Contract:

- DOE O 232.2, *Occurrence Reporting and Processing of Operations Information*, or current version
- DOE O 151.1C, *Comprehensive Emergency Management System*
- NAP-24, *Weapon Quality Policy*

11.1 Other References

- SD320, *Los Alamos National Laboratory Contractor Assurance System Description Document*
- P313, *Roles, Responsibilities, Authorities, and Accountability*
- Occurrence Reporting webpage
- QPA-PA-FSD-003, *Abnormal Events Handbook*
- PD1200, *Emergency Management*
- SEO-DO-PLAN-100, *Hazardous Materials Program Emergency Plan*
- P201-3, *Reporting Known and Potential Incidents of Security Concern*
- P141, *Price Anderson Amendments Act (PAAA), Worker Safety and Health (WSH), and Classified Information Security (CIS) Enforcement Procedure*
- QPA PAAA Program Office
- P322-1, *Causal Analysis and Corrective Action Development*
- P322-4, *Laboratory Performance Feedback and Improvement Process*
- PD311, *Requirements System and Hierarchy*
- P781-1, *Conduct of Training*

12.0 FORMS

There are no forms associated with this document.

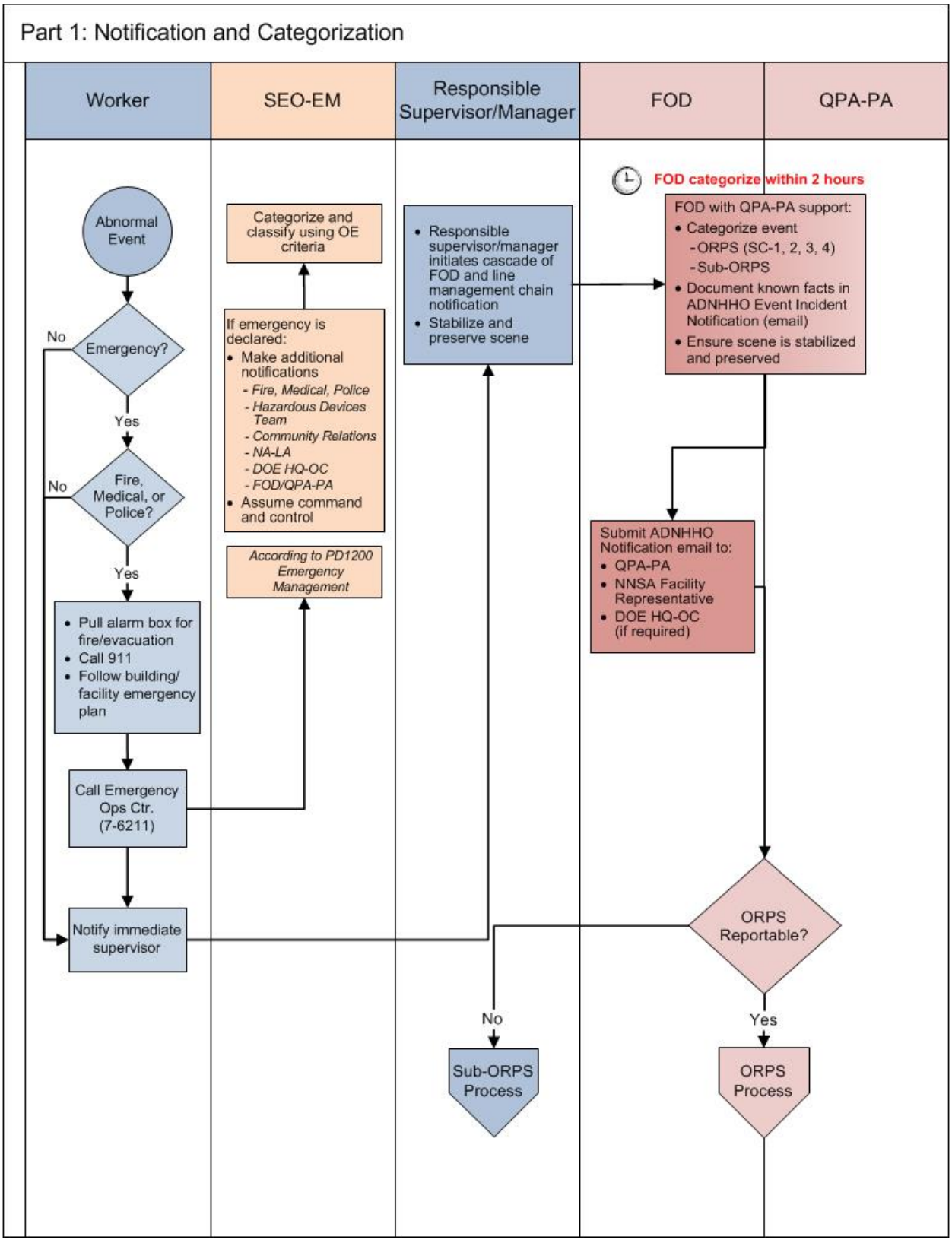
13.0 ATTACHMENTS

Attachment A. *Abnormal Event Process*

14.0 CONTACT

Quality and Performance Assurance-Performance Assurance Group (QPA-PA), Occurrence Investigation Team
Telephone: (505) 665-0033
Occurrence Reporting webpage

No: P322-3 Performance Improvement from Abnormal Events
Attachment A. Abnormal Event Process (Page 1 of 4)



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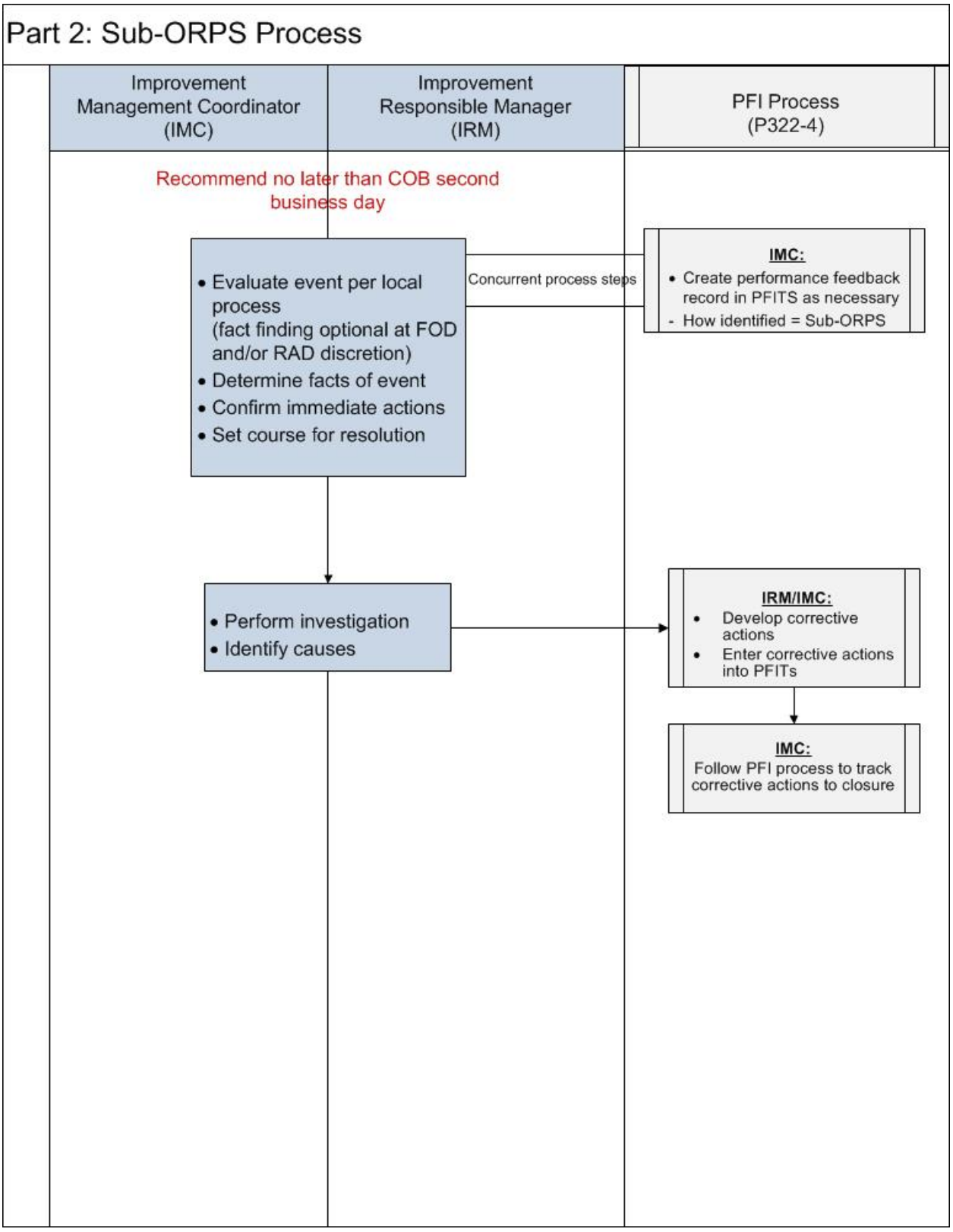

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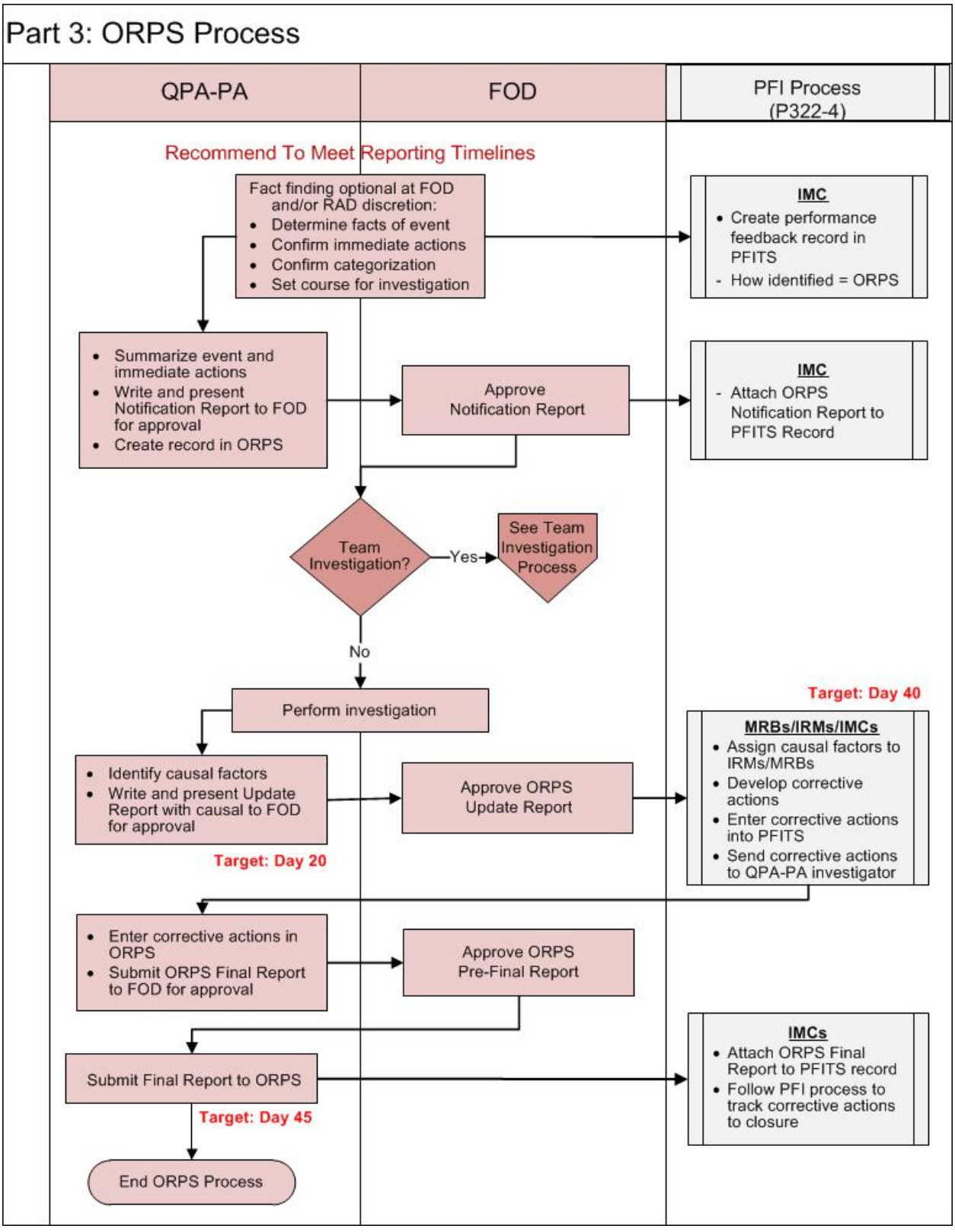

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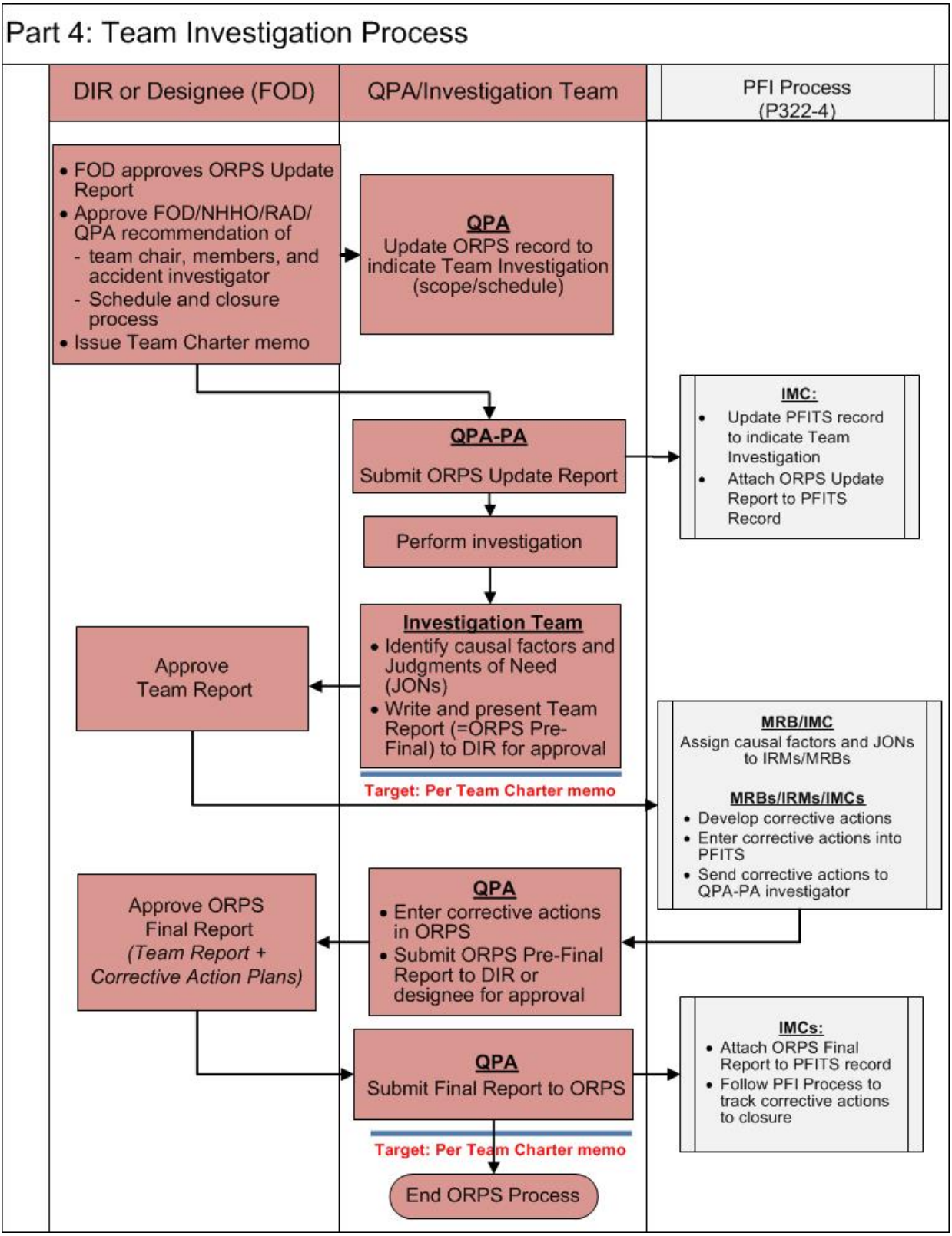
Attachment A. Abnormal Event Process (Cont.) (Page 4 of 4)



IMPORTANT

If you wish to receive credit for the preceding document you **must** enter the course through *UTrain* **not** the Policy Office website.

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.

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;*

- 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 Manua*l, 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.

- 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.

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

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, *Acceptable Knowledge Guidance*

Revision History		
		▪ LIR 404-00-02, *General Waste Management Requirements* ▪ LIR 404-00-03, *Hazardous and Mixed Waste Requirements* ▪ LIR 404-00-04, *Managing Solid Waste* ▪ LIR 404-00-05, *Managing Radioactive Waste* ▪ LIR 404-00-06, Managing Polychlorinated Biphenyls
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	This document cancels RN0808, *Requirements for Recycling Metal from Areas posted for Radiological Hazards*. 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.
04/10/13	P409, Rev. 4	Removed references to cancelled Form 1346, *Waste Profile Form*, which has been replaced by the Waste Stream Profile (found in the Waste Compliance and Tracking System (WCATS). Section 5.0: Updated to reflect effective date of May 28, 2013 for applicable nuclear, high- and moderate-hazard facilities and accelerators. Performed three year review in accordance with PD311, *Requirements System and Hierarchy*. Updated links, titles, and acronyms.
07/30/15	P409, Rev. 5	Performed three-year review in accordance with PD311, *Requirements System and Hierarchy*. This document cancels P930-2, *Radioactive Waste Certification Program* and P930-3, *Off-Site Shipment of Chemical, Hazardous, or Radioactive Waste.* 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."

11.0 REFERENCES

Prime Contract:

- DEAR 970.5223-1, Integration of Environment, Safety, and Health into Work Planning and Execution (Dec. 2000)
- Part II, Section H-83 (DEAR 5223-1)
- Part III, Section J, Appendix B 4.2

- Part III, Section J, Appendix G
- 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*

- 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

IMPORTANT

If you wish to receive credit for the preceding document you **must** enter the course through *UTrain* **not** the Policy Office website.

No: P101-14
Revision: 7

Issued: 08/06/15
Effective Date: 08/06/15

Chemical Management

1.0 PURPOSE

The purpose of this document is to:

- define the chemical management requirements for the Los Alamos National Laboratory (LANL or the Laboratory) Chemical Lifecycle Management Program,
- define processes to ensure protection of workers from health hazards associated with hazardous chemicals, and to keep exposures below Occupational Exposure Limits (OELs),
- provide direction to ensure that work with hazardous chemicals is conducted in a safe and responsible manner that protects workers, the public, and the environment, in accordance with Laboratory Integrated Work Management (IWM) and Environmental Management Systems,
- provide direction in the development and application of the hierarchy of controls (i.e., elimination, substitution, engineering, administrative, and Personal Protective Equipment [PPE]) that will protect workers and the environment, and
- promote consistency in hazardous-materials-related Integrated Work Documents (IWDs) and other procedures across the Laboratory.

2.0 AUTHORITY AND APPLICABILITY

2.1 Authority

This document is issued under the authority of the Laboratory Director to direct the management and operation of the Laboratory, as delegated to the Associate Director for Nuclear and High Hazard Operations (ADNHHO) as provided in the Prime Contract. This document derives from the Laboratory Governing Policies, particularly the section on Safety.

- Issuing Authority (IA): Associate Director for Nuclear and High Hazard Operations (ADNHHO)
- Responsible Manager (RM): Operations Support (OS) Division Leader
- Responsible Office (RO): Operations Support-Division Office (OS-DO)

2.2 Applicability

This document applies to all Laboratory workers. Subcontract workers are expected to follow the requirements set forth in their contractual agreements (i.e., Exhibit F) with the Laboratory.

This document applies to all work areas where chemicals including gases (compressed and cryogenic fluids) are procured, acquired, manufactured, machined, handled, received, distributed, transported, used, stored, or disposed. Activities that are subject to the requirements contained in this document are maintenance, construction, facility categorization, Research and Development (R&D), emergency planning, environmental restoration, and Decontamination and Decommissioning (D&D). This document applies to Laboratory facilities and equipment that involve current or past use of hazardous chemicals. Offsite work by LANL workers, where chemicals are used, should follow the specific guidelines and protocols of the host facility within

the context of the guidelines provided herein. Minimum requirements are adherence to the Federal Regulations cited in this document.

3.0 PROCEDURE DESCRIPTION

This document sets forth practices for managing industrial hygiene, safety, and environmental concerns associated with hazardous chemicals.

Note: Every Laboratory organization that procures, acquires, manufactures, machines, handles, receives, distributes, transports, uses, stores, or disposes of hazardous chemicals is required to follow the safety plan found in Attachment A*, LANL Hazard Communication and Chemical Hygiene Plan*. Requirements identified in Attachment A are specific to 29 Code of Federal Regulations (CFR) 1910.1200, *Labor, Occupational Safety and Health Standards, Hazard Communication* (e), 29 CFR 1910.1450, *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories* (e), and 29 CFR 1926.59, *Labor, Safety and Health Regulations for Construction, Hazard Communication* (e) (identical to .1200). The processes found in Attachment A, and any associated IWDs and organization-specific procedures that address hazardous chemicals, must be communicated to the workers in the organization. The plan is applicable to all activities whether chemicals are used in industrial applications (Hazard Communication [HAZCOM]) or small-scale laboratory R&D (Chemical Hygiene Plan [CHP]). Where it is mutually beneficial, the plan is applicable to all activities. Where procedures are specific to HAZCOM or CHP, the delineation is made in the text of the plan.

Note: Engineered nanomaterials are addressed in P101-29, *Working with Nanotechnology Materials and Processes*. Biological materials are addressed in P101-15, *Biological Safety.* Explosives are addressed in P101-8, *Explosives Safety*. Radiological materials are addressed in P121, *Radiation Protection*. Chemical disposition is addressed in P409, *LANL Waste Management.*

3.1 Chemical Management and Chemical Safety Program Elements

Table 1. Chemical Management Program Elements

Chemical Management Program Element	Main Document Section	Attachment A Section
A list of the hazardous chemicals known to be present, i.e., an inventory	3.3	1.3
Hazard identification and analysis	Attachment A	All
Acquisition	3.2	NA
Chemical inventory management and tracking, including management of extremely hazardous chemicals, and Material Safety Data Sheets/Safety Data Sheets (MSDS/SDSs)	3.3	1.4 (MSDS/SDS only)
Chemical transportation	3.8	NA
Chemical storage	3.7	NA
Hazard control	3.6	1.6
Pollution prevention and waste minimization	3.4	NA
Chemical emergency management	3.9	NA
Chemical disposition	3.7	NA
Training	6.0	1.15

The LANL chemical management program addresses elements from both 29 CFR 1910.1200, *Labor, Occupational Safety and Health Standards, Hazard Communication,* and 29 CFR 1910.1450, *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories.*

Table 2. Chemical Safety Program Elements

Chemical Safety Program Element	Main Document Section	Attachment A Section
A list of the hazardous chemicals known to be present, i.e., an inventory	3.3	1.3
Access to MSDS/SDSs for procured or acquired hazardous chemicals	3.3	1.4
Container labeling and other forms of warning	NA	1.5
Employee information and training	6.0	1.15
Methods used to inform employees of hazards of non-routine tasks or chemicals in unlabeled piping, precautionary measures for protection of employees during normal operating conditions and foreseeable emergencies, and the circumstances under which a particular laboratory operation, procedure or activity will require prior approval from the employer or the employer's designee before implementation	NA	1.6
Standard operating procedures relevant to safety and health considerations to be followed when laboratory work involves the use of hazardous chemicals	NA	1.6
Criteria that the employer will use to determine and implement control measures to reduce employee exposure to hazardous chemicals including engineering controls, the use of Personal Protective Equipment (PPE) and hygiene practices; particular attention will be given to the selection of control measures for chemicals that are known to be extremely hazardous	3.7	1.6
A requirement that fume hoods and other protective equipment are functioning properly and specific measures will be taken to ensure proper and adequate performance of such equipment	NA	1.8
Designation of personnel responsible for implementation of the Chemical Hygiene Plan (CHP) including the assignment of a Chemical Hygiene Officer (CHO), and, if appropriate, establishment of a Chemical Hygiene Committee	4.2	1.9
Provisions for additional employee protection for work with particularly hazardous substances, i.e., carcinogens, reproductive toxins, and substances that have a high degree of acute toxicity, including as appropriate: establishment of a designated area, use of containment devices such as fume hoods or glove boxes, procedures for safe removal of contaminated waste; and decontamination procedures	4.2	1.11
Compliance with 29 Code of Federal Regulations (CFR) 1910.119, *Labor, Occupational Safety and Health Standards, Process Safety Management of Highly Hazardous Chemicals (Occupational Safety and Health Administration [OSHA] PSM Rule),* Appendix A	4.7	NA
Hazardous chemical spill response	3.9	NA

3.2 Chemical Acquisition

Acquisition includes procurement, onsite synthesis, blending of chemicals, individuals or organizations bringing chemicals onsite, and other mechanisms. Chemicals are purchased by trained and authorized chemical workers.

Before a decision is made to purchase a chemical through LANL procurement, chemical owners will determine whether:

- The proposed quantity of the chemical is within the evaluated safety basis limits, fire protection limits, and fire hazard analysts limits for the facility. ***Note:*** The FOD is responsible for providing this information.
- There is a less hazardous or non-hazardous chemical available.
- There is a suitable surplus chemical available from another chemical owner.
- There is a current need for the chemical.
- There are unique hazards of the chemical that would require special assessment and controls.
- The quantity is limited to a specific project or maintenance need.
- There are stability or shelf life issues that need to be tracked.
- Storage facilities are suitable.
- There is an appropriate safe and environmentally acceptable means for the final disposition of environmentally sensitive chemicals, products, and byproducts.
- The required safety documentation MSDS/SDS is uploaded to the LANL MSDS/SDS electronic binder. Contact Occupational Safety and Health-Industrial Safety and Hygiene (OSH-ISH) for a listing of MSDS Online administrators who can add SDS/MSDSs to the LANL Electronic Binder.

All gas will be procured from the Gas Facility for those maintained as stock items, or as a LANL iProcurement Non Catalog request choosing Compressed Gas as the category. Gases cannot be purchased on a Pcard. All chemical/gases transported as a Hazard Class 2 material must be delivered to the Gas Facility at TA-3, Building 170. The SM-30 warehouse is not allowed to accept the delivery of gas.

Note: Non-gas chemical requests for purchase by purchase card must be submitted for approval via email to ChemDB@lanl.gov. Include the TA, building, and room where the chemical will be stored, the Z# and name of the chemical requestor, the chemical or product name, total amounts requested, the manufacturer and catalog number, and an SDS/MSDS for the chemical or product.

3.3 Chemical Inventory Management and Tracking

- LANL is required to maintain a list of the hazardous chemicals known to be present using an identity that is referenced on the appropriate MSDS/SDS. The listing of hazardous chemicals is maintained in the LANL institutional chemical inventory database application. This inventory is overseen by ADNHHO Operations Support (OS) Division. For LANL institutional chemical inventory database requirements, contact the help desk at 667-9242, or e-mail ChemDB@lanl.gov.
- Primary hazardous chemical containers are barcoded, entered, and tracked in the LANL institutional chemical inventory database in accordance with guidance documents found under the “Support and Resources” tab in the LANL institutional chemical inventory database application.

- The LANL institutional chemical inventory database will be updated when a primary hazardous chemical container is acquired; is transferred to a new owner and/or a new location; or is disposed.
- Physical inventories of primary hazards chemical containers will be performed annually to verify the accuracy of the LANL institutional chemical inventory database. Workers must have access to the MSDS/SDS for all procured hazardous chemicals. See 29 CFR 1910.1200, *Labor, Occupational Safety and Health Standards, Hazard Communication* (g) (6) (iii) and (8) and 29 CFR 1910.1450, *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories* (f) (3) (v). MSDS/SDSs must be maintained as stated in Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan,* Section 1.4.

3.4 Chemical Elimination, Substitution, Pollution Prevention, and Waste Minimization

Elimination of a hazardous chemical or substitution of a hazardous chemical with a less hazardous chemical is the preferred method to control hazards in accordance with the IWM process. Process change to a system for pollution prevention or waste minimization is another recognized control for chemical usage. Whenever possible, chemical workers will consider eliminating hazardous chemical usage or substituting less hazardous chemicals for highly hazardous chemicals, according to 29 CFR 1910.1450, *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories*, and 10 CFR 1021, *Energy, National Environmental Policy Act Implementing Procedures*. In addition, upstream chemical minimization processes and waste reduction techniques to minimize the quantity of chemical used in an activity will be considered.

Note: The Environmental Protection-Environmental Stewardship Services Group (ENV-ES) may be contacted for assistance in chemical substitution, pollution prevention, and waste minimization. See the Laboratory Chemical Safety Webpage for assistance with surplus chemicals. Transportation of surplus chemicals must comply with requirements in Section 3.8.

Avoid introducing excess chemicals into radiologically controlled areas, to minimize the potential to create a mixed waste. The need for legacy chemicals should be evaluated on at least an annual basis.

3.5 Management of Extremely Hazardous Substances

An extremely hazardous substance present at the Laboratory in an amount greater than or equal to its threshold planning quantity triggers emergency planning requirements as required by 40 CFR 355, *Protection of Environment, Emergency Planning and Notification*. Contact Security and Emergency Operations-Emergency Management Group (SEO-EM) at 667-6211 for assistance in emergency planning and release reporting requirements.

3.6 Hazard Control

Identification, evaluation, and control of hazards associated with chemical use are managed through IWM (see P300, *Integrated Work Management*), and worker exposure assessments (see P101-32, *Worker Exposure Assessments*).

3.7 Hazardous Chemical Storage

Storage includes all physical phases and all types of containers including, but not limited to, tanks, piping, cylinders, and containers of solid, liquid, or gaseous chemicals. Storage includes all chemicals or chemical products, including used and unused chemicals, sealed, opened, or partially filled containers, working solutions, day-use containers, and chemical “residues” left

within tanks, piping, or other containers. Storage in this document excludes storage of solid waste or hazardous waste.

Chemical storage will be limited to the quantity necessary to perform the work, and within safety basis and fire protection limits. Liquid hazardous chemicals should be stored so that a spill will not exceed 20 L (5 gallons), as required by the National Fire Protection Association (NFPA 45, *Standard on Fire Protection for Laboratories Using Chemicals* and NFPA 400, *Hazardous Materials Code*. Flammable and combustible liquids will be limited to less than the maximum quantities allowed in Tables 10.1.1(a), 10.1.1(b) and 10.1.2 of NFPA 45. Both documents are available to Laboratory workers through the Research Library.

Storage of gas must follow the requirements of NFPA 55, *Compressed Gases and Cryogenic Fluids Code*, and the Compressed Gas Association and be grouped together by type (e.g., flammable, oxidizer, corrosive, toxic and highly toxic gases); segregated from potential hazards; and separated by 20 feet, or a half hour fire barrier in accordance with P101-34, *Pressure Safety*.

Containers of materials that might become hazardous (i.e., peroxidizable chemicals) during prolonged storage will be dated when first opened. At the end of six months after opening, the material will be evaluated or tested for continued safe use. Material that is found to be safe or that can be stabilized to be made safe will be permitted to be re-dated and retained for an additional 6-month period, or according to manufacturer's instructions, whichever is more stringent. All other material will be safely and compliantly discarded.

To protect the environment and the safety and health of all people, hazardous waste will be disposed of properly. See P409, *LANL Waste Management,* for requirements.

Note: See Tool #4, *Chemical Storage Schemes*, and Tool #8, *Minimum Requirements for Peroxidizables*, on the Chemical Safety Tools webpage for additional information about storage requirements for materials that might become hazardous.

Note: The NFPA standards 30, 45, and 55, and the International Building Code define Maximum Allowable Quantities (MAQs) of different categories of chemicals that may be within open and closed systems in facilities. These criteria apply to LANL facilities (via the Prime Contract). The Fire Protection-Division Office (FP-DO) can assist in defining MAQs for specific facilities where those limits are not clearly defined.

3.8 Hazardous Chemical Transportation

Transportation refers to vehicular movement of chemicals, including movement subject to Department of Transportation (DOT) regulations for public roads, site transportation on nonpublic roads, and movement of chemicals within and between buildings. Off-site and on-site hazardous chemical transportation will be done in accordance with P151-1, *LANL Packaging and Transportation Program Procedure*.

Transportation of gases (DOT Hazardous Class 2 Material) must be performed by the Gas Facility in accordance with 49 CFR 100–185, *Transportation, Pipeline and Hazardous Materials Safety Administration, Department of Transportation*.

3.8.1 Off-Site Shipping

Any chemical that meets the definition of a hazardous material, or is suspected to be hazardous material according to 49 CFR 171.8, *Transportation, General Information, Regulations, and Definitions, Definitions and Abbreviations*, and can be classified as a hazardous material in

accordance with 49 CFR 173, *Transportation, Shippers—General Requirements for Shipments and Packagings, Parts 115–141 and Parts 403–436*, will be packaged, marked, labeled, and shipped with prepared shipping papers in accordance with 49 CFR 100–185, *Transportation, Pipeline and Hazardous Materials Safety Administration, Department of Transportation*, and applicable Department of Energy (DOE) Orders by DOT trained personnel. Contact Operations Support-Packaging and Transportation (OS-PT) for assistance.

Any chemical being shipped by air that meets the definition of dangerous goods according to the International Civil Aviation Organization will be packaged, marked, labeled, and shipped, with an accompanying properly prepared dangerous goods declaration, in accordance with the International Civil Aviation Organization technical instructions. Contact OS-PT for assistance.

Wastes containing chemicals that are also New Mexico special wastes or hazardous wastes have additional shipping, placarding, manifesting, and training requirements. Contact your Waste Management Coordinator (WMC).

3.8.2 On-Site Transfers of Chemicals

The on-site transfer of hazardous chemicals will follow P151-1, *LANL Packaging and Transportation Program Procedure*. OS-PT has jurisdiction over the requirements for packaging, marking, and documenting on-site transfers.

On-site shipping of analytical-scale samples of hazardous chemicals (DOT small quantities) is permissible, as long as it meets Laboratory and DOT requirements for such samples. An example procedure that meets the Laboratory and DOT requirements for such on-site shipping, including training requirements, is SOP-C-DO-003, *On-Site Shipping of Analytical-Scale Samples of Hazardous or Radioactive Materials (DOT Small Quantities).*

All hazardous chemical transport will be done in a government vehicle. Hand carrying of hazardous chemical containers will be done using secondary containment and laboratory carts for heavy or multiple containers. Exception: Gas must be transferred by Gas Facility personnel in accordance with 49 CFR 100–185, *Transportation, Pipeline and Hazardous Materials Safety Administration, Department of Transportation*.

3.8.3 Hazardous Chemical Spills

Workers must be authorized, provided the necessary training, understand required spill response procedures before working with a hazardous chemical, and ensure that containment and cleanup of a spill is permitted by the IWD.

- Contact SEO-EM Group at 667-6211 then the FOD or the FOD's on-call designee for the building (or the Operations Center if a facility is so equipped), in the event of a large hazardous chemical spill (i.e., a spill that cannot be safely contained by an authorized chemical worker). The FOD or on-call designee must ensure involvement of deployed support as necessary. SEO-EM provides the Incident Commander to manage cleanup of all spills outside the scope of IWDs.
- When safe to do so, authorized chemical workers will determine the extent of the area affected, and demarcate it with barricade tape or use another reliable means to restrict entry into the area.
- Properly briefed, authorized chemical workers may cleanup smaller spills, following spill control, mitigation, cleanup, and reporting procedures listed in the IWD associated with the activity in progress at the time of the spill.

- Workers and their supervisors are required to go to Occupational Medicine for a work-related injury or illness, including exposure to hazardous chemical spills, unless transported directly to Los Alamos Medical Center (LAMC). Prior to return to work, workers must go to Occupational Medicine for follow up.
- Manage all debris and waste resulting from the cleanup of a spill as though it contains the hazardous chemical, according to WMC instruction.

Note: Incidental spill guidance is available on the Chemical Safety webpage under Resources, Systems & Tools.

3.9 Chemical Safety Tools

Chemical safety tools, found on the Chemical Safety webpage, contain safety and health considerations to be followed when using hazardous chemicals. These tools will be supplemented and updated as needed.

4.0 RESPONSIBILITIES

4.1 Associate Director for Nuclear and High Hazard Operations-Operations Support (OS) Division

- Overall accountability for the proper management of the Chemical Management Program.
- Chemical Management Program Manager provides overall coordination of LANL's Chemical Management Program.
- Oversees the LANL institutional chemical inventory database application.

4.2 Associate Director for Environment, Safety, Health (ADESH)

- Maintains a site-wide MSDS/SDS program (OSH-ISH).
- Maintains a site-wide hazard assessment and exposure monitoring database and Comprehensive Tracking System (CTS) (OSH-ISH).
- Consults with the Laboratory community on the development and implementation of chemical hygiene and safety policies and practices (OSH-ISH).
- Annually reviews and updates as necessary per the Hazard Communication and Chemical Hygiene Plan (OSH-ISH).
- Provides medical consultation and examinations for individuals who are exposed or potentially exposed to hazardous materials, including OSHA regulated carcinogens (OSH-OM).
- Provides consultation with respect to reproductive toxicants (OSH-OM, Deployed Services Environment, Safety, and Health [DSESH]).
- Provides assistance in researching less hazardous chemical substitutes (ENV-ES).
- Provides the LANL CHO (OSH-ISH)/Chemical Safety SME.

4.3 Security and Emergency Response Division

- Provides specialized expertise and equipment in response to hazardous materials emergencies at LANL and within the surrounding communities.

4.4 Division Leaders

- Ensure that Division activities involving chemicals are conducted within the safety envelope and the scope of work identified in Division and Facility documents.
- Ensure that adequate resources are provided to Responsible Line Managers (RLMs) to identify, evaluate, and control chemical hazards associated with existing and proposed work performed within their Divisions so that chemical management can be integrated into day-to-day operations.
- Ensure that a chemical safety plan is written for their Division, or provide written documentation that references Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan,* as their Hazard Communication and Chemical Hygiene Plan. Ensure that the written program governs all hazardous chemical work in the group or facility (HAZCOM or CHP), and is referenced in IWDs and other relevant documents.
- Ensure that violations of codes and safety standards identified by reviews or inspections are corrected or that compensatory measures or action plans are developed.
- In CHP areas only, assign a Division Chemical Hygiene Officer (CHO) Group CHOs may be assigned as necessary. Ensure that CHOs have the experience and training as noted in Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan,* Section 1.9.

4.5 Program Directors, Program Managers, and Project Leaders

- Negotiate with RLMs to provide adequate resources for the requirements in this document.

4.6 Responsible Line Managers (RLMs) in Coordination with the Person in Charge (PIC)

- Ensure that primary hazardous chemical containers in their organization are barcoded, and entered and tracked in the LANL institutional chemical inventory database.
- Ensure that workers keep the LANL institutional chemical inventory database current and accurate for their chemicals.
- Ensure that a physical chemical inventory of primary hazardous chemical containers is performed in their organization annually and reconciled in the LANL institutional chemical inventory database.
- Ensure that for any new activity (i.e., an activity that requires a new IWD) a hazard review is completed for hazards that can be encountered or generated during the course of the work. The evaluation must include the hazards associated with the properties and the reactivity of the materials used, any intermediate and end products that can be formed, hazards associated with the operation of the equipment at the operating conditions, and hazards associated with the proposed reactions.
- Ensure that all required training is completed by workers before the work is authorized.
- Integrate chemical life cycle management (purchase through disposition) into resource planning, funding, prioritizing, planning, scheduling, and implementation of work conducted under their supervision.
- Specify the written program governing all chemical work in the group (HAZCOM or CHP) and reference in IWDs and other safety documents.
- Ensure that IWDs are completed and approved for work with Occupational Safety and Health Administration (OSHA) carcinogens and LANL Category 1 (LANL Cat 1) chemicals in CHP areas. See the Chemical Safety webpage.
- Provide job-specific briefings and/or information on the chemical hazards and safety precautions related to each authorized chemical worker's assigned work, before beginning

work. ***Note:*** Never assume that a worker has knowledge of the chemical, its hazards, and the controls. Job-specific information must include:

- chemical inventory, relevant to the employee's assigned work, specific chemicals used, and the location of activities where hazardous chemicals are present;
- specific methods and observations, if applicable, that are used to detect the presence or release of a hazardous chemical;
- the location of the associated MSDS/SDS(s), and how to obtain an MSDS/SDS. For hazardous chemicals used, the following information from each MSDS/SDS must be discussed within a job-specific briefing, or as part of a pre-job briefing:
  - hazards identification;
  - fire protection/incompatibilities;
  - accidental release measures, handling and storage;
  - exposure controls/personal protection;
  - physical and chemical properties; and
  - chemical stability and reactivity information, particularly instability conditions and incompatible chemicals.
- the applicable details of the written Hazard Communication and Chemical Hygiene Plan (see Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan*) and any facility-specific HAZCOM Plan or written CHP;
- secondary container labeling requirements (see Attachment A, Section 1.5.);
- specific building signs and postings for hazardous chemicals;
- Building Emergency Plans;
- locations of eyewashes and safety showers;
- spill response requirements, including mitigation, cleanup, and reporting requirements, and
- specific chemical storage requirements.

- Monitor through Management Observation and Verification (MOV) or other means that equipment and chemical containers are labeled with the name of the contents and that work areas are posted with signs or placards that depict the chemical hazards in the area.
- Monitor through MOV or other means that MSDS/SDSs are accessible to all workers who may have potential exposure to chemicals.
- When authorizing IWDs, ensure that elimination of hazardous chemicals, or substitution of a less hazardous material when practical, has been addressed by the preparer.
- When authorizing IWDs, ensure identification of operations where the following are used: LANL Cat 1 chemicals (CHP), known and suspect human carcinogens, reproductive toxicants, and highly acute toxicity/highly chronic toxicity chemicals (HAZCOM). Ensure that deployed personnel are notified to conduct worker exposure assessments, and that proper controls are established. See the Chemical Safety Webpage.
- Ensure that workers adhere to the requirements in this document.
- Authorize workers to perform chemical work and purchase chemicals.
- Investigate accidents and near misses involving chemicals, and ensure that corrective actions identified from chemical accident investigations and inspections are implemented.

- Ensure that all chemical hazards are removed when vacating space. When an area is being vacated, all chemicals will be moved, transferred to new ownership, or properly disposed. The work area will be cleaned and restored to its original condition or a condition acceptable to the next occupant before transfer of ownership.
- Ensure that resource planning, funding, prioritizing, scheduling, and implementation of chemical work conducted under their supervision addresses the necessary environmental, safety, and health evaluation and controls.
- Inform visitors about the Laboratory's chemical safety policies and procedures and ensure that they are aware of the existence and availability of chemical hazard information and resources.
- Notify DSESH deployed staff of new or modified work activities that require exposure assessments.
- Negotiate with Program Directors, Program Managers, and Project Leaders to provide adequate resources to meet the requirements in this document.
- Ensure that hazards of chemicals and chemical reactions are evaluated before laboratory activities or chemical reactions are begun. See Attachment A, Section 1.11.3.

4.7 Facility Operations Directors (FODs)

- Ensure that new work involving hazardous chemicals is reviewed by appropriate Subject Matter Experts (SMEs).
- Communicate Safety Basis levels to RLMs and maximum chemical quantities allowed to tenants.
- Maintain a proactive preventive maintenance program to ensure that laboratory engineering controls and emergency equipment (e.g., ventilation systems, detectors, shutoff devices, and emergency eyewash and safety showers) are in proper operating condition.
- Inform on-site construction/equipment subcontractors of the presence and identity of hazardous chemicals in their immediate work areas.
- Notify building occupants of testing, demolition, construction, and renovation activities and their related chemical hazards before initiation.
- Work with the Subcontract Technical Representative (STR) to ensure that subcontractors comply with Exhibit F and other subcontractor requirements.
- Working with Acquisition Services Management-Project Management and the STR, ensure that subcontractors provide an inventory and the MSDS/SDS for hazardous chemicals brought on-site to the Environment, Safety, Health (ESH) manager or designee, SEO Division personnel.
- Ensure that chemical incidents are reported and investigated and that corrective action is taken to prevent recurrence.
- Provide facility-specific information so tenants are aware of bounding chemical thresholds.
- Ensure that facilities maintain quantities (by weight) of highly hazardous chemicals below threshold quantities (see Process Safety Management (PSM) List [use Firefox]).

4.8 Deployed Services Environment, Safety, and Health (DSESH) Deployed Personnel

- Assist line managers in performing and documenting hazard assessments and risks for existing and planned operations, including laboratory moves and decommissioning.
- Provide guidance for establishing administrative, work practice, PPE, and engineering controls. Assist in determining labeling requirements for equipment, piping, containers, and facilities.
- Perform and document worker exposure assessments and exposure monitoring to determine employee exposures to hazardous materials and to evaluate the adequacy of controls in accordance with P101-32, *Worker Exposure Assessments.*

4.9 Authorized Chemical Owners

- Ensure that all their primary hazardous chemical containers are barcoded and entered into the LANL institutional chemical inventory database.
- Ensure that the LANL institutional chemical inventory database is updated when one of their primary hazardous chemical containers is transferred to a new owner and/or a new location; or is disposed.
- Complete the training requirements for an authorized chemical worker. Individuals with appointments of less than one year, visitors, undergraduate and high school students will not be chemical owners. The immediate supervisor for visitors, undergraduates and high school students will be the chemical owner.
- Post work areas with signs or placards that depict the current chemical hazards in the area. Labels, signs, and placards will be consistent with the group's written plan (HAZCOM or CHP).
- Label chemical containers with required information. See Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan,* Section 1.5.
- Working with the WMC, establish whether the chemical or its end product will require disposal as a hazardous waste, New Mexico Special Waste, or has other disposal requirements.
- To the greatest extent possible, purchase chemicals on an as-needed basis and limit the purchase quantity to an amount that will be used in six months or less, to minimize inventory and chemicals in storage. If possible purchase reagents in polyethylene bottles or plastic-coated glass bottles to minimize breakage, corrosion, and rust. Ensure that the amount purchased does not exceed safety basis or flammable or combustible liquid storage limits.
- Be aware of chemical incompatibilities and store chemicals accordingly.

4.10 Authorized Chemical Workers

- Work safely by observing safety standards, guidelines, and procedures.
- Implement all controls required by work authorization documentation.
- Stop work that may pose an imminent danger to workers.
- Work with DSESH deployed personnel in workplace monitoring and sample collection.
- Report unsafe conditions, chemical incidents, or injuries to line managers immediately.
- Call 911 immediately if a chemical-related illness or injury occurs.
- Be familiar with and follow chemical and emergency procedures as directed in work authorization documentation.

- Label chemical containers with required information. See Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan,* Section 1.5.
- Complete required training and ensure receipt and understanding of job-specific information on the chemical hazards and safety precautions related to assigned work, before beginning work. (See Section 6.0.)

5.0 IMPLEMENTATION

The requirements in this document are effective on the issue date.

6.0 TRAINING

Job-specific and site-specific information provided will be documented in the activity specific IWD. Training and briefings will use a graded approach so that each increasing level of risk associated with the safe use of chemicals is addressed. Job-specific information will include other topics such as MSDS/SDSs, labeling, emergency equipment, chemical spill control/mitigation/cleanup, process chemistry, process control, chemical storage, hazardous material regulations for chemical packaging, waste identification and disposal, pollution prevention, and waste minimization. Training and briefings will include methods that will be used to detect the presence or release of chemicals and measures workers can implement to protect themselves from chemical hazards.

RLMs will work with FOD personnel to ensure that workers are informed of the hazards when non-routine tasks are performed in the work area by maintenance or subcontract workers, and work with FOD personnel to inform subcontractors and visitors of the hazards in the building.

Required training for chemical workers, along with the regulatory reference is as follows:

- Course #21464 or equivalent, which includes how to detect hazards, how to interpret an MSDS/SDS, and labeling requirements, in accordance with 29 CFR 1910.1200, *Labor, Occupational Safety and Health Standards, Hazard Communication* (h) (2-3) and 29 CFR 1910.1450, *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories* (f) (3-4).
- Facility-specific hazard information, in accordance with 29 CFR 1910.1450 (f).
- Awareness briefing on operation and building chemical inventory, how to obtain an MSDS/SDS, secondary container labeling requirements, building signs and postings, building emergency plans, written program documents, location of eyewashes and safety showers, spill response, and chemical storage requirements in accordance with 29 CFR 1910.1200 (h) (1-3) and 29 CFR 1910.1450 (f).
- Level 1 On-the-Job Training (Level 1 formality of training requires trainee to read, observe/walk through, and self-assess/sign the communication document) or pre-job briefing on specific chemical hazards, procedures, and PPE and review the hazard analysis documentation (for moderate and high-level hazard IWDs) authorized by his/her RLM/PIC for the job assignment every time a worker receives a new job assignment or a new hazard is introduced into the current assignment in accordance with 29 CFR 1926.21, *Labor, Safety and Health Regulations for Construction, Safety Training and Education* (b), 29 CFR 1910.1450 (f) (3), and 29 CFR 1910.1003, *Labor, Occupational Safety and Health Standards, 13 Carcinogens*.
- If a chemical worker will be generating waste, Course #23263 *Waste Generation Overview Live*, and Course #21464, *Waste Generation Overview Refresher*, every three years, in accordance with 40 CFR 262, *Protection of Environment, Standards Applicable to Generators of Hazardous Waste*.

- If a chemical worker will be using gas, Course #769, *Pressure Safety Orientation,* and Course #9518, *Gas Cylinder Safety*.

7.0 EXCEPTION OR VARIANCE

To obtain an exception or variance to this document, see the following instructions:

- Managers may request an exception or variance from the IA through the RM;
- At the IA's request, the RM will provide a recommendation or supporting information; and
- The IA or designee will provide the requester with a written response and copy the RM.

The requesting organization must maintain the official copy of record of the approved correspondence granting the exception or variance.

8.0 DOCUMENTS AND RECORDS

8.1 Office of Record

The Policy Office is the Laboratory Office of Record for this Institutional Document and maintains the administrative record.

9.0 DEFINITIONS AND ACRONYMS

9.1 Definitions

See LANL *Definition of Terms*.

Accident—Any event, including, but not limited to, equipment failure, rupture of containers, or failure of engineering controls, that potentially creates a hazard through uncontrolled release of a hazardous chemical.

Authorized Chemical Worker—A worker (Los Alamos National Security, Limited Liability Company [LANS, LLC or LANS], contractor, subcontractor, student) whose RLM and PIC have determined that he/she has the training, skill, knowledge, and abilities to safely perform the chemical work to which he/she is assigned.

Carcinogen—Those chemicals that have been identified as substances that can lead to cancer by the agencies listed below and that have a concentration equal to or greater than 0.1% (1,000 parts per million).

- American Conference of Governmental Industrial Hygienists (ACGIH), either Category A1 (confirmed human carcinogen) or Category A2 (suspected human carcinogen).
- Compounds that the International Agency for Research on Cancer (IARC) has confirmed or identified as possible human carcinogens and those chemicals that the National Toxicology Program (NTP) has identified as known to be carcinogenic or chemicals that may reasonably be expected to be carcinogenic.

Chemical—Any element, compound, or mixture of elements and compounds. A substance that (1) possesses potentially hazardous properties (including, but not limited to, flammability, toxicity, corrosivity, reactivity, and instability); or (2) is included on any Federal, state, or local agency regulatory list; or (3) is associated with a MSDS/SDS. For the purposes of this document, this definition also applies to chemical products.

Chemical Hygiene Officer (CHO)—(CHP areas only). An employee, appointed by the Division Leader, who is qualified by training or experience to provide technical guidance in the development and implementation of the provisions of the LANL Hazard Communication and Chemical Hygiene Plan (see Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan*).

Chemical Hygiene Plan (CHP)—A written program that consists of the Laboratory's CHP (see Attachment A, *LANL Hazard Communication and Chemical Hygiene Plan*) and activity-specific documentation, such as IWDs, which set forth guidance to protect workers from the dangers presented by hazardous chemicals used in a particular laboratory work area.

Chemical Inventory—A written or electronic record of chemicals.

Chemical Owner—An authorized chemical worker to whom a container that contains a chemical on the chemical inventory is assigned.

Chemical Release—Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of a chemical into the environment.

Chemical Worker—A worker who works with hazardous chemicals.

Corrosive—A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. A substance or a mixture that by chemical action will materially damage, or even destroy, metals is termed "corrosive to metal." See 29 CFR 1910.1200, *Labor, Occupational Safety and Health Standards, Hazard Communication,* Appendix A.

Designated Area—An area that will be used for work with LANL Cat 1 chemicals and to which access is administratively restricted to authorized personnel.

Emergency Response—A response made by workers from outside the immediate release area or by other designated emergency responders (i.e., SEO-EM, the Los Alamos County Fire Department and the Hazardous Materials Response Group) to an occurrence that results, or is likely to result, in an uncontrolled release of a hazardous substance.

Environment, Safety, and Health (**ESH) Qualified Person**—An employee who has academic credentials or work experience in a relevant discipline, such as industrial hygiene or industrial safety, who has experience or training in conducting workplace exposure monitoring and in determining the hazards and consequences of exposure to chemicals.

Extremely Hazardous Substance— Any of 366 (+ or -) chemicals or hazardous substances identified by EPA on the basis of hazard or toxicity and listed under EPCRA. The list is periodically revised. See 40 CFR Part 355.

Explosive—A chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.

Flammable Liquid Storage Cabinet—A cabinet for the storage of flammable and combustible liquids constructed in accordance with Section 9.5 of NFPA 30, *Flammable and Combustible Liquids Code*.

Hazard Communication (HAZCOM) Plan—A written program developed and implemented by the Laboratory or subcontractor, which consists of requirements listed in Attachment A, *LANL*

Hazard Communication and Chemical Hygiene Plan, and activity-specific documentation such as IWDs, or operating procedures that set forth requirements to protect workers from the dangers presented by hazardous chemicals used in a specific construction or production work area.

Hazardous Chemical—Any chemical that presents a physical hazard or a health hazard (health hazard defined below). If a hazardous chemical comprises 1% (0.1% for carcinogens) or greater of a compound or mixture, the compound or mixture will be treated as a hazardous chemical. See 29 CFR 1910.1200, *Labor, Occupational Safety and Health Standards, Hazard Communication* (g) (2) (i) (c) (*1*).

Hazardous Waste—A solid waste that is not excluded from regulation as a hazardous waste and is a listed hazardous waste or exhibits any of the hazardous characteristics: ignitibility, corrosivity, reactivity, or toxicity.

Health Hazard—A chemical that is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in 29 CFR 1910.1200. Appendix A, *Health Hazard Criteria* having an NFPA rating of 2, 3, or 4 under fire conditions.

High Acute Toxicity—Substances that may be fatal or cause clinical damage to target organs as a result of a single exposure or exposures of short duration. High-acute-toxicity chemicals meet the following criteria: a Permissible Exposure Limit (PEL) or Threshold Limit Value (TLV) of less than 0.1 ppm Time-Weighted Average (TWA) or ceiling limit of less than 1.0 ppm.

High Chronic Toxicity—Refers to substances that produce adverse effects in humans who suffer repeated exposures to those substances over a relatively prolonged period.

Immediate Use—The hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Irritant—A chemical, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact.

Laboratory Scale—Work with substances in which the containers used for reactions, transfers, and other handling of substances are designed to be easily and safety manipulated by one person.

Laboratory Produced Material—A chemical or chemical mixture that is manufactured or synthesized by an operating group at the Laboratory.

LANL Category 1 Chemical (LANL Cat 1)—A Laboratory designation identifying specific chemicals that are regulated at the Laboratory and that require the chemical worker to follow special provisions. LANL Cat 1 chemicals are known human carcinogens, chemicals of high acute or high chronic toxicity, and/or known human reproductive toxins. Lists are available at the Chemical Safety Webpage. ***Note:*** The Globally Harmonized System (GHS) used in the update for 29 CFR 1910.1200 uses the term hazard category: the division of criteria within each hazard class. GHS hazard category 1 has specific criteria for each hazard class.

Legacy Chemical—A stable, non-time-sensitive stock chemical or chemical mixture being held for evaluation for future use. Note: Per EPA [40 CFR 261.2(a) (2) and 261.33], unused

commercial chemical products do not become solid wastes (i.e., they remain commercial chemical products) until a determination is made that the material will be discarded. Commercial chemical products, even those whose shelf life has been exceeded, that ultimately will be used for their intended purpose or that will be reclaimed are not subject to the Resource Conservation and Recovery Act (RCRA). In 2006 [71 FR 29719; May 23, 2006], EPA noted the following for laboratory chemicals "when accumulated for long periods of time, for example, such unused reagents may be considered solid or hazardous wastes if it can be determined that they are no longer usable for their intended purpose."

Material Safety Data Sheet/Safety Data Sheet (MSDS/SDS)—Written, printed, or electronically transmitted information on the hazards and properties of a particular material, including instructions for its safe use.

Mutagen—A chemical that induces DNA damage and genetic alterations that range from changes in one or a few DNA base pairs to gross changes in chromosome structure.

Occupational Exposure Limit (OEL)—The upper limit on the acceptable concentration of a hazardous substance in workplace air for a particular material or class of materials. LANL OELs include OSHA PELs (8-hour time weighted average), and Ceiling Values; ACGIH Threshold Limits Values (Threshold Limit Value-Time-Weighted Average [TLV-TWA], Threshold Limit Value-Short-Term Exposure Limit [TLV-STEL], and Threshold Limit Value-Ceiling [TLV-C]), or other appropriate OELs.

Occupational Safety and Health Administration Permissible Exposure Limit—regulatory limits on the amount or concentration of a substance in the air. They may also contain a skin designation. OSHA PELs are based on an 8-hour TWA exposure.

Physical Hazard—A chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas. *See* 29 CFR 1910.1200, Appendix B, *Physical Hazard Criteria*.

Production—An operation in which large quantities of a limited list of hazardous chemicals are used on a routine basis for synthesis, product manufacture, product preparation, dip tank or painting, solvent cleaning, photographic development, mechanical shops, construction, or maintenance activities.

Regulated Area—An area where entry and exit is restricted and controlled.

Reproductive Toxicants (known human)—Substances that are known to have lethal effects on the fertilized egg, developing embryo, or fetus, or to cause teratogenesis (malformation) in the fetus.

Secondary Container—Any chemical container other than an original container that will be used to store decanted chemicals or mixed chemicals beyond a single workday.

Note: This definition should not be confused with secondary containment for chemical release prevention and control.

Sensitizer—A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical.

Short-Term Exposure Limit (STEL)—A 15-minute time weighted average that should not be exceeded at any time during a work day.

Solid Waste—As defined by regulations promulgated under RCRA and the New Mexico Hazardous Waste Act, unless otherwise excluded, is any discarded material, either abandoned, recycled, or inherently waste-like, including liquids, solids, semisolids, and contained gases.

Spill—An unintentional release of a hazardous chemical, liquid, or solid that creates a hazard because of quantity, physical properties, or toxicity.

Subcontractor—A party entering into a contract with LANS, LLC.

Threshold Limit Value (TLV)—An ACGIH limit that is usually expressed as an 8-hour TWA, meaning a time-weighted airborne contaminant concentration for a normal 8-hour workday and a 40-hour work week, to which nearly all workers may be repeatedly exposed, day after day, over a working lifetime, without adverse effect.

Time Sensitive Chemicals—Those chemicals that, when stored for prolonged periods or under improper storage conditions, can develop hazards that were not present in the original formulation. There are four general categories of time-sensitive chemicals loosely based on those unsafe properties that can develop. They are (1) peroxide formers, (2) peroxide formers that can undergo hazardous polymerization, (3) materials that become shock or friction sensitive upon the evaporation of a stabilizer, and (4) materials that generate significant additional hazards by undergoing slow chemical reactions. It should be noted that time-sensitive chemicals can be pure reagents or they can be commercial mixtures formulated as cleaners, adhesives, and other products. ***Note:*** This definition does not include chemicals that have expiration dates for nonsafety reasons, e.g., inorganic standard solutions that expire 1 year from purchase.

Toxicant—A material that has the ability to injure biological tissue.

Toxicity—A relative property of a chemical agent that refers to a harmful effect on some biologic mechanism and the condition under which this effect occurs.

9.2 Acronyms

See LANL *Acronym Master List*.

ACGIH	American Conference of Governmental Industrial Hygienists
ADESH	Associate Director for Environment, Safety, Health
ADNHHO	Associate Director for Nuclear and High Hazard Operations
ANSI	American National Standards Institute
ASM	Acquisition Services Management
CFR	Code of Federal Regulations
CGA	Compressed Gas Association
CHO	Chemical Hygiene Officer
CHP	Chemical Hygiene Plan
CTS	Comprehensive Tracking System
D&D	Decontaminate and Decommission
DEAR	Department of Energy Acquisition Regulation
DOE	Department of Energy

DOT	Department of Transportation
DPR	Designated Procurement Representative
DSESH	Deployed Services Environment, Safety, and Health
ENV-ES	Environmental Protection-Environmental Stewardship
EO-EPP	Emergency Operations-Emergency Planning and Preparedness
ESH	Environment, Safety, Health
FOD	Facility Operations Director
FP-DO	Fire Protection-Division Office
GHS	Globally Harmonized System
HAZCOM	Hazard Communication
HDBK	Handbook
HEPA	High-Efficiency Particulate Air
IA	Issuing Authority
IARC	International Agency for Research on Cancer
ISEA	International Safety Equipment Association
IWD	Integrated Work Document
IWM	Integrated Work Management
LANL or the Laboratory	Los Alamos National Laboratory
LAMC	Los Alamos Medical Center
LANS, LLC or LANS	Los Alamos National Security, Limited Liability Company
MAQ	Maximum Allowable Quantity
MOV	Management Observation and Verification
MSDS/SDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NTP	National Toxicology Program
OEL	Occupational Exposure Limit
OM	Occupational Medicine
OS	Operations Support (Division)
OS-DO	Operations Support-Division Office
OSHA	Occupational Safety and Health Administration
OSH-ISH	Occupational Safety and Health-Industrial Safety and Hygiene
OSH-OM	Occupational Safety and Health-Occupational Medicine
OS-PT	Operations Support-Packaging and Transportation
OST	Operations Support Tool
PEL	Permissible Exposure Limit
PFITS	Performance Feedback and Improvement Tracking System
PIC	Person in Charge
PPE	Personal Protective Equipment
R&D	Research and Development
RCRA	Resource Conservation and Recovery Act
RLM	Responsible Line Manager

RM	Responsible Manager
RO	Responsible Office
SBP	Safety Basis Procedure
SME	Subject Matter Expert
STEL	Short-Term Exposure Limit
STR	Subcontract Technical Representative
TA	Technical Area
TLV	Threshold Limit Value
TLV-C	Threshold Limit Value-Ceiling
TLV-STEL	Threshold Limit Value-Short-Term Exposure Limit
TLV-TWA	Threshold Limit Value-Time-Weighted Average
TWA	Time-Weighted Average
USI	Unreviewed Safety Issue
USQ	Unreviewed Safety Question
WMC	Waste Management Coordinator

10.0 HISTORY

Revision History		
04/22/08	P101-14, Rev. 0	Renumbered document, ISD 101-14, *Chemical Management*.
04/15/09	P101-14, Rev. 1	Reformatted to meet the requirements as set forth in P311-1, *Creating, Revising, and Cancelling Institutional Documents*. Updated to address needs identified by the Chemical Management Improvement Project, driven by a Black Belt Project Execution Plan, and captured in Laboratory Issues Management Tracking System (LIMTS). The need to provide a more user friendly chemical inventory process, and tools to Designated Procurement Representatives (DPRs) and chemical workers is addressed. As part of the provision of a more user friendly chemical inventory process, drivers based on compliance requirements for chemical management were identified. Divisions responsible for these compliance requirements provided additional requirements for chemical inventory management and tracking, which are now reflected in a Chemlog functional requirements document. The set of requirements is provided in Section 3.3 of the document. There are no new requirements in this document, but the document has been simplified and updated, including combining the Hazard Communication (HAZCOM) plan and the Chemical Hygiene Plan (CHP) into one attachment.
08/11/10	P101-14, Rev. 2	Issued as a PROVISIONAL document until October 11, 2010. Added a requirement to ensure compliance with 29 Code of Federal Regulations (CFR) 1910.119, *Labor, Occupational Safety and Health Standards, Process Safety Management of Highly Hazardous Chemicals (OSHA PSM Rule),* Appendix A. by requiring Facility Operations Directors (FODs) to ensure that quantities are kept below threshold

Revision History		
		quantities. Updated responsibilities for chemical inventory to reflect ownership by Emergency Operations-Emergency Planning and Preparedness (EO-EPP). Clarified training requirements for "authorized chemical workers" and explained the training requirements for a worker who performs chemical spill/control/mitigation/cleanup. Added a requirement that work involving hazardous chemicals is reviewed using a new activity review process or equivalent process. Clarified the requirement for Chemical Hygiene Officers (CHOs), added the requirement that CHOs are assigned by the Division Leader, and added training and responsibilities for CHOs. Added specific requirements for job-specific briefings and/or information. Added the requirement for evaluation of chemicals and chemical reactions before start of laboratory activities.
10/11/10	P101-14, Rev. 2	Document became effective and is no longer PROVISIONAL.
11/30/10	P101-14, Rev. 3	Updated links to ensure correct names; removed irrelevant, incorrect, or duplicative links. Section 3.2: Elimination of a requirement for DPRs and clarification of chemical owner responsibility for procurement. Reducing requirement for justification of keeping chemical containers from six months to five years.
11/30/11	P101-14, Rev. 4	Updated items in Section 3.2 to consider before a chemical is purchased and provided link to list of chemicals with no disposal path. Changed Form 2134, *Medical Surveillance and Medical Certification Program Enrollment Form*, to Form 1793, *Job-Demands Evaluation*. Changed Chemical Management Webpage to Chemical Management Webpage. Updated Section 5.0 to reflect that this Quick Change does not require an Unreviewed Safety Question/Unreviewed Safety Issue (USQ/USI) review. Updated links, titles, and acronyms.
09/27/12	P101-14, Rev. 5	Section 5.0: Updated to reflect effective date of December 17, 2012 for applicable nuclear, high- and moderate-hazard facilities and accelerators. Removed the requirement for the approval by the Person in Charge (PIC) for the applicable Integrated Work Document (IWD). Updated links, titles, and acronyms.
01/08/15	P101-14, Rev. 6	This document cancels PD100, *Occupational Safety and Health*. Performed three-year review in accordance with PD311,

Revision History		
		Requirements System and Hierarchy. Changed the Issuing Authority (IA) from Associate Director for Environment, Safety, and Health (ADESH) to Associate Director for Nuclear and High Hazard Operations (ADNHHO); changed the Responsible Manager (RM) from Industrial Hygiene and Safety Division Leader to Operations Support (OS) Division Leader; and changed the Responsible Office (RO) from Industrial Hygiene and Safety Division to Operations Support-Division Office (OS-DO). Addressed revised Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, now aligned with the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals. Clarified requirements for Chemical Hygiene Officers. Reinserted requirements for chemical inventory. Added new requirements in 29 CFR 1910.1200, *Labor, Occupational Safety and Health Standards, Hazard Communication*. Added requirements for handling of sharps. Clarified and streamlined other chemical management requirements. Revised language in Section 5.0 to reflect Unreviewed Safety Question/Unreviewed Safety Issue (USQ/USI) process and implementation dates for affected facilities. Updated acronyms, links, and organization names. Made other edits and clarifications to resolve vague or inappropriate wording.
08/06/15	P101-14, Rev. 7	Performed three-year review in accordance with PD311, *Requirements System and Hierarchy*. Throughout document: Changed "Chemlog@lanl.gov" to "ChemDB@lanl.gov." Section 1.0: Changed the name from "Hazardous Materials Lifecycle Management Program" to "Chemical Lifecycle Management Program." Section 3.3: Changed how to barcode, enter, and track to the "Support and Resources" tab in the LANL institutional chemical inventory database application. Section 5.0: Updated this section to read, "The requirements in this document are effective on the issue date." Section 6.0: Updated broken link to UTrain course # 25418. Attachment A, Section 1.3: Removed sentence referencing Tools #9. Updated hyperlinks and references.

11.0 REFERENCES

Prime Contract:

- Clause I-121, Department of Energy Acquisition Regulation (DEAR) 970.5203-1, *Management Controls* (Dec. 2000)
- Clause I-122, DEAR 970.5203-3, *Contractor's Organization* (Dec. 2000) (Deviation)
- Clause I-123, DEAR 970.5204-2, *Laws, Regulations, and DOE Directives* (Dec. 2000) (Deviation)
- DEAR 970.5223-1, *Integration of Environment, Safety and Health into Work Planning and Execution*
- DEAR 970.5204-2, *Laws, Regulations, and DOE Directives; Appendix B 4.2, Environment, Safety, and Health*
- 29 CFR 1910.1200, *Labor, Occupational Safety and Health Standards, Hazard Communication*
- DOE O 151.1C, *Comprehensive Emergency Management System*

11.1 Other References

- 29 CFR 1910.1450, *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories*
- 29 CFR 1926.59, *Labor, Safety and Health Regulations for Construction, Hazard Communication*
- P101-29, *Working with Nanotechnology Materials and Processes*
- P101-15, *Biological Safety*
- P101-8, *Explosives Safety*
- P121, *Radiation Protection*
- 29 CFR 1910.119, *Labor, Occupational Safety and Health Standards, Process Safety Management of Highly Hazardous Chemicals (OSHA PSM Rule),* Appendix A
- MSDS/SDS electronic binder
- Designated Procurement Representative (DPR)
- LANL institutional chemical inventory
- 10 CFR 1021, *Energy, National Environmental Policy Act Implementing Procedures*
- 40 CFR 355, *Protection of Environment, Emergency Planning and Notification*
- NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response*
- P300, *Integrated Work Management*
- P101-32, *Worker Exposure Assessments*
- NFPA 45, *Standard on Fire Protection for Laboratories Using Chemicals*
- Research Library
- P101-34, *Pressure Safety*
- NFPA 55, *Compressed Gases and Cryogenic Fluids Code*

- P409, *LANL Waste Management*
- P151-1, *LANL Packaging and Transportation Program Procedure*
- 49 CFR 100–185, *Transportation, Pipeline and Hazardous Materials Safety Administration, Department of Transportation*
- 49 CFR 171.8, *Transportation, General Information, Regulations, and Definitions, Definitions and Abbreviations*
- 49 CFR 173, *Transportation, Shippers—General Requirements for Shipments and Packagings, Parts 115–141 and Parts 403–436*
- SOP-C-DO-003, *On-Site Shipping of Analytical-Scale Samples of Hazardous or Radioactive Materials (DOT Small Quantities)*
- SBP 112-3, *Unreviewed Safety Question (USQ) Process*
- 29 CFR 1926.21, *Labor, Safety and Health Regulations for Construction, Safety Training and Education*
- 29 CFR 1910.1003, *Labor, Occupational Safety and Health Standards, 13 Carcinogens*
- 40 CFR 262, *Protection of Environment, Standards Applicable to Generators of Hazardous Waste*
- NFPA 30, *Flammable and Combustible Liquids Code*
- P311-1, *Creating, Revising, and Cancelling Institutional Documents*
- PD311, *Requirements System and Hierarchy*
- P101-21, *Chronic Beryllium Disease Prevention Program*
- Laboratory Industrial Hygiene and Safety Manual
- P101-16, *Local Exhaust Ventilation and HEPA Filtration Systems*
- American National Standards Institute/International Safety Equipment Association (ANSI/ISEA) z358.1-2009, *American National Standard for Emergency Eyewash and Shower Equipment*
- LANL Operations and Maintenance Manual, Criterion 407: Emergency Eyewash and Shower Equipment
- LANL Category 1 Chemicals list
- P101-19, *Safety Signs, Labels, and Tags*
- P101-6, *Personal Protective Equipment*
- PD1200, *Emergency Management*
- P102, *Occupational Medicine*
- 10 CFR 851, *Energy, Worker Safety and Health Program*
- *Montreal Protocol on Substances that Deplete the Ozone Layer*
- Public Law 101-549, *Clean Air Act Amendments of 1990*
- 29 CFR 1910 Subpart Z, *Labor, Occupational Safety and Health Standards, Toxic and Hazardous Substances*
- 29 CFR 1910.1020, *Labor, Occupational Safety and Health Standards, Access to Employee Exposure and Medical Records*

- 40 CFR 61, *Protection of Environment, National Emission Standards for Hazardous Air Pollutants*
- 40 CFR 63, *Protection of Environment, National Emission Standards for Hazardous Air Pollutants for Source Categories*
- 40 CFR 68, *Protection of Environment, Chemical Accident Prevention Provisions*
- 40 CFR 82, *Protection of Environment, Protection of Stratospheric Ozone*
- 40 CFR 261, *Protection of Environment, Identification and Listing of Hazardous Waste*
- 40 CFR 263, *Protection of Environment, Standards Applicable to Transporters of Hazardous Waste*
- 40 CFR 268, *Protection of Environment, Land Disposal Restrictions*
- 40 CFR 302, *Protection of Environment, Designation, Reportable Quantities, and Notification*
- 40 CFR 370, *Protection of Environment, Hazardous Chemical Reporting: Community Right-to-Know*
- 40 CFR 372, *Protection of Environment, Toxic Chemical Release Reporting: Community Right-to-Know*
- 40 CFR 700–799, *Protection of Environment, Toxic Substances Control Act*
- 49 CFR, *Transportation*
- NFPA 430, *Code for the Storage of Liquid and Solid Oxidizers*
- NFPA 432, *Code for the Storage of Organic Peroxide Formulations*
- NFPA 484, *Standard for Combustible Metals*
- *Compressed Gas Association (CGA) Publications*
- 49 CFR 171-180, *Transportation, Hazardous Materials Regulations*
- DOE-HDBK (Handbook)-1139/2-2006, *Chemical Management (Volume 2 of 3), Chemical Safety and Lifecycle Management*
- DOE-HDBK-1139/3-2003, *Chemical Management (Volume 3 of 3), Consolidated Chemical User Safety and Health Requirements*
- P313, *Roles, Responsibilities, Authorities, and Accountability*
- P301, *Research Sample Management for Quality R&D*

12.0 FORMS

There are no forms associated with this document.

13.0 ATTACHMENTS

Attachment A. *LANL* Hazard Communication and *Chemical Hygiene Plan*

14.0 CONTACTS

Chemical Management: ADNHHO Operations Support (OS) Division
Telephone: (505) 665-5550
Website: http://int.lanl.gov/org/padops/adnhho/operations-support/index.shtml

Chemical Safety: Occupational Safety and Health Division
Telephone: (505) 606-0295

Website: http://int.lanl.gov/org/padops/adesh/occupational-safety-and-health/index.shtml

No: P101-14 Chemical Management
Attachment A. LANL Hazard Communication and Chemical Hygiene Plan (Page 1 of 12)

1.0 INTRODUCTION

A Chemical Hygiene Plan (CHP) is required by 29 Code of Federal Regulations (CFR) 1910.1450, *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories*, which applies to facilities where multiple chemicals are used in laboratory scale quantities or Research and Development (R&D). A written Hazard Communication (HAZCOM) Plan is required by 29 CFR 1910.1200, *Labor, Occupational Safety and Health Standards, Hazard Communication,* and 29 CFR 1926.59, *Labor, Safety and Health Regulations for Construction, Hazard Communication*, which apply to workers who use chemicals in shops, maintenance activities, construction or facility work, product manufacture, laboratory analysis, environmental restoration, or decommissioning activities. This attachment covers both standards. Areas where only one standard applies will be noted in the text.

Personnel exposure to chemical agents is to be minimized, and maintained within acceptable exposure limits. Exposures will be minimized by the use of hazard elimination, hazard substitution, engineering controls, administrative controls, and Personal Protective Equipment (PPE). Every employee, guest, visiting scientist, student, or subcontractor working on or off-site will be familiar with and comply with appropriate Los Alamos National Laboratory (LANL or the Laboratory) safety standards.

This plan includes:

- procedures to be followed when work involves the use of hazardous chemicals,
- criteria used to determine and implement control measures to reduce employee exposure to hazardous chemicals through the Integrated Work Management (IWM) and Worker Exposure Assessment processes,
- methods used to inform workers of non-routine tasks and hazards associated with chemicals in unlabeled pipes through the IWM process,
- requirements for:
  - fume hoods and other protective equipment,
  - employee information and training,
  - authorization and approval of activities through the IWM process,
  - additional employee protection for work with particularly hazardous substances in accordance with 29 CFR 1910.1450,
  - a hazardous chemical listing, and
  - subcontractor personnel in terms of HAZCOM.

1.1 Purpose

The purpose of this Hazard Communication and Chemical Hygiene Plan is to provide workers with the specific requirements for chemicals used during work, the hazards involved, the forms of warning, Material Safety Data Sheets/Safety Data Sheets (MSDS/SDSs), and the procedures and work practices to minimize their exposure to those chemicals.

1.2 Scope

HAZCOM applies to the use of chemicals in shops, maintenance activities, construction or facility work, product manufacture, the use of chemicals in a process in excess of 40 pounds or 5 gallons (see 40 CFR 355, *Protection of Environment, Emergency Planning and Notification*), environmental restoration, or decommissioning activities.

The CHP applies to work with small quantities of chemicals where the work can be safely manipulated by one person and multiple chemical procedures or multiple chemicals are used.

1.3 Chemical Inventory Requirements

A list of the hazardous chemicals known to be present at the Laboratory is maintained in the LANL institutional chemical inventory database. Primary hazardous chemical containers must be barcoded, and entered and tracked in the database.

Note: Most primary hazardous chemical containers ordered through standard purchasing agreements will be delivered to the user with a barcode and will already be listed in the LANL institutional chemical inventory database.

The chemical owner is responsible for ensuring the entry was accurately made in the chemical inventory database (e.g., owner, name of chemical, location). Some hazardous chemical containers (e.g., P-card purchases) may be delivered without a barcode and absent from the chemical inventory database. Chemical owners are responsible for barcoding these containers and entering them into the chemical inventory database. When a primary hazardous chemical container is transferred to a new owner and/or a new location; or is disposed, the chemical owner is responsible for updating the database.

Responsible Line Managers (RLMs) are accountable for accurate chemical inventories and are responsible for ensuring that physical inventories of their primary hazardous chemical containers are performed annually to verify the database inventory.

Note: Accuracy of the Laboratory's chemical inventory is very important. For example, in accordance with 40 CFR 370, *Protection of Environment, Hazardous Chemical Reporting: Community Right-to-Know*, "The owner or operator or the officially designated representative of the owner or operator must certify that all information included in the Tier II submission is true, accurate, and complete…under penalty of law... " The accuracy of the Laboratory's Tier II submittal (annual hazardous chemical report) is dependent on the accuracy of the Laboratory's chemical inventory.

For assistance with the LANL institutional chemical inventory database, contact the help desk at 667-9242, or e-mail ChemDB@lanl.gov.

1.4 Material Safety Data Sheets/Safety Data Sheets (MSDS/SDSs)

Access to MSDS/SDSs is provided through a link on the Chemical Safety Webpage.

- For chemicals acquired prior to December 1, 2015: MSDSs are available for all hazardous chemicals and hazardous chemical mixtures in the LANL institutional chemical inventory database (see the Chemical Safety Webpage) through the LANL MSDS/SDS database, or if specific manufacturer MSDS/SDSs are not available, refer to the Laboratory Chemical Safety Webpage for commercial MSDS/SDS databases.
- For chemicals acquired after December 1, 2015, or for chemicals for which an SDS has been created: SDSs, are available for all hazardous chemicals and hazardous chemical mixtures in the LANL institutional chemical inventory database (see the Chemical Safety Webpage) through the LANL MSDS/SDS database, or if specific manufacturer SDSs are not available, refer to the Laboratory Chemical Safety Webpage for commercial MSDS/SDS databases.

Manufacturer's MSDS/SDSs are provided to Industrial Safety and Hygiene (ISH) as part of the I-procurement process. If a chemical owner has acquired the chemical through another process, the manufacturer's MSDS/SDS will be provided to ISH.

Note: This does not apply to samples being submitted for analysis.

New chemicals developed at the Laboratory for internal use will be evaluated by the chemical owner to determine if they are hazardous (CHP only). If it is determined the chemicals are hazardous, the information will be included in the Integrated Work Document (IWD), thus allowing for the chemical workers to receive information on how to control the hazard. If the chemical produced is a byproduct whose composition is not known, the chemical will be assumed to be hazardous and handled accordingly. If an employee produces a new chemical, and plans to ship it off-site for use or distribution, an MSDS/SDS is required to be created and shipped with the chemical. For chemicals created at the Laboratory, ISH will be contacted for assistance in creating an MSDS/SDS.

1.5 Labels

Labels on containers, including, but not limited to, tanks, totes, piping and drums must be maintained. This means that labels must be maintained on chemicals in a manner which continues to be legible and the pertinent information (such as the hazards and directions for use) does not get defaced (i.e., fade, get washed off) or removed in any way.

Note: All hazardous chemicals shipped after June 1, 2015, must be labeled with specified elements including pictograms, signal words and hazard and precautionary statements. However, manufacturers, importers, and distributors may start using the new labeling system in the revised HCS before the June 1, 2015 effective date if they so choose. LANL is not responsible for updating labels on shipped containers, even if the shipped containers are labeled under the 1994 Hazard Communication Standard, unless the labels have been removed or defaced. However, if there are newly-identified hazards that are not disclosed on the label, RLMs and PICs must ensure that the workers are aware of the hazards as discussed below under workplace labels.

Primary chemical containers associated with the 1994 Hazard Communication Standard will have a label with the chemical name, and hazard warning. The hazard warning is a statement of the hazardous effect of the chemical (e.g., "flammable" or "causes lung damage") or a numerical rating such as that found on the NFPA label.

(CHP areas only) When one transfers a material from the original manufacturer's container to other vessels, these vessels are referred to as "secondary containers." Secondary containers in HAZCOM areas will include the chemical name, creation date, hazard warning, and manufacturer. Secondary containers in CHP areas will include the name of the chemical, date created, and the owner of the container.

Portable containers into which hazardous chemicals are transferred and which are intended only for the immediate use (i.e., use by one worker for one day, and always under the control of that one worker) of the chemical worker who performed the transfer are not required to be labeled. However, it is good practice to label the container with the name of the chemical and the owner.

Contact the CHO and OSH-ISH for assistance in developing labels

1.6 Methods Used to Inform Workers

Workers use the IWM process (see P300, *Integrated Work Management*) to develop IWDs for the proposed work activity. The IWD or other work document describes the scope, location, duration, hazards and environmental aspects, and controls (including PPE) to mitigate the hazards and negative environmental impact of the work. The IWD is used to authorize the work in accordance with P300. IWDs or other work documents will be used to address tasks involving hazardous chemicals.

Responsible Line Managers (RLMs) will ensure that all work involving hazardous chemicals is reviewed for impacts on security, environment, safety and health, facility or equipment, and facility safety basis concerns in accordance with P300. At a minimum, the following steps will be performed:

1. Initially categorize hazardous chemical work in accordance with P300. If categorized as high hazard/complex work, assemble a hazard analysis review team (see P300 Appendix A, *Integrated Work Management Process for Research and Development*). In addition to the required members for the team, include deployed industrial hygienist(s), and other hazardous chemical Subject Matter Experts (SMEs).
2. Create a detailed description of the work for the IWD involving hazardous chemicals that identifies the hazards associated with performing the work.
3. Specify hazard controls within the IWD using the following hierarchy of controls.
   a. Elimination or Substitution
   b. Engineering Controls
   c. Administrative Controls
      - qualifications
      - formal procedures
      - training
      - work practices

d. PPE

Note: Guidance for Preparing IWDs: Consider and understand the potential for generating new hazardous chemical-bearing waste streams. Consider substituting a less hazardous chemical and speak with your Waste Management Coordinator (WMC) before creating new waste streams.

4. Contact your deployed industrial hygienist to perform a qualitative exposure assessment in accordance with the Laboratory Industrial Hygiene and Safety Manual to evaluate the potential for worker exposure to hazardous chemicals.

Your deployed industrial hygienist will work with subcontractor personnel to ensure that the potential for subcontractor worker exposure to hazardous chemicals is evaluated before removing, remodeling, servicing, maintaining, or repairing laboratory equipment and exhaust systems.

1.7 Worker Exposure Assessments

Worker exposure assessments, including exposure monitoring, will be conducted in accordance with applicable sections of:

- P101-21, *Chronic Beryllium Disease Prevention Program*
- P101-32, *Worker Exposure Assessments*
- the Laboratory Industrial Hygiene and Safety Manual

1.8 Use and Maintenance of Laboratory Fume Hoods

Requirements that will be followed for the proper design, operation, and use of laboratory fume hoods are located in P101-16, *Local Exhaust Ventilation and HEPA Filtration Systems*.

1.9 Chemical Hygiene Officer (CHO) (Chemical Hygiene Plan [CHP] Only)

The LANL CHO resides in OSH-ISH. Each Division Leader will appoint a CHO to provide technical guidance to line management and chemical workers (CHP only). The CHO will be an authorized chemical worker with the education and experience to determine the hazards and consequences of exposure to the chemicals found in the chemical inventory.

*1.9.1 **Roles and Responsibilities*** (Based on 29 CFR 1910.1450*, Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories, Appendix A [nonmandatory] and Prudent Practices for Handling Hazardous Chemicals in Laboratories)*

LANL CHO:

- Establish, maintain, and revise the CHP.
- Create and revise CHP documentation.
- Communicate chemical safety lessons learned to Division CHOs for dissemination.

Division CHO:

- Liaise with OSH-ISH to ensure compliance with this document.
- Monitor procurement, use, and disposal of chemicals used in the Division.
- Seek ways to improve the LANL Hazard Communication and Chemical Hygiene program.

- Perform MOVs with Division management of laboratories, preparation rooms, and chemical storage rooms.
- Assist laboratory owners in developing and maintaining adequate facilities.
- Provide assistance to Division members for proposed research activities that involve hazardous chemicals.

1.10 Safety Showers and Eye Washes

- Safety Showers and Eye Washes will be maintained, inspected, and tested periodically as required by American National Standards Institute (ANSI)/International Safety Equipment Association (ISEA) z358.1-2009 *American National Standard for Emergency Eyewash and Shower Equipment*, with the exception of weekly activation of safety showers. Activation of safety showers will be done on a quarterly basis due to issues associated with containment of test water. See LANL Operations and Maintenance Manual, Criterion 407: Emergency Eyewash and Shower Equipment.

1.11 Provisions for Additional Employee Protection

1.11.1 Work with LANL Category 1 Chemicals

- Special handling procedures are necessary to minimize exposures to known human carcinogens, reproductive toxicants, and substances with high acute or high chronic toxicity. Chemicals in these hazard groups are identified in the LANL Cat 1 Chemicals list.
- Handling procedures for these agents will be defined in laboratory or work authorization documents and approved by Deployed Services Environment, Safety, and Health (DSESH) deployed personnel before initiation of work.
- Specific consideration will be given to the following controls, to be used as appropriate for the agent and process: establishment of designated areas; use of containment devices such as laboratory fume hoods or glove boxes; procedures for safe removal of contaminated waste; and decontamination procedures (see 29 CFR 1910.1450, *Labor, Occupational Safety and Health Standards, Occupational Exposure to Hazardous Chemicals in Laboratories* [e] [3] [viii]).

Decontamination is necessary before the affected work area can be released from “designated area” status. The type and level of decontamination should be defined by ISH personnel. After decontamination, the area will no longer be considered a “designated area,” and all warning and control signs will be removed. A wet mop or a vacuum cleaner equipped with a High-Efficiency Particulate Air (HEPA) filter will be used instead of dry sweeping.

1.11.2 Additional Requirements for Carcinogens

A regulated area will be established where a known human or suspected human carcinogen is manufactured, processed, used, repackaged, released, handled, or stored. All materials containing 0.1% (by weight) or more of a listed carcinogen will be clearly labeled to warn of a carcinogen hazard. A list of carcinogens, located in the LANL Cat 1 chemical list can be found on the Chemical Safety Webpage. Less-hazardous, noncarcinogenic chemicals that can be substituted for currently used carcinogens will be substituted when compatible with the work to be accomplished.

All areas in which carcinogens are used or stored will meet the following conditions:

- Clearly marked by posting signs warning of a carcinogen hazard. Additional signs and labels are required when OSHA-regulated carcinogens are in use. See P101-19, *Safety Signs, Labels, and Tags*.
- Signs posted prohibiting eating, drinking, gum chewing, smoking, or applying cosmetics or lip balm.
- Ventilation and hood performance that meet minimum requirements before beginning any new operations involving carcinogens. (See P101-16, *Local Exhaust Ventilation and HEPA Filtration Systems*.)
- Evaluation of carcinogen storage and use using the Laboratory Industrial Hygiene and Safety Manual, *Chapter 33, Carcinogens*. Request the Environment, Safety, Health (ESH) Qualified Person perform a re-evaluation of carcinogen hazards when the use of a carcinogen changes in quantity, concentration, frequency, or duration.
- Decontamination procedures for equipment and facilities will be documented in an IWD before new carcinogens are used.
- Notification of ISH and Occupational Medicine (OM) with names of authorized chemical workers working with carcinogens.

1.11.3 Evaluation of Laboratory Operations

- Before laboratory tests or chemical reactions begin, evaluations must be made for hazards that can be encountered or generated during the course of the work.
- Evaluations must include the hazards associated with the properties and the reactivity of the materials used and any intermediate and end products that can be formed, hazards associated with the operation of the equipment at the operating conditions, and hazards associated with the proposed reactions, for example, oxidation and polymerization.
- Where reactions are being performed to synthesize materials, the hazard characteristics of which have not yet been determined by test, precautions must be employed to control the highest possible hazard based on a known hazard of similar material.
- Where use of a new material might present an explosion potential, initial experiments or tests must be conducted in an enclosure that is designed to protect people and property from potential explosion damage.
- Unattended or automatic laboratory operations involving hazardous chemicals must be equipped with regular surveillance for abnormal conditions.

1.12 Personal Protective Equipment (PPE)

- The Laboratory requires that suitable clothing and equipment be used to protect workers and others in Laboratory spaces from hazards in the workplace. PPE is intended to protect the body (including eyes, face, feet, hands, head, hearing, and respiratory system) from hazards capable of causing injury, illness, or impairment of bodily function. No protective material will provide full protection against all hazards. PPE is considered for use as a hazard control strategy only after it has been determined that elimination, substitution and engineered and administrative controls are not feasible, or in the interim while engineered and administrative controls are being designed and implemented. Proper PPE will be identified in the work authorization documentation.

- The level of protection and type of PPE selected will match the applicable hazards. See P101-6, *Personal Protective Equipment*.

1.13 Flammable Liquids Storage Cabinets

A flammable liquids storage cabinet is a cabinet that is Underwriters Laboratories listed or Factory Mutual approved for storage of flammable liquids. The Fire Protection-Division Office (FP-DO) should be contacted for questions on what qualifies as a flammable storage cabinet and the chemical limits.

Not more than 60 gallons of Class I and/or Class II liquids, or not more than 120 gallons of Class III liquids may be stored in an individual cabinet. Storage cabinets shall be designed and constructed to limit the internal temperature to not more than 325ºF when subjected to a standardized 10-minute fire test. Storage cabinets shall be conspicuously labeled, "Flammable - Keep Fire Away."

The bottom, top, door, and sides of metal cabinets shall be at least No. 18 gage sheet metal and double walled with 1½-inch air space. The door shall be provided with a three-point lock, and the door sill shall be raised at least 2 inches above the bottom of the cabinet.

Note: Do not store compressed gases in these cabinets.

1.14 Hydrofluoric Acid (HF)

Hydrofluoric Acid (HF) is a particularly dangerous acid because of its unique ability among acids to penetrate tissue. This ability to penetrate tissue allows HF to cause severe systematic toxicity from even relatively small dermal exposures. For this reason, the following requirements and recommended safe practices apply to work with HF:

Requirements:

- Substitute less hazardous fluoride compounds, where possible, e.g., use aluminum fluoride instead of HF to remove silicates from aqueous solutions.
- An Integrated Work Document (IWD) (see P300, *Integrated Work Management*) is required for work with HF. The IWD must include the first-aid procedure in case of an exposure and what to do in case of a spill.
- As required in P300, the IWD must be readily accessible where the activity is being conducted.
- A Material Safety Data Sheet/Safety Data Sheet (MSDS/SDS) must be available.
- Before working with HF, workers must read the MSDS/SDS, read the IWD, complete training on the first-aid procedure in case of an exposure, and know what to do in case of a spill.
- Workers must be authorized in accordance with the requirements in P300.
- Workers who work with HF must be registered and trained by Occupational Medicine on first-aid procedures associated with HF exposure.

- Personal protection by engineered controls, personal protective equipment, or a combination is required for HF use. Controls must be commensurate with the HF hazard represented by a specific use or process involving HF. Your deployed industrial hygienist will assist in the development of and approve personal protective equipment and engineered controls for HF uses and processes through IWD development.
- A calcium gluconate skin exposure mitigation kit must be located in close proximity to the work involving HF. The kit must be replaced with new stock annually. A list of HF first-aid trained personnel must be posted near the kit. Contact Occupational Medicine for mitigation kits and replacement components.
- An HF spill kit must be available with calcium compounds such as calcium carbonate, calcium sulfate, or calcium hydroxide. It is advised that facilities that use or handle HF maintain on hand adequate compatible spill control materials to absorb or contain the volume of the largest volume container of HF commonly within the facility. In facilities with a "no spill cleanup" policy, these materials will supplement that which is immediately available to Hazardous Material (HAZMAT) first responders. Sodium bicarbonate should never be used with an HF spill since it does not bind the fluoride ion and can generate toxic aerosols.

Safe Practices

- Never work alone with concentrated (~6M or greater) HF or large volumes of dilute HF; use a buddy system. It is highly recommended that HF work not be conducted during hours when facilities may have minimum personnel such as nights and weekends even with small volumes and dilute solutions to ensure that there are adequate personnel to render aid in the event of an accident or spill.
- Use an HF-compatible tray or other suitable container while working with HF for containment in case of a spill.
- Store HF in compatible materials (e.g., Teflon, fluorinated ethylene propylene, polyethylene, etc.) containers and keep containers closed.
- Label all nonoriginal containers that contain HF and solutions other than that for immediate use (See Section 1.5).
- Store the stock HF in HF-compatible plastic secondary containment and label the cabinet. Store HF in lower cabinets near the floor. Store HF with other inorganic acids and away from bases, flammables, or oxidizers.
- Wash or wipe gloves with water before removing them, if permissible, by specific laboratory protocols.
- Protect exposed skin and nonresistant or absorbent clothing through:
  - enclosed processes and uses,
  - chemical fume hoods with sash down,
  - gloveboxes with HF-compatible gloves and windows,
  - specially engineered process enclosures, e.g., ventilated cabinets,

Note: Concentrated HF and hydrogen fluoride gas from reactions can etch the glass hood sash on a fume hood and make it hard to see through. If the hood sash becomes fogged and hard to see through because of etching, contact your Facility Operations Director (FOD) representative about installing a polycarbonate sash. In some cases, hood sashes as well as glove box windows may be protected before exposure with a transparent film of Polyvinylidene Fluoride (PVDF, Kynar, Hylar, and Sygef) or other HF-resistant plastic.

- HF-resistant rubber or plastic apron,
- HF-resistant plastic arm coverings,
- HF-resistant gloves and glove combinations,
  - incidental use of dilute acid solutions–double gloves with heavy nitrile exam gloves; re-glove if there is any exposure to the gloves,
  - extended use of concentrated acid–heavy neoprene or butyl gloves worn over nitrile or silver shield gloves,
  - fluorinated polymer gloves for high-concentration and/or high-concentration HF gas exposure,
- closed toe shoes or chemical resistant boots,
- long pants and a long-sleeve shirt with a reasonably high-neck (not low-cut).

- Protect the face and eyes through
  - safety glasses in conjunction with chemical fume hoods with sash down (dilute solutions),
  - splash goggles in conjunction with a fume hood sash (high-concentration, high-reactivity process), and
  - face shield in conjunction with splash goggles (open processes, open hood sash).

1.15 Emergency Procedures

Emergency procedures will be in accordance with requirements contained in PD1200, *Emergency Management*.

1.16 Medical Surveillance

Medical surveillance requirements will be in accordance with requirements contained in P102, *Occupational Medicine*.

1.17 Worker Information, Training and Authorization

Chemical workers who work with hazardous chemicals will receive training about those chemicals before they begin work. Chemical workers receive this training through a combination of formal training, reading assignments and job-specific information as specified in the work authorization documentation. Chemical workers who work in areas where hazardous chemicals are used, but who do not work directly with such chemicals, will be made aware of the hazards before they begin work in those areas. Formal training will be conducted and documented in accordance with Laboratory training policy. Chemical workers will be trained on chemicals in use in their workplace at the time of initial assignment and whenever new hazards are introduced. See Section 6.0 of this document.

1.18 Use of Non-medical Sharps

- Use the correct tool for the job, i.e., a box cutter to cut boxes.
- Do not shear, clip, or bend needles. Do not recap used disposable hypodermic needles. Do not remove used disposable hypodermic needles from the syringe. If you are using a glass syringe and a non-disposable needle, use extreme caution when recapping the needle, or removing the needle. To recap a non-disposable needle, use either a one-handed “scoop” technique or a mechanical device designed for holding the needle sheath.
- Do not walk with an unprotected sharp.
- Dispose of sharps at the point of use.
- Use needleless systems, or a blunt needle whenever possible.
- Organize your work space so that all materials for the experiment are ready and available before accessing the sharp device. This helps reduce the chance of having to set an exposed needle down on the lab bench in order to retrieve other necessary supplies.
- Be prepared to use the device the moment the sharp is exposed (e.g., when the needle is uncapped, the razor blade removed from its wrapper).
- Make sure you have adequate lighting to perform the task involving the sharp.
- Keep exposed sharps pointed away from yourself and others.
- Never directly hand an exposed sharp to another person. Instead, designate a “sharps passing zone” where exposed sharps are set down prior to being picked up by another person.
- Be accountable for the sharps you use.
- Look around after you complete your work and make sure that all sharps have been disposed of properly.
- Store sharps in a safe manner. Protect the sharp with a cap, cover, or store it in a rigid container.
- Use a dedicated, labeled sharps storage area.

Disposal of Non-medical Sharps:

- Hypodermic needles and contaminated sharps must always be discarded in an approved, rigid, leak-proof sharps container. Do not overfill the container. Do not open sharps containers. Note: sharps containers for personal medical use are available at Occupational Medicine.
- Do not discard loose sharps or sharps containers in the regular trash.
- **Broken glass:** (no regulated chemical or bioagent/biohazard contamination): Carefully sweep up any broken pieces into a dustpan and place them in a hard sided closed container (e.g., cardboard box) labeled “broken glass” with the technical area (TA), building number, room number and generator’s name written on the container. The container can be placed in the regular trash provided the broken glass is not contaminated; coordinate disposal with your WMC.

- **Chemical contaminated sharps**: Store in leak-proof, rigid, puncture-resistant containers that are manufactured for the purpose of sharps containment and are taped closed or tightly lidded to preclude loss of contents. Label and manage in accordance with regulatory requirements for the material with which they are contaminated. Contact your WMC for assistance.
- **Uncontaminated (no rad, chemical, or biological) Sharps**: Store in leak-proof, rigid, puncture-resistant containers that are manufactured for the purpose of sharps containment and are taped closed or tightly lidded to preclude loss of contents. Label the container "non-infectious and non-hazardous waste" with the TA, building number, room number and generator's name written on the container. The container can be placed in the regular trash; however, coordinate with your WMC.
- **New Mexico special waste sharps (infectious waste sharps):** Refer to Tool 502 "Infectious Waste" for assistance.

The Chemical Safety Webpage also contains guidance on Working with Sharps and Management of Waste Sharps.

IMPORTANT

If you wish to receive credit for the preceding document you **must** enter the course through *UTrain* **not** the Policy Office website.

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Environment, Safety, Health Directorate

Environmental Protection – Water Quality and RCRA Quality Procedure

MSGP Storm Water Corrective Actions

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CONTROLLED DOCUMENT

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

History of Revisions

Document Number *[Include revision number, beginning with Revision 0]*	**Effective Date** *[Document Control Coordinator inserts effective date]*	**Description of Changes** *[List specific changes made since the previous revision]*
0	08/10	New Document.
1	11/10	Incorporated ENV-RCRA-QP-062 *MSGP Routine Inspections* into this document.
2	01/13	Biennial revision, new template implemented.

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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").

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.

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:

- *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.

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;

- 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);

- 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	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" Click on "Enter New Corrective Action."
2	Under the "Corrective Action Header" tab, enter the following: • 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. **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. • 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. Once all of the above information is entered correctly, click "Save" and go

	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	Click "Go To Corrective Action Details" in the middle of the screen. Under the "Corrective Action Details" tab, enter the following: • 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. **NOTE:** Spills or other emergency situations may identify the need for a corrective action that was not identified during an inspection. • 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) **NOTE:** If the corrective action has not been completed, enter an expected completion date. Do not put a date in both locations. 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. **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." 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.

	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.

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.

2	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. All information shall be validated before running the final annual report.
3	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.

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;

- 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.

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

Click here for "Required Read" credit.

ATTACHMENT 1- ANNUAL REPORTING FORM

NPDES Permit Tracking No.:

EPA

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?
☐ YES ☐ 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? ☐ YES ☐ NO

If YES, for each location, describe the sources of those stormwater and non-stormwater discharges and any associated control measures in place:

NPDES Permit Tracking No.:

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.*

NPDES Permit Tracking No.:

C. INDUSTRIAL ACTIVITY AREA SPECIFIC FINDINGS

Complete one block for each industrial activity area where pollutants may be exposed to stormwater. Copy this page for additional industrial activity areas.

In reviewing each area, you should consider:

- 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 from areas of no exposure to exposed areas; and
- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas.

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 control measures 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 c 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 _____:

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)

NPDES Permit Tracking No.:

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)

NPDES Permit Tracking No.:

D. CORRECTIVE ACTIONS

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.

Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in this comprehensive stormwater inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # ☐☐ of ☐☐ for this reporting period.

2. Is this corrective action:
   - ☐ An update on a corrective action from a previous annual report; or
   - ☐ A new corrective action?

3. Identify the condition(s) triggering the need for this review:
   - ☐ Unauthorized release or discharge
   - ☐ Numeric effluent limitation exceedance
   - ☐ Control measures inadequate to meet applicable water quality standards
   - ☐ Control measures inadequate to meet non-numeric effluent limitations
   - ☐ Control measures not properly operated or maintained
   - ☐ Change in facility operations necessitated change in control measures
   - ☐ Average benchmark value exceedance
   - ☐ Other (describe): _____

4. Briefly describe the nature of the problem identified:

5. Date problem identified: ☐☐/☐☐/☐☐☐☐

6. How problem was identified:
   - ☐ Comprehensive site inspection
   - ☐ Quarterly visual assessment
   - ☐ Routine facility inspection
   - ☐ Benchmark monitoring
   - ☐ Notification by EPA or State or local authorities
   - ☐ Other (describe): _____

7. Description of corrective action(s) 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, basis for that determination:

8. Did/will this corrective action require modification of your SWPPP? ☐ YES ☐ NO

9. Date corrective action initiated: ☐☐/☐☐/☐☐☐☐

10. Date correction action completed: ☐☐/☐☐/☐☐☐☐ or expected to be completed: ☐☐/☐☐/☐☐☐☐

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 timeframes associated with each step) necessary to complete corrective action:

NPDES Permit Tracking No.:

E. ANNUAL REPORT CERTIFICATION

1. Compliance Certification

Do you certify that your annual inspection has met the requirements of Part 4.2 of the permit, and that, based upon the results of this inspection, to the best of your knowledge, you are in compliance with the permit? ☐ YES ☐ NO

If NO, summarize why you are not in compliance with the permit:

2. Annual Report 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.

Authorized Representative Printed Name: Title:

Signature: Date Signed:

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:** ☐ Quarterly ☐ Other	**Date of inspection (MM/DD/YYYY):** **Time of inspection:**

Weather: ❑ Clear ❑Cloudy ❑ Rain ❑ Sleet ❑ Fog ❑ Snow ❑ High Winds ❑ Other:
Temperature: ° F
Is Inspection Being Conducted During a Storm Water Discharge? ❑Yes ❑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? ☐ Yes ☐ No **Describe:**

Were previously identified conditions corrected before the next anticipated storm event? ☐ Yes ☐ 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? ☐ Yes ☐ No

Were any Corrective Actions initiated or completed? ☐ Yes ☐ No **Describe:**

Are there any conditions requiring Corrective Action? ☐ Yes ☐ No **If Yes, List Number of Corrective Actions Required** _____
(Note – need a Corrective Action Form for each listed)

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:**_____

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 field work and consists solely of visual evaluations, and has been documented to have a **LOW hazard** rating by submittal of a completed *ENV Low Hazard Verification* form 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 Terrill 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 ☒ Unclassified

** Effective Date

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

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

- ENV-RCRA-QAPP-MSGP *Multi-Sector General Permit Quality Assurance Project Plan*

Definitions specific to this procedure

Adverse weather conditions: Weather that prohibits collection of samples such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc. Could also include drought, extended frozen conditions, etc.

Best Management Practices (BMPs): Schedules of activities, practices, prohibitions of practices, structures, vegetation, maintenance procedures, and other management practices to prevent or reduce pollution. BMPs can also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Clarity: Clearness or cleanness of appearance. This includes the visual observation of suspended sediment.

Color: Unpolluted water will be clear and colorless. Color should not be confused with clarity.

Floating solids: Particulate material floating on the surface of the water. Examples include: leaves, pinecones, pine needles, dead grass, twigs, branches, and common trash.

Foam: An accumulation of fine frothy bubbles formed in or on the surface of water. A mass of bubbles of air in a matrix of liquid film.

Odor: The property or quality of waters that affects or stimulates the sense of smell. Examples of odors that may be present are burnt oil, sewage, diesel, sulfuric, or detergent odors.

Oil sheen: The presence of rainbow-like colors glistening on the surface of a liquid. The color of oil sheen will vary dependent on thickness and consistency.

Settled solids: Settled particulate material i.e. heavier than water. Examples include sand, gravel, metal turnings, and glass.

Suspended solids: Particulate materials that are floating between the bottom of the sample and the surface of the water.

Unstaffed and Inactive Sites: A facility maintaining certification with the SWPPP that it is inactive and unstaffed and visual examinations are not required.

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 Environ-mental 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	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. 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.

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 **immediately**. 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	Note if there are any potential sources of pollutants on site. If yes, contact an MSGP representative of ENV-RCRA and document the following: • 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	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. **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.

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: ☐Apr-May ☐Jun-Jul ☐Aug-Sep ☐Oct-Nov
Outfall ID:	"Substantially Identical Outfall"? ☐ Yes ☐ No	If YES identify other Outfalls in the Group:
Person(s) collecting sample (PRINT): PPT Member? ☐ Yes ☐ No	Signature :	
Person(s) examining sample (PRINT): PPT Member? ☐ Yes ☐ No	Signature :	
Date & Time Discharge Began:	Date & Time Sample Collected:	Date & Time Sample Examined:
Substitute Sample? ☐ Yes ☐ No	If YES, identify quarter/year when sample was originally scheduled to be collected:	

Was the sample collected in the first 30 minutes? ☐ Yes ☐ No If No, explain why not:

Nature of Discharge: ☐ Rainfall. Amount_____inches ☐ Snowmelt. Amount_____inches

Previous Storm Ended > 72 hours Before Start of This Storm? ☐Yes ☐ No	If No, Explain: *

PARAMETERS

Color	☐ None ☐ Other	If Other describe:
Odor ☐ None ☐ Musty ☐ Sewage ☐ Sulfur ☐ Sour ☐ Solvents ☐Petroleum/Gas ☐ Other		If Other, describe the odor:
Clarity: ☐ Clear ☐ Slightly Cloudy ☐ Cloudy ☐ Opaque ☐ Other (describe):		
Floating Solids: ☐ Yes ☐ No		If YES, describe if raw or waste materials(s):
Settled Solids:** ☐ Yes ☐ No		If YES, are solids Fine ☐ Coarse ☐ If Other describe:
Suspended Solids: ☐ Yes ☐ No		If YES, are solids Fine ☐ Coarse ☐ If Other describe:
Foam (gently shake sample): ☐ Yes☐ No		If YES, on the surface ☐or ☐ in the water. Describe color:
Oil Sheen ☐ Yes ☐ No ☐ Color of Sheen:		Thickness: Flecks ☐ Globs ☐ Describe if other:
Other Obvious Indicators of Pollution Present in the sample? Yes☐ No☐		If YES describe:

SITE OBSERVATIONS

Potential pollutants found during visual examination? ☐ Yes ☐ 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? ☐ Yes ☐ 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☐ No☐ If No, explain why not:

Was a Corrective Action Plan identified within 14 days of the observation? Yes☐ No☐ If No, explain why not:

Other Relevant Information: Yes☐ No☐
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.

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: ☒ Jan-Mar ☐ Apr-Jun ☐ Jul-Sep ☐ Oct-Dec
Outfall ID: 3-Sigma-1	"Substantially Identical Outfall"? ☒ Yes ☐ 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? ☐ Yes ☒ No Joe Doe	Signature : Joe Doe	
Person(s) examining sample (PRINT): PPT Member? ☐ Yes ☒ No Joe Doe	Signature : Joe Doe	
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? ☐ Yes ☒ No	**If YES**, identify quarter/year when sample was originally scheduled to be collected:	

Was the sample collected in the first 30 minutes? ☒ Yes ☐ No If No, explain why not:

Nature of Discharge: ☐ Rainfall. Amount_____inches ☒ Snowmelt. Amount___0.25 inches

Previous Storm Ended > 72 hours Before Start of This Storm? ☒ Yes ☐ No	**If No**, Explain: *

PARAMETERS

Color ☐ None ☒ Other	**If Other** describe: light brown
Odor ☒ None ☐ Musty ☐ Sewage ☐ Sulfur ☐ Sour ☐ Solvents ☐ Petroleum/Gas ☐ Other	**If Other,** describe the odor:
Clarity: ☐ Clear ☒ Slightly Cloudy ☐ Cloudy ☐ Opaque ☐ **Other (describe)**:	
Floating Solids: ☐ Yes ☒ No	**If YES,** describe if raw or waste materials(s):
Settled Solids:** ☐ Yes ☒ No	**If YES,** are solids Fine ☐ Coarse ☐ If Other describe:
Suspended Solids: ☒ Yes ☐ No	**If YES,** are solids Fine ☒ Coarse ☐ If Other describe:
Foam (gently shake sample): ☐ Yes ☒ No	**If YES,** on the surface ☐ or ☐ in the water. Describe color:
Oil Sheen ☐ Yes ☒ No ☐ **Color of Sheen**:	**Thickness**: Flecks ☐ Globs ☐ Describe if other:
Other Obvious Indicators of Pollution Present in the sample? Yes ☐ No ☒	**If YES** describe:

SITE OBSERVATIONS

Potential pollutants found during visual examination? ☐ Yes ☒ 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? ☐ Yes ☐ 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 ☐ No ☐ **If No**, explain why not:

Was a Corrective Action Plan identified within 14 days of the observation? Yes ☐ No ☐ **If No**, explain why not:

Other Relevant Information: Yes ☐ No ☒
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.

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	O	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

ENV-CP-QP-045.1	
Effective Date: September 5, 2013	Next 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:

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Derivative Classifier: ☐ **Unclassified** ☒ **DUSA_ENVPRO**

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Anthony Grieggs	ENV-CP Group Leader	Signature on file	9/5/13

CONTROLLED DOCUMENT

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History of Revisions

Document Number *[Include revision number, beginning with Revision 0]*	**Effective Date** *[Document Control Coordinator inserts effective date]*	**Description of Changes** *[List specific changes made since the previous revision]*
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:

- 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.

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. • 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: • 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 ½ 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. 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.

7	**NOTE:** You must be a trained electrical worker and have completed all required courses in Training Plan #2876 to conduct this step. 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.)

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	After the programming is complete, select "Run diagnostics" and press "Enter" to run the system diagnostic test. The diagnostic tests include the following: • 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." Do not select "Yes." 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

	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	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 • April 1 through May 31 • June 1 through July 31 • August 1 through September 30, and • October 1, through November 30.
2	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. **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. 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 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.

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: • 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.

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 • 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

	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.

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	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. If sampler is to be deactivated, follow the steps specific to each sampler provided in the preceding section. 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": 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."

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*

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

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.	❒Yes ❒No
Deploy Avalanche sampler matching serial number listed in equipment list above for installation.	❒Yes ❒No
Deploy and install pH and Temperature Probe listed in equipment list above and probe saturation reservior.	❒Yes ❒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?	❒Yes ❒No
Is the sampler installed according to steps in ENV-QP-045.0?	❒Yes ❒No
Is a Greenlee box used?	❒Yes ❒No
Are electrical connections secure?	❒Yes ❒No
Record battery voltage(s). Voltage(s) > 11.7 V ?	❒Yes ❒No
Is the sampler physically configured for the types and number of bottles specified above (i.e., correct carousel, base, arm)?	❒Yes ❒No
Is the sampler programmed correctly per ENV-QP-045.0 for the program / bottle set specified above?	❒Yes ❒No
Does sampler pass the ISCO diagnostics test ?	❒Yes ❒No
Does sample tubing pass suction test?	❒Yes ❒No
Is sampler ON upon departure?	❒Yes ❒No
Does ISCO display either "Sampler Inhibited" or "Program Disabled"?	❒Yes ❒No
Has the actuator switch been reset to "Latch"?	❒Yes ❒No
If any maintenance completed, check YES and describe.	❒Yes ❒No
If any follow-on maintenance is required, check YES and describe.	❒Yes ❒No

LANL PERSONNEL USE ONLY (Initials and dates)

Accepted	Tech QC	ENV-RCRA Review
_____	_____	_____

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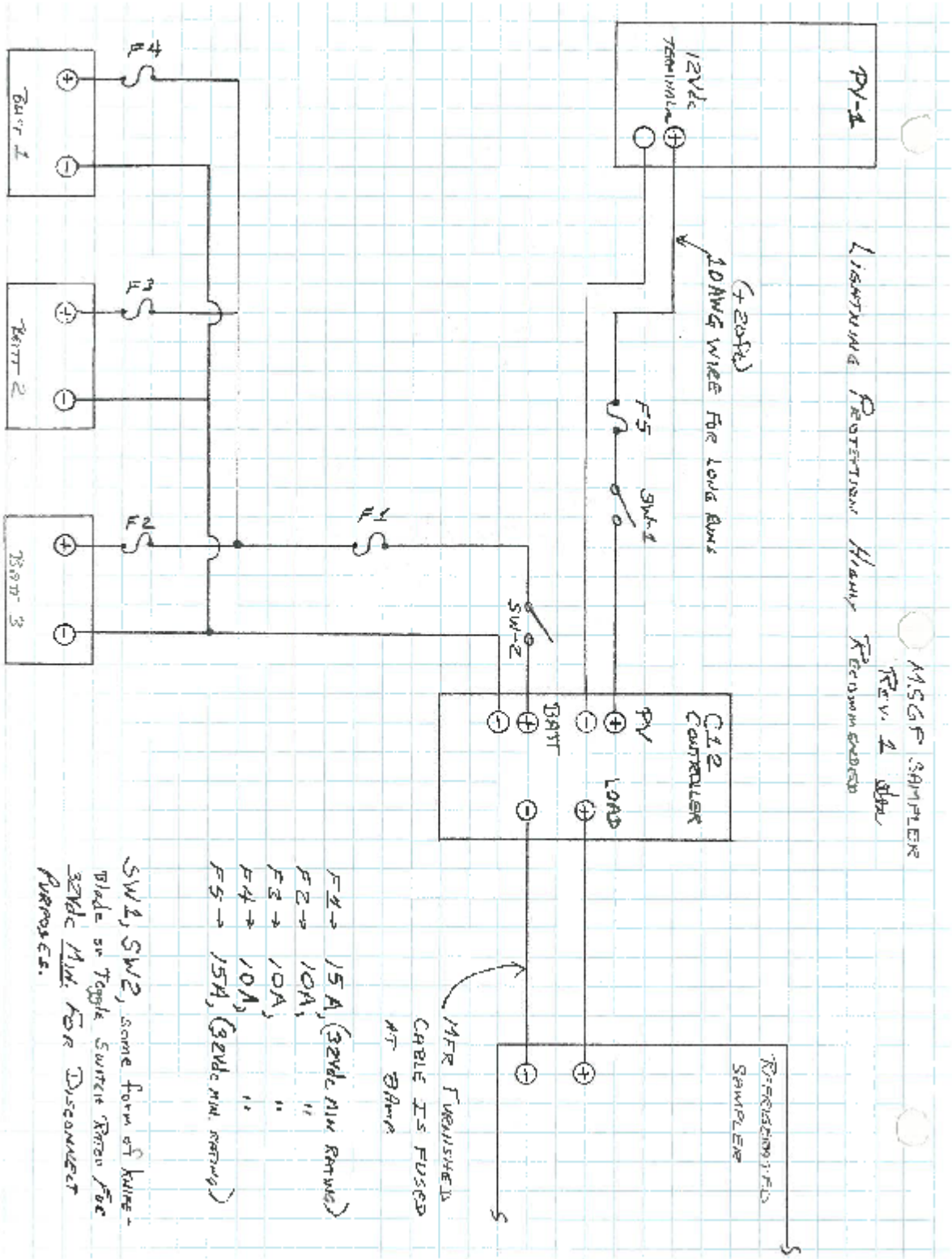
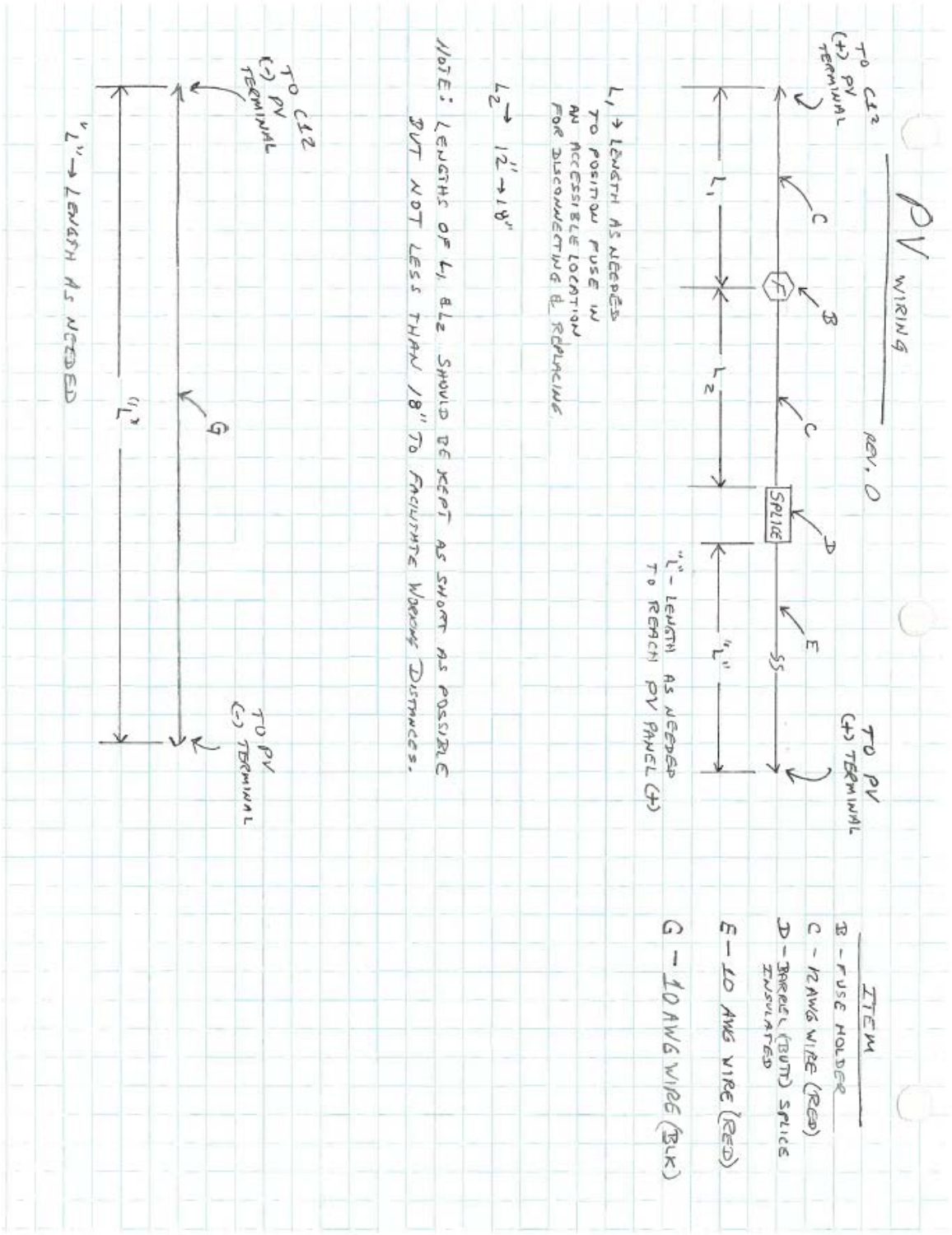
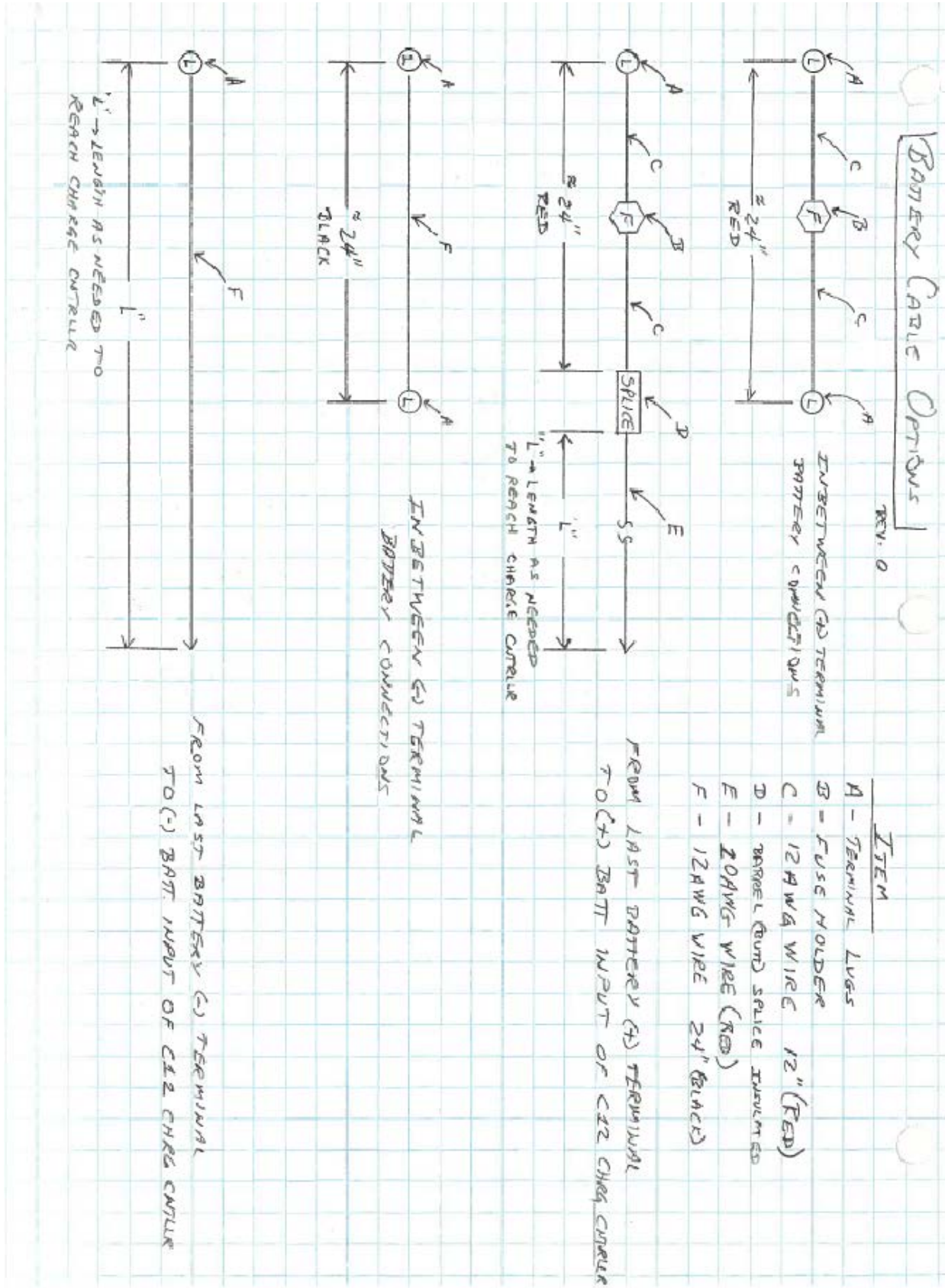
ATTACHMENT 2- WIRING DIAGRAM FOR AVALANCHE SAMPLER



ATTACHMENT 3 – BATTERY PHOTOVOLTAIC CONNECTION WIRING





BATTERY CABLE OPTIONS
REV. 0
ITEM
A - TERMINAL LUGS
B - FUSE HOLDER
C - 12AWG WIRE 12" (RED)
D - BARREL (BUTT) SPLICE INSULATED
E - 20AWG WIRE (RED)
F - 12AWG WIRE 24" (BLACK)
INBETWEEN (+) TERMINAL BATTERY CONNECTIONS
≈ 24" RED
FROM LAST BATTERY (+) TERMINAL TO (+) BATT INPUT OF C12 CHRG CNTRLR
SPLICE
SS
"L" → LENGTH AS NEEDED TO REACH CHARGE CNTRLR
INBETWEEN (-) TERMINAL BATTERY CONNECTIONS
≈ 24" BLACK
FROM LAST BATTERY (-) TERMINAL TO (-) BATT INPUT OF C12 CHRG CNTRLR
"L" → LENGTH AS NEEDED TO REACH CHARGE CNTRLR

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

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
2nd bottle group	Time
2nd 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]

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

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

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.	❒Yes ❒No	
Does sampler pass the ISCO diagnostics test?	❒Yes ❒No	
Are electrical connections secure?	❒Yes ❒No	
Record battery voltage(s). Is/are voltage(s) > 11.7 V?	❒Yes ❒No	
Does ISCO display either "Bottle 1 of X afer 1" or "Sampler Inhibited"?	❒Yes ❒No	
Is bottle set described above installed?	❒Yes ❒No	
Is recorded height of actuator above channel bottom correct?	❒Yes ❒No	
If any maintenance completed, check Yes: Describe.	❒Yes ❒No	
If any follow-on maintenance is required, check Yes: Describe.	❒Yes ❒No	
Is sampler ON upon departure?	❒Yes ❒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

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

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."	❒Yes ❒No	
Place caps securely on bottles in the sample carousel.	❒Yes ❒No	
Verify equipment list above.	❒Yes ❒No	
ISCO 3700 Sampler Units		
Disconnect and remove battery. Transport battery to MSGP stockroom for maintenance and storage.	❒Yes ❒No	
Place battery cables securely inside Greenlee box or ISCO casing.	❒Yes ❒No	
Pull up actuator and tubing and store in Greenlee box or ISCO casing.	❒Yes ❒No	
Avalanche ISCO Sampler Units:		
Disconnect and remove batteries. Transport batteries to MSGP stockroom for maintenance and storage.	❒Yes ❒No	
Place battery cables securely inside Greenlee box or ISCO casing.	❒Yes ❒No	
Pull up actuator and tubing and store inside Greenlee box or ISCO casing.	❒Yes ❒No	
Transport Avalanche sampler to MSGP stockroom for maintenance and storage.	❒Yes ❒No	

Additional Notes:

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

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?	❒Yes ❒No	
Turn sampler "OFF." Remove bottles from carousel.	❒Yes ❒No	
Disconnect and remove battery(ies), solar panel, and cables (as applicable).	❒Yes ❒No	
Pull up actuator and tubing. Disconnect from sampler unit.	❒Yes ❒No	
Uninstall Greenlee box, as applicable.	❒Yes ❒No	
Transport all removed equipment to the MSGP stockroom for maintenance and storage.	❒Yes ❒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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History of Revisions

Document Number *[Include revision number, beginning with Revision 0]*	**Effective Date** *[Document Control Coordinator inserts effective date]*	**Description of Changes** *[List specific changes made since the previous revision]*
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).

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

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. • For ISCO 3700 samplers = "Sampler Inhibited"

	OR • For Avalanche samplers = “Program Disabled” 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.
5	Don nitrile gloves and safety glasses.
6	Remove the lid from the sampler.
7	Item 4: If water was collected, check “Yes” and collect the water according to the steps in “Retrieving Storm Water Runoff Samples” below. 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). If No, describe (e.g., “no water collected”, “sampler off”) in the third column; check “No” for Item 4.
8	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.
9	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. 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.
10	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.
11	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).
12	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. Record the volume retrieved in third column.
13	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.
14	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.
15	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).
16	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)

	If maintenance is necessary and can be performed at the time of inspection, perform the work and describe in third column. If maintenance cannot be completed at the time of inspection, then describe the condition and work needed in the third column.
17	Item 14: Verify and document the sample tubing passed a suction test by checking the "Yes" or "No" box. 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. If maintenance cannot be completed at the time of inspection, then describe the condition and work needed in third column.
18	Item 15: Verify all cable and electrical connections are attached and secure by checking the "Yes" or "No" box. 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. If maintenance cannot be completed at the time of inspection, then describe the condition and work needed in the third column.
19	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.
20	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" • 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" OR • Avalanche samplers = "Program Disabled" If an error occurs, reconfigure the sampler (see ENV-RCRA-QP-045 for settings)
21	Item 18: Verify and document any maintenance completed while on site. Describe the work performed or indicate "none completed" in third column. 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.
22	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. If no follow-on maintenance is required, indicate "none required" in third column. 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.
23	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. If storm water samples were collected by the sampler, skip to "Retrieving storm water runoff

	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	See flow chart in Attachment 1. Item 5: Refer to the "Earliest Sample Collect Date" on work order. 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. If the ISCO sample collection date is BEFORE the "Earliest Sample Collect Date": • 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	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. For "Partial Volume Retrieval Allowed, Minimum Volume NOT Met" samplers: If sample volume was sufficient, continue with next step 5 below. If sample volume was NOT sufficient: • 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. For "Partial Volume Retrieval Allowed, Minimum Volume Met" samplers: • 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

	• 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

7.0 DEFINITIONS

None

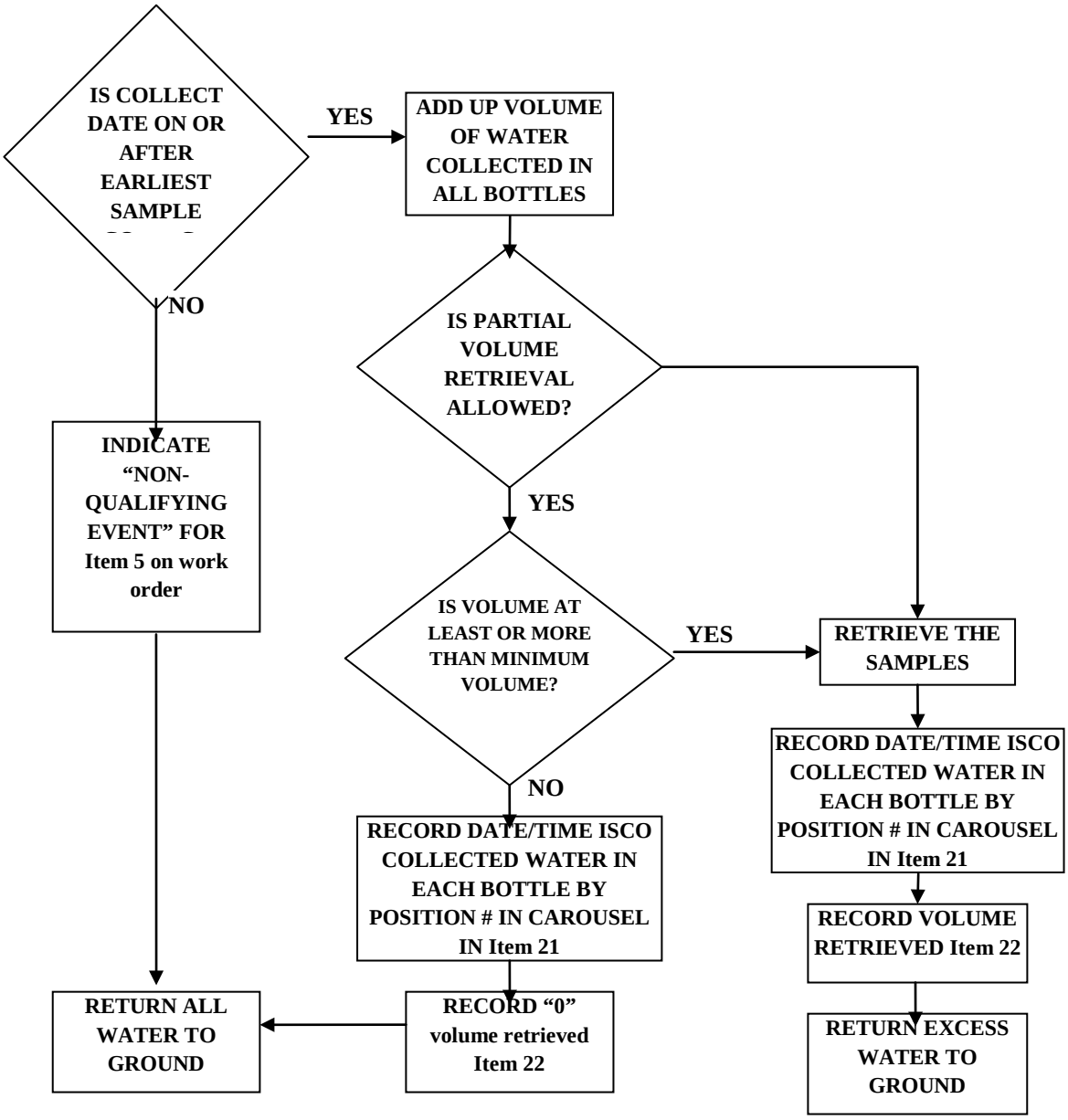
8.0 ATTACHMENTS

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

ATTACHMENT 1- FLOW CHART FOR SAMPLE RETRIEVAL



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	12c- 1 1L Glass, 11 1L Poly
ISCO 3700 Sampler	Teledyne	3700	209H01284	Program	Storm / Multiplex 10 min delay
Pb-Acid Battery	MK Powered	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?	❒ Yes ❒ No	
Does ISCO display either "Sampler Inhibited" or "Program Disabled" ?	❒ Yes ❒ No	
Is ISCO time delta < 1 min (MST)? If NO, record adjustment.	❒ Yes ❒ No	
Is any water collected? If YES, complete Page 2.	❒ Yes ❒ 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.	❒ Yes ❒ No	
Is any water collected on or after the "Earliest Sample Collect Date"?	❒ Yes ❒ No	
Was sample volume retrieved?	❒ Yes ❒ No	
Was a Visual Assessment performed? If YES, complete the MSGP Visual Assessment form (ENV-RCRA-QP-064.0 Att. 1).	❒ Yes ❒ No	
ON DEPARTURE		
Is the equipment information listed above, including specifications, correct?	❒ Yes ❒ No	
Are electrical connections secure?	❒ Yes ❒ No	
Record battery voltage(s). Voltage(s) > 11.7 V ?	❒ Yes ❒ No	
Does the ISCO diagnostics test pass?	❒ Yes ❒ No	
Does sample tubing pass suction test?	❒ Yes ❒ No	
Is sampler ON upon departure?	❒ Yes ❒ No	
Has the actuator swtich been reset to "Latch"?	❒ Yes ❒ No	
Does ISCO display either "Sampler Inhibited" or "Program Disabled"?	❒ Yes ❒ No	
If any maintenance completed during inspection, check YES and describe.	❒ Yes ❒ No	
If any follow-on maintenance is required, check YES and describe.	❒ Yes ❒ No	

Page 1 of 2 for MSGP-26090

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 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	❒P ❒G	/ /2012		
2	❒P ❒G	/ /2012		
3	❒P ❒G	/ /2012		
4	❒P ❒G	/ /2012		
5	❒P ❒G	/ /2012		
6	❒P ❒G	/ /2012		
7	❒P ❒G	/ /2012		
8	❒P ❒G	/ /2012		
9	❒P ❒G	/ /2012		
10	❒P ❒G	/ /2012		
11	❒P ❒G	/ /2012		
12	❒P ❒G	/ /2012		
13	❒P ❒G	/ /2012		
14	❒P ❒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

Page 2 of 2 for MSGP-26090

ENV-CP-QP-048.1	
Effective Date: September 5, 2013	Next Review Date: August 5, 2015

Environment, Safety, Health Directorate

Environmental Protection – Compliance Programs Quality Procedure

Processing MSGP Stormwater Samples

Reviewers:

Name:	Organization:	Signature:	Date:
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Derivative Classifier: ☐ **Unclassified** ☒ **DUSA____ENVPRO_____**

Name:	Organization:	Signature:	Date:
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Approval Signatures:

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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

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History of Revisions

Document Number *[Include revision number, beginning with Revision 0]*	**Effective Date** *[Document Control Coordinator inserts effective date]*	**Description of Changes** *[List specific changes made since the previous revision]*
0	07/11	New Document.
1	09/13	Annual Review and Revision, new format, process change, and new organization name.

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Attachment 2- Sample Container Labels 11

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 proceeded 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

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

	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/Filed 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_2SO_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

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.

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

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

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):		08/12/13	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 SHENDO

RELINQUISHED BY (Printed Name) Marwin Shendo (Signature) MShe.	**Date/Time** 8/12/13 1:45	**RECEIVED BY** (Printed Name) S. Sherwood (Signature) Sherri Sherwood	**Date/Time** 8/12/13 1345
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY** (Printed Name) (Signature)	**Date/Time**

Report Date 08/01/2013

COPY

ATTACHMENT 2- SAMPLE CONTAINER LABELS

AVERY® 5523™ 1-800-GO-AVERY (462-8379) www.avery.com

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:

Weatherproof Laser Labels Use template for 5163™

ENV-CP-QAPP-MSGP, R5	
Effective Date: 11/04/2013	Next Review Date: 11/04/2015

Environment, Safety, Health Directorate

Environmental Protection Division – Compliance Programs Group

Quality Assurance Project Plan

Stormwater Multi-Sector General Permit for Industrial Activities Program

Reviewers:

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

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Responsible Line Manager:	Organization:	Signature:	Date:
Anthony Grieggs	ENV-CP, Group Leader	Signature on File	

CONTROLLED DOCUMENT

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

History of Revisions

Document Number *[Include revision number, beginning with Revision 0]*	**Effective Date** *[Document Control Coordinator inserts effective date]*	**Description of Changes** *[List specific changes made since the previous revision]*
0	06/03	New Document
1	12/05	Annual review and revision
2	07/07	Annual review, incorporated organizational restructure changes.
3	07/09	Biennial Review and Revision
4	07/09	Biennial Review and Revision
5	10/13	Biennial Review and Revision. New format implemented.

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1.0 QUALITY PROGRAM

LANL will comply with the monitoring requirements as specified by the 2008 National Pollutant Discharge Elimination System (NPDES) Stormwater Multi-Sector General Permit for Industrial Activities. Compliance will be demonstrated through the successful implementation of this project plan and applicable procedures.

Los Alamos National Laboratory (the Laboratory) has established a comprehensive stormwater program for its industrial activities. Historically, the Laboratory operated under the NPDES Baseline General Permit and then under the NPDES 1995, 2000, and 2008 Multi-Sector General Permits. The Laboratory submitted its NOI for 2008 coverage in December 2008.

The 2008 MSGP was issued on September 22, 2008 and became effective on September 29, 2008.

The purpose of this project plan is to ensure compliance with the following:

- 2008 NPDES Multi-Sector General Permit (MSGP) and the Clean Water Act (CWA)
- DOE Order 450.1, *Environmental Protection Program*, and DOE Order 5400.5, *Radiation Protection of the Public and Environment*, which establish environmental protection program policies, requirements, and responsibilities

The Environmental Protection, Environmental Compliance Programs (ENV-CP) Water Quality Team has been tasked with overseeing institutional stormwater compliance related activities at the Laboratory.

1.1 QUALITY PROGRAM PURPOSE

This Quality Assurance Project Plan (QAPP) describes the policies and requirements that ensure MSGP activities are conducted in a consistent, agreed-upon manner.

This QA Project Plan describes the policies and requirements that ensure the MSGP processes are conducted in a consistent, agreed-upon manner. Drivers for the quality plan include:

- DOE Order 414.1C, *Quality Assurance*
- SD330, *LANL Quality Assurance Program*

This QA Project Plan (QAPP), including implementing procedures, is a sub-tier document to the SD330, *LANL Quality Assurance Program*. The following documents provide requirements to ensure that the MSGP Program is operated in accordance with established plans and procedures:

- SD330, *LANL Quality Assurance Program*
- QA Project Plan for the MSGP (this document)
- Implementing procedures

1.2 ORGANIZATION

ENV-CP is responsible for compliance oversight of the Laboratory's MSGP coverage. The Group is organized by teams under the line management direction of the Group Leader. Teams are cross-functional and focus on specific Laboratory water quality responsibilities, deliverables, or

products. Teams are guided by Team Leaders who have the responsibility to assure the program is completed and properly implemented.

The Team Leader coordinates the project and reports to the ENV-CP Group Leader. The Project Lead implements program oversight, coordinates contractor efforts (if there are any), and reports to the Team Leader. A QA Specialist is assigned to work for the Team Leader to provide quality assurance assistance, advice, and review. In addition, representatives from other groups may participate and contribute to this team as subject matter experts for project activities. The project organization is shown in Attachment 1.

Applicable regulatory drivers include the following:

- Clean Water Act (CWA)
- 2008 NPDES Multi-Sector General Permit (MSGP)
- DOE Order 450.1, *Environmental Protection Program*
- DOE Order 5400.5, *Radiation Protection of Public and Environment*
- P401, *Procedure to Identify, Communicate, and Implement Environmental Requirements*

1.3 RESPONSIBILITIES

The following table lists specific responsibilities:

Who	What
Group Leader	Assure that qualified staff complies with regulatory requirements associated with the MSGP.
Project Lead	Ensure that MSGP-related activities are performed in accordance with the requirements specified in this plan.
ENV-CP Staff	Perform MSGP-related activities as assigned by the Team Leader or Project Leader

2.0 PERSONNEL DEVELOPMENT

Qualified team members will be hired and trained as prescribed in ENV-DO-QP-115, *Personnel Training*. Minimum training requirements for ENV personnel are described in the ENV Division Qualification Standards. The LANL Human Resources Division maintains documentation of education qualification. Required MSGP qualifications and training plans are listed below.

2.1 MSGP CURRICULA

The MSGP Program requires personnel with the following training requirements:

MSGP Inspectors

Curricula 10697 ENV-RCRA MSGP Inspector
Item 43337 ENV-CP-QAPP-MSGP
Item 54892 ENV-RCRA-QP-022 MSGP Stormwater Corrective Actions

Item 42415 ENV-DO-QP-101 *Environmental Reporting Requirements for Releases or Events*
Item 42547 ENV-DO-QP-111 *Reporting Environmental Releases to Pueblo Governments*
Item 40708 ENV-DO-QP-108 *Preparation of External Correspondence for Review and Approval*
Item 43172 ENV-DO-QP-112 *Coordinating Regulatory Inspections*
Item 42891 ENV-DO-QP-113 *Tracking Issues and Actions*
Item 43805 ENV-DO-QP-114 *Logbook Use and Control*
Item 45777 ENV-DO-QP-100 *General Field Safety*

Curricula 131 Field Worker Training Requirements
Item 43562 or 3583 or 16585 CPR/AED: LANL Workplace
Item 3574 or 13264 First Aid

MSGP SWPPP Preparers

Curricula 7814 ENV-RCRA MSGP SWPPP Preparer
Item 43337 ENV-CP-QAPP-MSGP
Item 56593 ENV-RCRA-QP-044 *Preparing Storm Water Discharge Monitoring Reports (MDMRs) for the NPDES Multi-Sector General Permit*
Item 40708 ENV-DO-QP-108 *External Correspondence*
Item 43172 ENV-DO-QP-112 *Coordinating Regulatory Inspections*
Item 42891 ENV-DO-QP-113 *Tracking Issues and Actions*
Item 43805 ENV-DO-QP-114 *Logbook Use and Control*
Item 45777 ENV-DO-QP-100 *General Field Safety*

Curricula 51 ENV-RCRA Design Engineer
Item 44269, COE Review of LANL Produced Design Documents, AP-341-620
Item 44266, COE System Design Descriptions, AP-341-61
Item 44263, COE Engineering Drawings and Sketches, AP-341-608
Item 44261, COE Calculation, AP-341-605
Item 44258, COE Requirements and Criteria Document, AP-341-602
Item 44257, COE Functions & Requirements Document, AP-341-601
Item 43658, CORE Engineering Overview
Item 55428, COE Management Level Determination, AP-341-502
Item 54168, P342 Engineering Standards
Item 47029, COE LANL Review of Design by External Agencies, AP-341-622
Item 43666, Engineering Design Management
Item 43663, Engineering Technical Baseline
Item 44225, COE Evaluation of Vendor Information, AP-341-701

MSGP Visual Assessors

Curricula 10698 ENV-RCRA MSGP Visual Assessor
Item 43337 ENV-RCRA-QAPP-MSGP
Item 50493 ENV-RCRA-QP-064 *MSGP Storm Water Visual Assessments*
Item 42415 ENV-DO-QP-101 *Environmental Reporting Requirements for Releases or Events*
Item 42547 ENV-DO-QP-111 *Reporting Environmental Releases to Pueblo Governments.*
Item 40708 ENV-DO-QP-108 *External Correspondence*

Item 43172 ENV-DO-QP-112 *Coordinating Regulatory Inspections*
Item 42891 ENV-DO-QP-113 *Tracking Issues and Actions*
Item 43805 ENV-DO-QP-114 *Logbook Use and Control*
Item 45777 ENV-DO-QP-100 *General Field Safety*

Curricula 131 Field Worker Training Requirements
Item 43562 or 3583 or 16585 CPR/AED: LANL Workplace
Item 3574 or 13264 First Aid

2.2 MSGP INSPECTOR QUALIFICATIONS

Inspections:

- Post high school education or experience in engineering or environmental science or a related field; or industrial site field experience involving stormwater pollution prevention.
- 2 years experience of completing MSGP inspections or 1 year MSGP inspection experience with the Certified Inspector of Sediment and Erosion Control (CISEC) certification.
- 6 months knowledge of LANL facility operations.
- Demonstrated ability, as determined by the Multi-Sector General Permit Project Lead and/or Water Quality Team Leader, to successfully and effectively evaluate and identify the following at industrial sites:
    - Conditions and activities that could impact stormwater quality at the facility.
    - Inadequate or ineffective BMPs.
    - Required modification or maintenance of existing BMPs.
    - Locations requiring new or additional BMPs.
    - Potential pollutant sources associated with the facility.
    - Appropriate and correct site stabilization measures.
- Demonstrated ability, as determined by the Multi-Sector General Permit Project Lead and/or Water Quality Team Leader, to evaluate the compliance status of each industrial facility and document identified issues during an inspection.
- Demonstrated ability, as determined by the Multi-Sector General Permit Project Lead and/or Water Quality Team Leader, to properly and effectively complete inspection reports, including the ability to perform the following:
    - Prepare reports in a clear, concise manner, identifying site conditions and issues.
    - Write legibly and describe conditions clearly and accurately.
    - Use proper spelling and grammar.
    - Complete the MSGP Routine Inspection Report forms accurately.
    - Accurately enter findings into the Corrective Actions Report database.

- Conduct inspections in a professional manner.
- Be a member of, or contractor supporting, ENV-RCRA or ENV Division.

2.3 MSGP SWPPP PREPARER QUALIFICATIONS

SWPPP Preparation:

One of the 2 criteria below must be satisfied:

- BS degree or experience in engineering, environmental science, or related field, with a background involving stormwater pollution prevention and regulatory compliance relating to MSGP sites and a 1 year minimum of LANL facility operations knowledge and 1 year experience of completing MSGP inspections; or
- Certified Professional in Erosion and Sediment Control (CPESC) or Professional Engineer (PE) with a demonstrated background in stormwater management, sediment and erosion control, and regulatory compliance.

In addition to:

- Demonstrated ability, as determined by the Multi-Sector General Permit Project Lead and/or Water Quality Team Leader, to:
  - Prepare SWPPPs per LANL format and in compliance with NPDES MSGP requirements.
  - Identify and specify appropriate BMPs and stabilization measures.
  - Identify potential pollutant sources associated with the facility.
  - Perform necessary calculations to meet regulatory requirements.
  - Prepare a site map.
  - Be a member of, or contractor supporting, ENV-CP or ENV Division.

5.4 MSGP VISUAL ASSESSOR QUALIFICATIONS

Quarterly Visual Assessments:

- Education or experience in engineering, environmental science, or a related field; or industrial site field experience involving stormwater pollution prevention; and
- Completed ENV-RCRA training on how to collect and evaluate visual assessment; and
- Demonstrated ability, as determined by the Multi-Sector General Permit Program Lead and/or Water Quality Team Leader, to:
  - Collect quarterly visual samples at the designated outfall.
  - Complete the applicable portions of the MSGP Quarterly Visual Assessment Form.
  - Have working knowledge of the regulatory requirements in Section 4.2 of the MSGP.

5.5 TRAINING RESPONSIBILITIES

All personnel performing MSGP project-related work are required to obtain appropriate training prior to performing work governed by a procedure. Training for all project personnel will be performed and documented in accordance with ENV-DO-QP-115, *Personnel Training*.

The following table lists specific responsibilities regarding training requirements.

Who	What
Group Leader	Ensure project personnel meet all Laboratory training requirements.
Program Lead	Establish and document job descriptions for each position within the MSGP Project. Ensure all project personnel have the appropriate level of education,

	experience, and training.

3.0 QUALITY IMPROVEMENT

The MSGP Project subscribes to the principles of problem prevention and continuous improvement. The Project Lead is committed to evaluating improvement opportunities identified by trending and reporting.

The Project Lead provides verbal and written updates, as needed, to the Team Leader and Group Leader to keep group management apprised of the focus of the MSGP Project activities and to address any shortcomings that may be identified.

3.1 CORRECTIVE ACTIONS WITHIN ENV-RCRA

Corrective actions for all ENV-RCRA programs and projects are initiated, tracked, corrected, and documented according to P330-6 *Nonconformance Reporting*, P322-4 *Laboratory Performance Feedback and Improvement Process*, *SD330, Los Alamos National Laboratory Quality Assurance Program*, and Division/Group procedures.

3.3 QUALITY IMPROVEMENT RESPONSIBILITIES

The following table lists specific responsibilities for quality improvement:

Who	What
Project Lead	Monitor program performance and ensure issues are corrected in a timely manner.
ENV-CP Staff	Identify opportunities for process improvement, health and safety enhancement, environmental protection, or other improvements of the program's operations. Discuss the identified opportunities with the Project Lead. Ensure issues are reported and corrected in a timely manner.

4.0 DOCUMENT CONTROL/RECORDS MANAGEMENT

The program lead, at least one reviewer, and the Group Leader will approve all revisions to this plan. Revisions to the plan will be provided to the QA Specialist. This plan will be reviewed and revised (if necessary) biennially.

This document will be controlled under the organization's document control system (ENV-DO-QP-106, *Document Control*). Controlled copies of ENV documents are located on the Internet: http://int.lanl.gov/orgs/env/rcra/qa.shtml, all other copies are uncontrolled.

Procedures will be developed as necessary and in accordance with ENV-DO-QP-105, *Preparation, Review, and Approval of Procedures*.

Phone calls, email, or fax communications will be documented and controlled if the content provides direction or results in decisions.

4.1 PROGRAM RECORDS

The number, type, and detail of all records to be kept will provide sufficient information to allow an individual with equivalent education and training to verify or reconstruct the results. Implementing procedures specify the records, forms, logbook entries, or other information to be kept as documentation of the performance of the procedure.

Records to be kept in the ENV-CP records system include the following:

- Copy of the Multi-Sector General Permit
- Annual Site Compliance Evaluation reports
- Corrective Action Reports
- Reports and certifications required by MSGP
- Records of all data used to complete MSGP Notice of Intent
- Discharge Monitoring Reports

Records to be kept by the Deployed Environmental Professional assigned to the FOD in which the industrial facility resides includes the following:

- Copies of Stormwater Pollution Prevention Plans
- Reports and certifications required by MSGP
- Routine Inspection Forms
- Supporting analytical data reports including Visual Assessment Forms
- Corrective Action Reports
- Discharge Monitoring Reports
    - Annual Site Compliance Evaluation reports

All ENV-CP records will be maintained and available (after the deadline for submittal as given in applicable procedures) for auditing in the records center at ENV-CP (ENV-DO-QP-110, *Records Management*). Records will be archived in compliance with Laboratory and DOE requirements for records retention, storage, and management.

4.2 PROGRAM RECORDS RESPONSIBILITIES

The following table lists specific responsibilities for program records management:

Who	What
Team Leader	Ensure QAPP meets minimum specifications for documentation and records of the SD330, *Los Alamos National Laboratory Quality Assurance Program*
Program Lead	Conduct annual review of records to ensure compliance with project requirements.

4.3 ELECTRONIC MEDIA

The project will utilize electronic means as necessary to maintain data and perform calculations on these data. Electronic means will not however replace paper copies. All records that must be maintained to meet the requirements of the Permit will be kept in hard copy as the official record.

4.4 DATABASES

Analytical data will be maintained in the LANL Water Quality Database (WQDB). Security, verification, and validation of data are maintained in accordance with LANL procedures.

Security -- ENV data will be maintained electronically in a secure manner and will be protected from loss by being maintained as part of an official dataset that is backed up at least weekly.

Verification of data -- All ENV data, either electronic or hardcopy must undergo a verification and validation process that includes the following:

Verification

- Paper deliverables match electronic data that are stored in an official dataset. Paper deliverables include:
  - chain of custody for sample data
  - field log, if applicable, for sample data
  - data packages for analytical data
  - documentation packages for supporting data (e.g., geographic information system)
- All hand-entered data have been verified by a person other than the individual performing the entry
- Electronic uploads of data (e.g., electronic data deliverables) have been spot checked (at least 10%) to ensure the upload performed as expected
- Hard copy supporting information (e.g., data packages, chains of custody, validation reports, etc.) is evaluated for completeness, archived, and available for audit

Validation --analytical data validation is the responsibility of the EP Directorate. The process will include the following:

- Validate that sample and quality assurance/quality control data and information meet contract specifications
- Assign validation flags, as appropriate
- Identify the analytical supplier
- Identify the analytical method

Verification of calculations -- A person other than the person who generated the query will review for accuracy all compliance related calculations performed in a database through queries. This review will be documented and forwarded to the appropriate record series.

Spreadsheets:
Backups -- All spreadsheets used to hold data and generate reports to be used in demonstrating compliance will be maintained in a secure location. The preferred location is on the Group server. Spreadsheets will be backed up at least weekly.

Verification of data -- All compliance-related data uploaded into a spreadsheet will be verified to be accurate against the original paper copy. Data that are uploaded through electronic means will undergo a 10% verification. Data that are uploaded through manual means will undergo a 100% verification. Someone other than the data entry person must perform the 100% review. This review will be documented and forwarded to the appropriate record series.

Verification of calculations -- A person other than the person who generated the spreadsheet will review for accuracy all compliance-related calculations performed in a spreadsheet. This review will be documented and forwarded to the appropriate record series. Modifications to the function of these spreadsheets will also be verified in this manner.

Software control -- The integrity of spreadsheets will be ensured by limiting access to these spreadsheets to only trained, authorized personnel. Additionally, at least once per year, the function of the spreadsheets will be verified by hand calculations. Documentation of this review will be forwarded to the appropriate record series.

4.4 IMPLEMENTATION RESPONSIBILITIES

The following table lists specific responsibilities:

Who	What
Program Lead	Regularly assess data integrity methods used by MSGP personnel.

5.0 PLANNING AND PERFORMING WORK

Work conducted under this program ensures compliance with the 2008 Multi-Sector General Permit; the Clean Water Act; and DOE Orders 450.1, *Environmental Protection Program*, and 5400.5, *Radiation Protection of the Public and Environment*.

Work that contributes to achieving the quality specifications of the MSGP deliverables will be planned and documented as described in this document and implementing procedures.

Work will be performed according to applicable plans and implementing procedures. The team leader will provide first line supervision of personnel assigned to project tasks to ensure work is performed to achieve project quality specifications. Before changing a work process that affects the project quality specifications, the team leader will ensure the same level of planning and review as used in the initial project planning steps.

5.1 WORK PROCESSES

All work should be regarded as a process. Each process consists of a series of actions and is planned and carried out by qualified workers using specified work processes and equipment under administrative, technical, and environmental controls established by management to achieve an end result. Workers are the best resource of contributing ideas for improving work processes and will be involved in work process design, process evaluation, and providing the feedback necessary for improvement.

All work is planned and performed using the principles of Integrated Safety Management and in compliance with P300, *Integrated Work Management for Work Activities*.

5.3 WORK PERFORMANCE

Management should ensure that the following are clearly identified and conveyed to workers prior to beginning work:

- customer and data requirements for the work and final product;
- acceptance criteria applicable to work and final product;
- hazards associated with the work;
- technical standards applicable to work and final product; and
- safety, administrative, technical, and environmental controls to be employed during the work.

The work processes used to meet the regulatory requirements and the requirements of this plan can be divided as follows:

- Stormwater Pollution Prevention Plans (Multi-Sector General Permit Section 5.0)
- Inspections (Multi-Sector General Permit Section 4.0)
- Monitoring (Multi-Sector General Permit Section 6.0)
- Discharge Monitoring Reports (Multi-Sector General Permit Section 7.1 – Reporting Monitoring Data to EPA)
- Best Management Practices (Multi-Sector General Permit Section 2.0 –Control Measures)
    - Reporting and Recordkeeping (Multi-Sector General Permit Section 7.0)

5.4 STORMWATER POLLUTION PREVENTION PLAN

Stormwater Pollution Prevention Plan (SWPPP) development and implementation by the regulated industrial facility is required for MSGP compliance (refer to Section 8.0 of the 2008 MSGP for S*ector-Specific Requirements for Industrial Activity* and Appendix D, *Sectors of Industrial Activity Covered by This Permit*). The SWPPP is intended to document the selection, design, and installation of control measures. Additional documentation requirements are intended to document the implementation (including inspection, maintenance, monitoring, and corrective

action) requirements identified in the 2008 MSGP permit. The SWPPP is a written assessment of potential sources of pollutants in stormwater runoff and control measures that will be implemented at the specific industrial facility to minimize the discharge of pollutants in runoff from the site. These control measures include site-specific Best Management Practices (BMPs), inspections, employee training, and reporting. The procedures detailed in the SWPPP must be implemented by the facility and updated as necessary, with a copy of the SWPPP kept on-site.

The SWPPP development process involves evaluating regulated industrial activities and requiring Facility Management support in implementation, improvement, and revision of the Plans.

5.4.1 DISCHARGE MONITORING REPORTS

The Laboratory is required to submit analytical results of stormwater monitoring and to keep the results with the facility specific SWPPP. The Laboratory must certify and submit analytical monitoring results obtained from each facility specific sampling location (i.e., the sampling station located at the monitored outfalls) associated with industrial activity on a Discharge Monitoring Report (DMR) form or use it to report any of the following:

- no discharge for all outfalls for a specific monitoring period;
- the industrial facility status has changed to inactive and unstaffed;
- the facility status has changed to active; or
- no further pollutant reductions are achievable for all outfalls and for all pollutants (see Section 6.2.1.2 of the 2008 MSGP).

5.4.2 ANNUAL SITE COMPLIANCE EVALUATION REPORT

The Laboratory is required to submit an annual report (Attachment 2) to the Environmental Protection Agency (EPA) that includes the findings from the comprehensive site inspection and any corrective action documentation. The documentation must include the following:

- identification of the condition triggering the need for corrective action review;
- date and description of the problem identified;
- summary of the corrective action taken or to be taken;
- notice of whether SWPPP modifications are required as a result of the discovery or corrective action;
- date corrective action was initiated; and
- date corrective action was completed or is expected to be completed.

The following table lists responsibilities:

Who	What
Project Lead	Ensure that SWPPP requirements are performed in accordance with the MSGP.

Facility Management Support	Implement SWPPP requirements as recommended by the Project Lead.
ENV-CP Staff and Deployed Environmental Professionals (DEPs)	Assure SWPPP implementation as required by MSGP.
DEPs	Develop, modify, and update SWPPPs and assist facility personnel with SWPPP implementation.

5.5 INSPECTIONS

The MSGP requires periodic inspection of industrial processes and maintenance of (BMPs) to assure effectiveness of control measures. The Laboratory has implemented a quarterly or monthly inspection process (depending on the industrial facility) to support this determination. A copy of the Routine Inspection Form is provided in Attachment 3.

5.6 STORMWATER MONITORING

Benchmark stormwater monitoring is the required mechanism for determining the effectiveness of corrective actions and meeting the requirements of the MSGP. Refer to Attachment 4, *MSGP Facilities and Stormwater Monitored Outfalls Associated with Industrial Activity 2011***,** for a list of Laboratory sites that have monitoring requirements. Laboratory management has made an investment in time and materials, in addition to a commitment to comply with the 2008 MSGP Permit. All stormwater monitoring is conducted by ENV-CRP personnel. The MSGP Project currently has a network of 23 monitoring stations. Considerations to be used for MSGP stormwater monitoring development decisions will include MSGP requirements, new state water quality standards, Administrative Authority requests, or new permit requirements. Stormwater monitoring will be conducted as specified in the MSGP.

Effluent Limitations stormwater monitoring is required for the following type of facility of LANL:

Regulated Activity	**Parameter**	**Effluent Limit**	**Monitoring Frequency**	**Sample Type**
Discharges from asphalt emulsion facilities	Total Suspended Solids	23.0 mg/L daily max. 15.0 mg/L, 30-day avg.	1/year	grab
	pH	6.0-9.0 s.u.	1/year	grab
	Oil and Grease	10.0 mg/L 30-day avg.	1/year	grab

This determination was made in accordance with Section 1.1.2.4 of the MSGP. The TA-60 Asphalt Batch Plant meets the criteria for effluent limitations monitoring in this section. Exceedances of the effluent limits in this table require immediate action. In addition, if follow-up monitoring after corrective actions also exceeds an effluent limit guideline, an Exceedance Report for Numeric Effluent Limits must be submitted to EPA no later than 30 days after lab results have been received and verified.

Impaired Waters stormwater monitoring is required for discharges made to an impaired water. The canyons within and surrounding Los Alamos National Laboratory are declared as Impaired Waters by the New Mexico Environment Department. The pollutants vary from canyon to canyon and are listed in Attachment 5, *Pollutants Under Impaired Waters Monitoring.* The pollutants may be discontinued in subsequent annual monitoring if the concentration is below background levels in stormwater or if the constituent is not detected.

Visual assessments are also required by the MSGP and are an important tool for collecting information to determine the effectiveness of controls in preventing potential contaminants from migrating off Laboratory property. Accordingly, field personnel must conduct visual assessments for stormwater collected at the monitoring stations or discharged through substantially identical outfalls associated with industrial facilities located throughout the Laboratory. Information recorded will document all observations that are required by the MSGP (see ENV-RCRA-QP-064, *Multi-Sector General Permit Storm Water Visual Inspections*).

The Laboratory's MSGP permit requires stormwater quality monitoring to evaluate compliance with water quality standards and evaluation against benchmarks. Parameters sampled at the monitoring stations are selected based on permit requirements and the results of the previous year.

Four stormwater samples per year are required under the 2008 MSGP, but it is not necessary to collect them in consecutive quarters if climatic conditions that prevented quarterly collection are documented (see *Adverse Weather Conditions* in Section 6.1.5 of the MSGP). Sample locations are listed in Attachment 4, *MSGP Facilities and Stormwater Monitored Outfalls Associated with Industrial Activity 2011*, and collection will be conducted in accordance with LANL and NPDES Permit requirements and the current year MSGP Sampling and Analysis Plan.

Stormwater samples are used to demonstrate compliance with water quality standards and requirements to evaluate results against benchmark parameters (Attachments 5 and 6). Any persons involved in the preparation, retrieval, and analysis must maintain positive control of samples at all times until sample disposal. ENV-RCRA personnel will follow guidance in the Associate Directorate for Environmental Programs (ADEP) document ENV-WQH-QP-029, *Creating and Maintaining a Chain of Custody*, as well as, ENV-RCRA-QP-047, *Inspecting Storm Water Runoff Samplers and Retrieving Samples*, and ENV-RCRA-QP-048, *Processing MSGP Storm Water Samples*.

Chain of custody is maintained during:

Activity	Responsibility
Sample collection and preparation	All persons (other than analytical personnel) performing sample preparation and collection will be trained to sample collection procedures and must adhere to the chain of custody requirements therein.
Analysis	Analytical laboratories performing sample analysis will maintain sufficient procedures to ensure positive control of samples as specified in the existing Statement of Work.
Storage/ disposal	Analytical laboratories will maintain retained samples and/or sample portions under chain of custody until reanalysis, or ultimate disposal.

The LANL Sample Management Office (SMO) will be the central point for all analytical laboratory selection, evaluations, sample submittal, and data return. The SMO will evaluate potential analytical laboratories, prepare analytical statements of work that include requirements, and arrange contracts with selected laboratories for analysis of all samples. The SMO will accept samples from field collection personnel, process the sample, ship the samples to the off-site analytical laboratories, and receive the data packages from the laboratories.

All analytical data will be received from analytical laboratories in electronic format and uploaded into a database. All received data will be checked for completeness and adherence to contract requirements. After uploading, all data will undergo verification and validation (V&V) for evidence of laboratory contamination, improper analytical method, and other analytical issues which could potentially affect data quality.

Field data collected by sample collection personnel will be verified and validated by the SMO when field personnel deliver samples to the SMO.

If significant V&V issues are identified, results will be forwarded to and discussed with the responsible project leads.

Data issues that result from procedural failures, personnel errors, or other failures to follow requirements will be documented as issues and corrected according to ENV-DO-QP-113, *Tracking Issues and Actions*.

The following table lists responsibilities:

Who	What
Project Lead	Ensure that all project monitoring requirements are performed in accordance with the MSGP. Review and update the MSGP Sampling and Analysis Plan annually.

	When complete, communicate findings to the team members for implementation. Make appropriate arrangements with the SMO to accept, process, and submit samples to an analytical laboratory for required analyses as specified in the SAP.
MSGP Water Quality Compliance Personnel	• Implement monitoring program as required by the MSGP Project Lead. • Conduct stormwater sampling in accordance with the MSGP Sampling and Analysis Plan and applicable procedures. • Ensure procedures for sample handling and control during sample preparation and retrieval are followed.
Sample Management Office	• Develop Statements of Work (SOW) for all analytical laboratories that perform analytical work for the MSGP project in accordance with P840-1, *Procurement Quality*. • Ensure analytical laboratories comply with the DOE's SOW. Conduct an annual audit of the laboratory to ensure compliance with the SOW. • Approve Statements of Work for analytical laboratories that are contracted to analyze water samples. • Approve analytical laboratories that are contracted to analyze water samples for regulatory compliance purposes. • Accept samples and submit them to and approved analytical laboratory for analysis. • Track progress of samples at the analytical laboratory and resolve issues with sample analysis. • Receive data packages from the analytical laboratory and enter data into the database. • Provide the MSGP Project Lead with monthly invoice updates. • Perform V&V of field data submitted and uploaded from forms when samples are submitted to the SMO.
Operations Integration Office (OIO), Systems Integration (SI)	Perform V&V of data packages uploaded by the SMO or send data packages to a subcontractor company for independent V&V.

5.7 DISCHARGE MONITORING REPORTS

The Laboratory is required to submit analytical results of stormwater monitoring and to keep the results with the specific SWPPP. The Laboratory must submit analytical monitoring results obtained from each monitoring station associated with industrial activity on a MSGP Discharge Monitoring Report (MDMR) form (one form must be submitted for each storm event from which, a sample was collected).

MDMRs shall be written in accordance with ENV-RCRA-QP-044, *Preparing Storm Water Discharge Monitoring Reports (MDMRs) for the NPDES Multi-Sector General Permit*. MDMRs shall be submitted to EPA within 30 calendar days of receiving validated

analytical results. Refer to the DMR language under the SWPPP Section above for additional requirements.

Site analytical requirements are defined by the industrial activity in the MSGP permit. All MSGP analytes applicable to LANL are consistent with the requirements of 40 CFR Part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants.*

Sample analytical requirements vary by site depending on the industrial activities performed at the site. Refer to Attachment 5 for a list of analytes by industrial sector. If an insufficient quantity of sample is available, then sample collection will be prioritized at that location for future events. Additional samples may be collected to meet permit requirements.

ENV-RCRA shall refer to the requirements of the 2008 Multi-Sector General Permit, and the most current MSGP Sampling and Analysis Plan to determine the priorities of required analyses.

The following table lists responsibilities:

Who	What
Project Lead	• Ensure implementing procedures for sample analyses are used. • Ensure that MDMRs are submitted to EPA and NMED in accordance with the MSGP.
MSGP Water Quality Compliance Personnel	Assure MDMRs are completed and certified as required by the MSGP and have received a full quality assurance review.

5.8 ADVERSE WEATHER CONDITIONS AND CLIMATES WITH IRREGULAR STORMWATER RUNOFF

Section 4.2.3 of the 2008 MSGP allows the industrial 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, such as local flooding, high winds, or electrical storms, 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.

Since LANL is located in an area where limited rainfall occurs during parts of the year (i.e., in a semi-arid climate) and has periods of freezing conditions, LANL has identified an alternative monitoring period of four quarters as follows for each calendar year.

- April 1-May 31

- June 1-July 31
- August 1-September 30
- October 1-November 30

The following table lists specific responsibilities.

Who	What
Project Lead	Ensure that the monitoring schedule is documented in facility specific SWPPPs and provided to EPA on the MDMRs.

5.9 REPORTING AND RECORDKEEPING

All monitoring data shall be collected in accordance with the requirements specified in the 2008 MSGP. LANL will submit monitoring results to EPA within 30 days of receiving validated laboratory results. The address for submittal of monitoring results is as follows.

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

LANL shall keep copies of the following documentation for a period of at least 3 years from the date that LANL's coverage under the MSGP expires or is terminated.

- SWPPP (including any modifications made during the term of the 2008 MSGP)
- Additional documentation requirements as identified in Section 5.4 of the MSGP
- All reports and certifications required by the MSGP
- Monitoring data
- Records of all data used to complete the NOI.

The following table lists specific responsibilities:

Who	What
Project Lead	Periodically audit MSGP records to ensure documentation of compliance is being retained.
Deployed Environmental Professionals	Retain records as required by the MSGP for industrial facilities located in their FOD.

5.10 BEST MANAGEMENT PRACTICES

It is critical that the Laboratory be able to effectively inspect and maintain the Best Management Practices that have been installed at various locations. Quarterly inspections must be completed and provided to the Project Lead for inclusion into the records system. In addition, the Project Leader conducts a Comprehensive Annual Site Inspection and writes a report to document the status of BMPs and other identified corrective actions. This report is sent to EPA each year. Laboratory management has made an investment in time and materials, in addition to a commitment to minimizing the potential migration of contaminants in stormwater. Report findings are evaluated and in conjunction with facility personnel, BMPs are modified, installed, or removed as necessary.

The following table lists responsibilities.

Who	What
Project Lead	Assist facility personnel and Deployed Environmental Professionals with implementation, inspection, and maintenance of BMPs at MSGP facilities.
Facility Management Support	• Coordinate with Project Lead and provide funding as needed to install, inspect, maintain and implement identified BMPs. • Certify the corrective actions identified by the Project Lead and/or facility personnel (or their representatives) for their individual facilities in the Annual Report.

5.11 INFORMATION MANAGEMENT

The Water Quality Database is a database information system designed in part to support the information management (IM) needs of the Laboratory's MSGP. MSGP support includes stormwater discharge monitoring reporting, Geographic Information System (GIS) development, and other IM activities as needed.

The following table lists responsibilities:

Who	What
Project Lead	Coordinate with IM support personnel to meet regulatory requirements.

5.12 RESPONDING TO WATER QUALITY EXCEEDANCES

The identification of a pollutant source(s) contributing to a water quality exceedance will be addressed through the creation of a corrective action that is entered into the Corrective Acton

Report database in accordance with ENV-DO-QP-113, *Tracking Performance Feedback and Actions* and *ENV-RCRA-QP-022, MSGP Stormwater Corrective Actions*. Federal stormwater regulations implemented under the Laboratory's MSGP (40 CFR 122, EPA Administered Permit Programs: The National Pollutant Discharge Elimination System) require that corrective action be taken if exceedances of water quality standards or MSGP numeric effluent limits are identified. Corrective actions are typically accomplished by modifying, as appropriate, existing BMPs and SWPPPs.

When a water quality exceedance occurs, the Laboratory will submit the data on the required MDMRs, investigate the occurrence, and document corrective actions.

When an exceedance of the MSGP benchmark parameters is detected, the Project Lead will assure the analytical data is reviewed, notify appropriate SWPPP owners, and recommend and track corrective actions where required.

The following steps lead to corrective actions:

STEP	Action
1	Establish that an analytical result from a location is valid and has exceeded a standard or MSGP benchmark.
2	Evaluate and demonstrate that the analyte is of LANL origin, if possible.
3	Determine the source and assign responsibility for the corrective action.
4	Develop a corrective action plan.

The following table lists responsibilities:

Who	What
Project Lead	• Assure that analytical data is reviewed and accurate. • Notify appropriate SWPPP owners, Laboratory management, and Deployed Environmental Professionals. • Develop a corrective action plan. • Follow up with corrective actions if required. • Track corrective actions.
Facility Management and DEP	• Review analytical data with Project Lead and provide input into a possible corrective action necessary to improve water quality where needed. • Evaluate and improve BMPs in accordance with site conditions, industry standards, and manufacturer

	recommendations.

5.13 INSTRUMENTATION AND EQUIPMENT

Compliance will be tracked by performing inspections of samplers and other associated equipment, inspecting BMPs, and conducting annual site compliance evaluations. Adequate records will be maintained to demonstrate the operating history of essential instrumentation and equipment.

LANL will properly operate and maintain all systems of monitoring and control and related appurtenances which are installed or used to achieve compliance with the MSGP and the SWPPP. Backup instrumentation and equipment will be timely deployed in the event of equipment failure.

Instrument calibration is essential for documenting the quality of data obtained with the instrument. All technical work that depends upon the accuracy of data will be performed using equipment for which the calibration status and limits of accuracy are known and controlled.

Field team personnel will calibrate and perform maintenance procedures on all monitoring and analytical field instruments to ensure accuracy of measurements and will maintain appropriate records of such activities. All field calibrations will be documented as prescribed by procedures or manufacturer's instructions.

The following table lists specific responsibilities.

Who	What
Project Lead	• Ensure data are collected and equipment is operated and maintained in accordance with project requirements. • Provide equipment maintenance and calibration specifications and ensure MSGP Water Quality Compliance Team personnel operate and conduct field activities in accordance with implementing procedures and specific work orders.

6.0 DESIGN

Design activities will be conducted and reviewed in accordance with PD340, *Conduct of Engineering* and P341, *Engineering Process Manual*.

Design standards under this program include, but are not limited to temporary and permanent BMPs, corrective action measures, and stormwater monitoring support.

Design inputs will be specified and approved on a timely basis for making design decisions. Inputs will contain the level of detail required to permit the performance of design activities correctly.

Formal design reviews, including design verifications and evaluation of design changes, will be conducted to ensure that the design input is correctly incorporated into the design output. Changes to design will undergo the same review as the original design.

Verification and validation of the adequacy of designs are conducted before relying on the performance of the design function. Verification and validation are conducted in accordance with implementing procedures.

The following table lists responsibilities.

Who	What
Project Lead	• Provide input to the design process in accordance with appropriate standards, requirements, and implementing procedures. • Determine the qualifications required to perform a review of design documents. • Identify a resource with skills, knowledge, ability, training, and certifications required to complete the review of the facility engineering design documents. • Communicate the results of the review to the requestor.
ENV-CP Staff	Review design documents and requests as assigned. Inform the Project Lead of concerns regarding the facility engineering designs.

7.0 PROCUREMENT

Items and services required for this process are commercial grade in nature and no special procurement requirements or needs are necessary. All procurements will be made in accordance with P840-1, *Procurement Quality*. For items and all services for which special requirements are necessary, the Project Lead and project members will identify such items or services.

The following table lists responsibilities:

Who	What
Group Leader	Ensure all procurements are conducted in accordance with P840-1.
Project Lead	Recommend to Group Leader contracting items and services. Develop acceptance criteria.
ENV-CP Staff	Identify potential suppliers of products or services necessary to complete work activities that must be procured from outside ENV-RCRA.

8.0 INSPECTION AND ACCEPTANCE TESTING

Any materials or services will be inspected and/or tested prior to acceptance for use in this project in accordance with P330-8, *Inspection and Test for Acceptance*. Most supplies used during performance of project activities are commercial grade in nature and require no special acceptance practices or procedures.

The following table lists responsibilities:

Who	What
Group Leader	Ensure procedures for inspection meet SD330, *Los Alamos National Laboratory Quality Assurance Program* requirements.
Project Lead	Verify that all materials and services meet acceptance criteria.
ENV-CP Staff	Follow established procedures for inspection and acceptance testing.

9.0 MANAGEMENT ASSESSMENT

The ENV-CP Group conducts internal management assessments of projects and programs in accordance with the requirements in P328-3, *Management Assessment* and P328-4, *Management Observation and Verification*. Assessments of the program are documented and filed as records.

When violations of requirements are found during a management assessment, a nonconformance report is initiated in accordance with P330-6, *Nonconformance Reporting* for nonconforming items. Nonconforming services or processes are tracked and documented in accordance with P322-4, *Issues and Corrective Action Management*.

The following table lists responsibilities:

Who	What
Group Leader	Ensure management self-assessments for the MSGP program are conducted as specified in implementing procedures.
Project Lead	Ensure program management self-assessments are conducted.

10.0 INDEPENDENT ASSESSMENT

Independent assessments are those assessments conducted by organizations external to ENV-RCRA. As required by the SD330, *Los Alamos National Laboratory Quality Assurance Program*, this program may be assessed by outside organizations in accordance with P328-2, *Independent Assessment*.

Periodically audits/assessments will be conducted, with input from the Project Lead identifying one or more areas of the project to be audited.

The following table lists responsibilities:

Who	What
Project Lead	• Approve audit schedules. • Provide input to the QA Specialist as to the content of audit. • Review audit reports for factual accuracy. Address all findings and implement corrective actions as appropriate.
QA Specialist	• Identify areas to be addressed during internal audits. • Contract with the Quality Management Group to perform annual internal audits. • Review audit procedures to ensure they meet the requirements in this section.
Team Members	Cooperate with auditors by providing information, data, etc. Implement corrective actions as directed by the Project Lead.

11.0 ATTACHMENTS

Attachment 1- MSGP Program Organization

Attachment 2 – Annual Reporting Form

Attachment 3 – Routine Inspection Form

Attachment 4 – MSGP Facilities and Storm Water Monitored Outfalls Associated with Industrial Activity 2011, Permit NMR05GB21

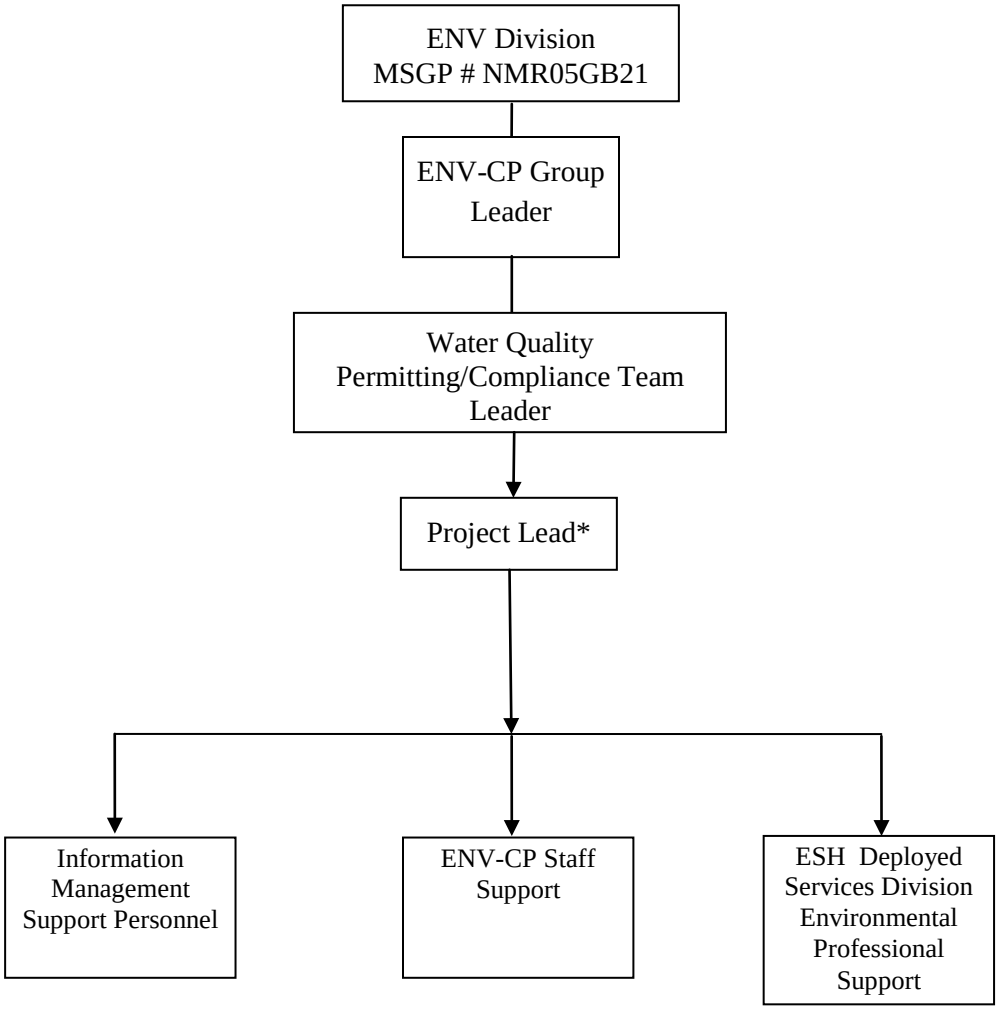
Attachment 5 – Pollutants under Impaired Waters Monitoring

Attachment 6 – Analytes by Industrial Sector

Attachment 7 – References and Guidance Documents

Click here for "Required Read" credit.

ATTACHMENT 1- MSGP PROGRAM ORGANIZATION



*Project Lead acts as liaison and will work directly with Team Leaders for staff assignments.

ATTACHMENT 2 – 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?
   ☐ YES ☐ 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? ☐ YES ☐ NO

   If YES, for each location, describe the sources of those stormwater and non-stormwater discharges and any associated control measures in place:

NPDES Permit Tracking No.:

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.*

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C. INDUSTRIAL ACTIVITY AREA SPECIFIC FINDINGS

Complete one block for each industrial activity area where pollutants may be exposed to stormwater. Copy this page for additional industrial activity areas.

In reviewing each area, you should consider:

- 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 from areas of no exposure to exposed areas; and
- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas.

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 control measures 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 c 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 _____:

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)

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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)

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D. CORRECTIVE ACTIONS

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.

Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in this comprehensive stormwater inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # ☐☐ of ☐☐ for this reporting period.

2. Is this corrective action:

- ☐ An update on a corrective action from a previous annual report; or
- ☐ A new corrective action?

3. Identify the condition(s) triggering the need for this review:

- ☐ Unauthorized release or discharge
- ☐ Numeric effluent limitation exceedance
- ☐ Control measures inadequate to meet applicable water quality standards
- ☐ Control measures inadequate to meet non-numeric effluent limitations
- ☐ Control measures not properly operated or maintained
- ☐ Change in facility operations necessitated change in control measures
- ☐ Average benchmark value exceedance
- ☐ Other (describe): _____

4. Briefly describe the nature of the problem identified:

5. Date problem identified: ☐☐/☐☐/☐☐☐☐

6. How problem was identified:

- ☐ Comprehensive site inspection
- ☐ Quarterly visual assessment
- ☐ Routine facility inspection
- ☐ Benchmark monitoring
- ☐ Notification by EPA or State or local authorities
- ☐ Other (describe): _____

7. Description of corrective action(s) 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, basis for that determination:

8. Did/will this corrective action require modification of your SWPPP? ☐ YES ☐ NO

9. Date corrective action initiated: ☐☐/☐☐/☐☐☐☐

10. Date correction action completed: ☐☐/☐☐/☐☐☐☐ or expected to be completed: ☐☐/☐☐/☐☐☐☐

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 timeframes associated with each step) necessary to complete corrective action:

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E. ANNUAL REPORT CERTIFICATION

1. Compliance Certification

Do you certify that your annual inspection has met the requirements of Part 4.2 of the permit, and that, based upon the results of this inspection, to the best of your knowledge, you are in compliance with the permit? ☐ YES ☐ NO

If NO, summarize why you are not in compliance with the permit:

2. Annual Report 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.

Authorized Representative Printed Name: Title:

Signature: Date Signed:

ATTACHMENT 3 – ROUTINE INSPECTION FORM

Name of Facility:	**Responsible FOD (Name & Organization):**	
Qualified Inspector(s): **Others Present:**	**Inspection type:** □ **Quarterly** □ **Other**	**Date of inspection (MM/DD/YYYY):** **Time of inspection:**

Weather: ❑ **Clear** ❑**Cloudy** ❑ **Rain** ❑ **Sleet** ❑ **Fog** ❑ **Snow** ❑ **High Winds** ❑ **Other:**
Temperature: **° F** **Is Inspection Being Conducted During a Storm Water Discharge?** ❑**Yes** ❑**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? □ **Yes** □ **No Describe:**

Were previously identified conditions corrected before the next anticipated storm event? □ **Yes** □ **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? □ Yes □ No			
Were any Corrective Actions initiated or completed? □ Yes □ No Describe:			
Are there any conditions requiring Corrective Action? □ Yes □ No If Yes, List Number of Corrective Actions Required _____ **(Note – You need enter a Corrective Action in the MSGP Corrective Action Report database for each listed)**			

ATTACHMENT 4 -- MSGP FACILITIES AND STORM WATER MONITORED OUTFALLS ASSOCIATED WITH INDUSTRIAL ACTIVITY 2011, PERMIT NMR05GB21

Location	Permitted Facility	Operation	Activity	Sector	Monitored Outfall	• Canyon
TA-15-185	TA-15-185 PHERMEX	Vehicle Maintenance Shop	Vehicle Maintenance	P	15-PHRMX-1	• Water
TA-3-0034	TA-3-0034 Metal Shop	Fabricated Metals	Fabricated Metals	AA	3-MST-1	• Mortandad
TA-3-22	TA-3-22 Power & Steam Plant	Power Plant	Steam Electric Power	O	3-PSP-1 3-PSP-5 3-PSP-8	• Sandia • •
TA-3-38	TA-3-38 Metals Fab Shop	Metal Shop	Fabricated Metals	AA	3-MFS-1	• Sandia
TA-3-39	TA-3-39 & 102 Metal Shop	Metal Shop	Fabricated Metals	AA	3-TS-1	• Pajarito
TA-3-66	TA-3-66 Sigma Complex	Sigma Foundry	Primary Metals	F	3-Sigma-6	• Sandia
TA-54	TA-54 Area G	Area G - South Side	TSD	K	54-G-1	• Pajarito
TA-54	TA-54 Area G	Area G -North Side	TSD	K	54-G-2	• Canada del Buey
TA-54	TA-54 Area G	Area G - South Side	TSD	K	54-G-3	• Pajarito
TA-54	TA-54 Area G	Area G - South Side	TSD	K	54-G-4	• Pajarito
TA-54	TA-54 Area L	Area L	TSD	K	54-L-1	• Canada del Buey
TA-54-38	TA-54 RANT	RANT	TSD	K	54-RANT-1	• Canada del Buey
TA-60	TA-60 Asphalt Batch Plant	Asphalt Batch Plant	Asphalt Paving	D	60-ABP-1	• Mortandad
TA-60	TA-60 MRF	Materials Recycling Facility	Scrap Recycling	N	60-MRF-1	• Sandia
TA-60-250	TA-60 Roads and Grounds	Roads & Grounds Facility	Vehicle Maintenance & Storage	P P P	60-RG-1 60-RG-3 60-RG-8	• Mortandad • Sandia • Sandia
TA-60-1	TA-60-1 Heavy Equipment Yard	Motor pool	Vehicle Maintenance	P	60-HEY-2	• Sandia
TA-60-2	TA-60-2 Warehouse	Motor pool	Vehicle Maintenance	P	60-WH-1	• Sandia
TA-9-28	TA-9-28 Heavy Equipment Maintenance	Motor pool	Vehicle Maintenance	P	9-HEM-1	• Pajarito

ATTACHMENT 5 – POLLUTANTS UNDER IMPAIRED WATERS MONITORING

Permitted Facility	Monitored Outfall	Assessment Unit	Canyon	Pollutant
TA-54 Area G TA-54 Area L TA-54-RANT	54-G-2 54-L-1 54-RANT-1	NM-128.A_00	Canada del Buey (within LANL)	PCBs Aluminum Gross Alpha
TA-54 Area G TA-54 Area G TA-54 Area G	54-G-1 54-G-3 54-G-4	NM-128.A_08	Pajarito Canyon (within LANL below Arroyo de la Delfe)	PCBs Aluminum Copper Gross Alpha
TA-15-185 PHERMEX	15-PHRMX-1	NM-128.A_13	Water Canyon (within LANL below Area-A Canyon)	PCBs Aluminum Gross Alpha
TA-3-39 & 102 Metal Shop	3-TS-1	NM-128.A_15	Two Mile Canyon (Pajarito to headwaters)	PCBs Aluminum Gross Alpha
TA-9-28 Heavy Equipment Maintenance	9-HEM-1	NM-128.A_16	Arroyo de la Delfe (Pajarito Canyon to headwaters)	Aluminum Mercury Gross Alpha
TA-60 Asphalt Batch Plant TA-3-0034 Metal Shop TA-60 Roads and Grounds	60-ABP-1 3-MST-1 60-RG-1	NM-9000.A_042	Mortandad Canyon (within LANL)	Aluminum Copper Gross Alpha
TA-3-38 Metals Fab Shop TA-3-22 Power & Steam Plant TA-3-22 Power & Steam Plant TA-3-22 Power & Steam Plant TA-3-66 Sigma Complex TA-60-1 Heavy Equipment Yard TA-60 MRF TA-60 Roads and Grounds TA-60 Roads and Grounds TA-60-2 Warehouse	3-MFS-1 3-PSP-1 3-PSP-5 3-PSP-8 3-Sigma-6 60-HEY-2 60-MRF-1 60-RG-3 60-RG-8 60-WH-1	NM-9000.A_047	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	PCBs Aluminum Copper Gross Alpha Mercury

ATTACHMENT 6 – ANALYTES BY INDUSTRIAL SECTOR

Permitted Facility	Monitored Outfall	Sector	Activity	Analyte	Monitoring Requirement
TA-3-0034 Metal Shop	3-MST-1	AA	Fabricated Metals	Aluminum	Quarterly Benchmark Monitoring (QBM)
TA-3-38 Metals Fab Shop	3-MFS-1			Iron	QBM
TA-3-39 & 102 Metal Shop	3-TS-1			Nitrate plus Nitrite Nitrogen	QBM
				Zinc	QBM
TA-60 Asphalt Batch Plant	60-ABP-1	D	Asphalt Paving	Oil and Grease	Effluent Limitations Guidelines (ELG)
				pH	ELG
				Total Suspended Solids	QBM and ELG
TA-3-66 Sigma Complex	3-Sigma-6	F	Primary Metals	Copper	QBM
				Zinc	QBM
TA-54 Area G	54-G-1	K	Treatment, Storage or Disposal Facility (TSD)	Ammonia	QBM
TA-54 Area G	54-G-2			Arsenic	QBM
TA-54 Area G	54-G-3			Cadmium	QBM
TA-54 Area G	54-G-4			Chemical Oxygen Demand	QBM
TA-54 Area L	54-L-1			Cyanide	QBM
TA-54 RANT	54-RANT-1			Lead	QBM
				Magnesium	QBM
				Mercury	QBM
				Selenium	QBM
				Silver	QBM
TA-60 MRF	60-MRF-1	N	Scrap Recycling	Aluminum	QBM
				Chemical Oxygen Demand	QBM
				Copper	QBM
				Iron	QBM
				Lead	QBM
				Total Suspended Solids	QBM
				Zinc	QBM
TA-3-22 Power & Steam Plant	3-PSP-1	O	Steam Electric Power	Iron	QBM
	3-PSP-5				
	3-PSP-8				

ATTACHMENT 7 – REFERENCES AND GUIDANCE DOCUMENTS

- 40 CFR 122, *EPA Administered Permit Programs*
- 40 CFR 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants.*
- Clean Water Act, Title 33 U.S.C. 1251
- DOE O 414.1C, *Quality Assurance*
- DOE Order 450.1, *Environmental Protection Program*
- DOE Order 5400.5, *Radiation Protection of Public and Environment*
- EPA QA/G-4, *Guidance for the Data Quality Objectives Process*

LANL Documents:

- P322-4, *Laboratory Performance, Feedback, and Improvement*
- P328-3, *Management Assessments*
- P328-4, *Management Observation and Verification*
- P330-6, *Nonconformance Reporting*
- P330-8, *Inspection and Test for Acceptance*
- P340, *Conduct of Engineering*
- P341, *Engineering Process Manual*
- P401, *Procedure to Identify, Communicate, and Implement Environmental Requirements*
- P407, *Water Quality*
- P840-1, *Procurement Quality*

ENV Documents:

- ENV-DO-QP-105, *Preparation, Review, and Approval of Procedures*
- ENV-DO-QP-106, *Document Control*
- ENV-DO-QP-113, *Tracking Performance Feedback and Actions*
- ENV-DO-QP-115, *Personnel Training*
- ENV-CP-QP-022, *MSGP Storm Water Corrective Actions*
- ENV-CP-QP-044, *Preparing Storm Water Discharge Monitoring Reports (MDNRs) for NPDES MSGP*
- ENV-CP-QP-047, *Inspecting Storm Water Runoff Samplers and Retrieving Samples*
- ENV-CP-QP-048, *Processing MSGP Storm Water Samples*
- ENV-CP-QP-064, *Multi-Sector General Permit Storm Water Visual Inspections*
- ENV-WQH-QP-029, *Creating and Maintaining a Chain of Custody*
- Surface Water Monitoring Plan, October 2001, Rev. 0.0