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MSGP Stormwater Pollution Prevention Plan

TA-60 Material Recycling Facility

Triad National Security, LLC (Triad)

A Requirement of the

NPDES MULTISECTOR GENERAL PEMIT

NMR050013 (Triad)

for Stormwater Discharges associated with Industrial Activities

January 2019

Revision 0

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STORMWATER POLLUTION PREVENTION PLAN

PREFACE

This Stormwater Pollution Prevention Plan (SWPPP) was developed in accordance with the provisions of the Clean Water Act (33 U.S.C. §§1251 et seq., as amended), and the *United States Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP)* (U.S. EPA, June 2015) issued by EPA, and using the industry specific permit requirements for Sector N: Scrap Recycling and Waste Recycling Facilities as a guide. The applicable stormwater discharge permit is EPA General Permit Tracing Number NMR050013 [Triad National Security, LLC (Triad)]. Click here to view contents of the 2015 Multi-Sector General Permit.

This SWPPP applies to discharges of stormwater from the operational areas of the TA-60 Material Recycling Facility at Los Alamos National Laboratory. Los Alamos National Laboratory (also referred to as LANL or the "Laboratory") is owned by the Department of Energy (DOE), and is operated by Triad. Throughout this document, the term "facility" refers to the TA-60 Material Recycling Facility. The current MSGP expires at midnight on June 4, 2020.

1.0 FACILITY DESCRIPTION

1.1 Facility Information

Name of Facility: TA-60 Material Recycling Facility		
Street:		
City: Los Alamos	State: NM	ZIP Code: 87545
County: Los Alamos		
NPDES ID (i.e., permit tracking number): NMR050013		
Primary Industrial Activity SIC code, and Sector and Subsector (2015 MSGP, Appendix D and Part 8): Sector N		
Estimated area of industrial activity at site exposed to stormwater: 1.8 acres		
Discharge Information		
Name(s) of surface water(s)/segment that receives stormwater from your facility: Sandia Canyon from NPDES Outfall 029.		

Does this facility discharge industrial stormwater directly into any segment of an "impaired water" (see definition in 2015 MSGP, Appendix A)? ☒Yes ☐No
Pollutants causing the impairment: Total Recoverable Aluminum, Dissolved Copper, PCB (Aroclors), and Temperature
Pollutants causing the impairment (see above) that may be present in industrial stormwater discharges from this Facility:
Are any of your stormwater discharges subject to effluent limitation guidelines (ELGs) (2015 MSGP Table 1-1)? ☐Yes ☒No If Yes, which guidelines apply? Not applicable.

1.2 Stormwater Pollution Prevention Team

The TA-60 MRF is part of the Utilities and Institutional (UI-DO) Facilities Facility Operations Director at Los Alamos National Laboratory with day to day management provided by Logistics Division-Heavy Equipment Roads & Grounds (LOG-HERG), 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.

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

Staff Names	Individual Responsibilities
Team/Group Leader: Russell Stone, ESH Manager, DESH, UI	Responsible for the management of all environmental, safety, health, and quality programs for the buildings and facilities listed within this Plan. This includes performing oversight and periodic walk downs to ensure implementation of the requirements of the MSGP and this SWPPP including overseeing the assigned duties of other PPT members. The Group Leader is responsible for ensuring that problems noted in inspections are corrected. The Group Leader must also ensure funding is established to cover compliance requirements of the MSGP and this SWPPP.
Deployed Environmental Professionals (DEPs): Leonard Sandoval (primary), Jillian Burgin (backup), DESH-UI	Responsible for the management of all environmental programs and issues for the buildings and facilities listed within this Plan. The DEP is responsible for training, recordkeeping, and SWPPP revision. The DEP will ensure that all PPT, operations site workers (as appropriate), and applicable supervisors receive annual MSGP and SWPPP training. The DEP will ensure that inspection documents and other required MSGP records relative to the SWPPP are managed in accordance with the

	permit and established document control procedures and that the SWPPP is kept current. The DEP provides technical and regulatory support to facility personnel regarding implementation of the MSGP and this SWPPP. Lastly, the DEP conducts routine inspections and visual assessments as required by the MSGP. Identified corrective actions from routine inspection are entered into the EPC-CP Corrective Action Report (CAR) database. The DEP is responsible for tracking and updating the status of corrective actions that cannot be implemented immediately.
FOD Manager: Lawrence Chavez, Operations Manager, UI-DO	Responsible for managing the operation and maintenance of all aspects of the buildings and facilities listed within this Plan. The Operations Manager shall provide review and ensure coordination with core personnel and the PPT, as appropriate, when tenants within the UI FOD propose a new process or a new site or operation that may be subject to the MSGP.
ENV Core: Holly Wheeler, MSGP Team Lead, EPC-CP	The MSGP Project Lead is responsible for managing and administering the Multi-Sector General Permit Storm Water Program for all industrial facilities within Los Alamos National Laboratory. The MSGP Project Lead advises and provides guidance to facility personnel on NPDES MSGP regulations/requirements. The MSGP Project Lead also acts as the institutional point of contact for all interactions with the regulatory authority (EPA) and supervises personnel implementing storm water monitoring requirements for the facility.
Facility Staff: Danny Esquibel, Maintenance Manager (LOG-HERG)	Responsible for day-to-day operations at the facility. Assisting DEPs and EPC with inspections; and implementing, installing and maintaining BMPs at the facility for MSGP compliance. Spill reporting; providing documentation as requested by other team members. Coordinating SWPPP training and briefings as requested by DEP/EPC.

1.3 Site Description

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. Dome 60-0085 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.

Of the 2-acre MRF site, approximately 90% (1.8-acres) consists of impervious surfaces in the form of rooftops, asphalt, compacted asphalt millings or concrete surfaces. Stormwater flow direction on the site is primarily to the east. Run-on to the site has been diverted into two primary drainage channels as seen on the site map.

A grated trench drain structure was installed directly to the west of the entrance in October 2005. This structure diverts the majority of the stormwater run-on away from the site into a small drainage swale along the south side of the site.

Stormwater runoff flows from west to east across the site and drains into a concrete catch basin in the northeast corner of the facility. The concrete catch basin was constructed during October 2005, and a drain valve was installed at the outlet of the basin. The increased catchment size and drain allows for water captured in the basin to be detained longer and released at a much slower rate than was previously allowed. The increased retention time allows for sediment transported by stormwater to settle out before its release. Also, grated filters were installed in conjunction with the basin. The runoff flows into the basin and eventually through the four filters. The filters provide additional sediment and debris removal. The drain valve is kept in a closed and locked position.

1.4 General Location Map

The general location map for the facility can be found in Figure A. Figure A provides locations of all receiving waters associated with stormwater discharges from the facility. 100% of the site flows to Sandia Canyon. The canyon at this location is a perennial stream and eventually flows into the Rio Grande approximately 10 miles southeast of the site.

1.5 Site Map

A site map provided in Figure B illustrates the facility's activities: including property boundaries, structures, impervious surfaces, operational areas as well as information on drainage patterns, stormwater and erosion control structures, potential pollutant sources, and nearby receiving streams.

As required by the 2015 MSGP, the following information specific to the facility is shown either on the site map or with additional information provided in this SWPPP.

- **Site Boundaries and Acreage**. The site covers approximately 1.8 acres
- **Significant Structures and Impervious Surfaces.** The site is 90% impervious, primarily rooftops, asphalt, compacted asphalt millings or concrete surfaces.
- **Direction of Stormwater Flow and Site Drainage.** Direction of flow is indicated with arrows.
- **Locations of Structural Stormwater Control Measures**.
- **Locations of all Receiving Waters.** In the immediate vicinity of the facility, indicating if any of the waters are Impaired and, if so, whether the waters have TMDLs established for them (see paragraph below this list). Maps of nearby receiving waters is provided in Figures B-1 and B-2.

- **Locations of all Stormwater Conveyances.** This includes all ditches, pipes, and swales.
- **Locations of Potential Pollutant Sources.**
- **Locations of Significant Spills or Leaks.**
- **Locations of all Stormwater Monitoring Points.**
- **Locations of Stormwater Inlets and Outfalls**. Of which each will require a unique identification code for each outfall (e.g., Outfall 029, etc.), indicating if you are treating one or more outfalls as "substantially identical" and an approximate outline of the areas draining to each outfall.
- This facility is not associated with a municipal separate storm sewer system (MS4)
- **Areas of designated critical habitat for endangered or threatened species.** There are none in the direct vicinity of the facility. However, a map for threatened and endangered species within LANL property is included in Figure B-3.
- There are no non-stormwater discharges at the facility (see certification in Attachment 3)
- Locations of the following activities where such activities are exposed to precipitation:
    - fueling stations (refueling trucks are kept on site);
    - 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; and
    - location and sources of run-on to the site.

1.6 Outfalls

There is only one stormwater outfall associated with this facility: **Outfall: 029.**

Outfall 029: Is representative of all stormwater runoff associated with the facility and stormwater discharges from the facility are to the east into Sandia Canyon (impaired waters), which is a tributary of the Rio Grande located approximately 10 miles east of the facility. An automated monitoring station is located at Outfall 029.

2.0 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

Past Spills and Leaks

Spills and leaks for the past 3 years (2016-2018) are summarized in Attachment 10. Spills and leaks that occurred prior to 2016 will be documented in previous SWPPP revisions.

Table 1: 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 60-0085 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

In the event of any future spill or leak at any of the facility areas, a spill report documenting the occurrence and the nature of the spill or leak, will be completed. The spill report will be filed promptly upon completion and documentation of the spill clean-up, and will be summarized in this section of the SWPPP.

The probability of spills or releases at the facility is minimized by the application of good housekeeping procedures and appropriate operational methods. As this facility regularly repairs heavy equipment and vehicles, spill protection is readily available on site. Appropriate response measures for a spill or release of hazardous materials are applied when addressing spills. The specific spill response and cleanup procedures will depend on the nature of the spilled material. Specific spill response and reporting procedures for LANL are listed in Section 3.4 of this SWPPP.

2.3 Unauthorized Non-Stormwater Discharges

Non-storm water discharges are also identified in the “Non-Storm water Discharge Assessment and Certification” that is located in Attachment 3. This certification form certifies that all storm water outfalls have been evaluated for the presence of non-storm water discharges. This form will be updated whenever a change in possible non storm water discharges is determined**.**

2.4 Salt Storage

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

2.5 Historical Data Summary

CY 2016

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

[1]N/A – No quarterly benchmark monitoring required.

CY 2017

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

[1]N/A – No quarterly benchmark monitoring required.

CY 2018

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

[1]N/A – No quarterly benchmark monitoring required.

3.0 STORMWATER CONTROL MEASURES

3.1 Non-Numeric Technology-Based Effluent Limits

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.

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:

- 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

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 is cleaned at the end of every March prior to the beginning of the new sampling season in April or when the depth of sediment or debris reached two-thirds (2/3) of the depth of the pond and when and if debris is at least six inches from the outlet pipe. According to the manufacturing specifications the functional longevity of the floc logs is 6 months to a year and at the MRF they will be replaced as soon as they deteriorate to the point where they no longer function properly. According to the manufacturing specifications the functional longevity for the Enviro-soxx with Metal-Loxx wattles is also 6 months to a year and they will be replaced at the end of every March prior to the beginning of the new sampling season in April.

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.

In general, the approach to spill cleanup is to secure the spill area and contact the Operations and Maintenance Coordinator (OMC) and/or the Security and Emergency Operations (SEO) Emergency Management & Response (EM&R) Team (if necessary). For incidental releases, Micro-Blaze or dry absorbents can be used and the contaminated absorbents disposed of properly.

The facility operators shall report all spills or releases. All uncontrollable spills or releases must be reported to the SEO/EM&R Office or Facility Duty Officer by calling 667-6211 or, after hours, at 667-7080. If fire or explosion is present, or if the potential for such exists, the situation must be reported by dialing 911. In the event of a spill, the SEO/EM&R Office will determine appropriate cleanup procedures and will notify the individuals or organizations responsible for completing spill reports or fulfilling regulatory reporting requirements.

Spills are reported to EPC-CP for documentation and reporting purposes. The completion of a spill report is required in the event of a spill. The spill report will be submitted to EPC-CP personnel and handled according to internal spill record keeping procedures. Spills may be "reportable" (requiring external agency notification) depending on the nature of the spilled material and the location of the release. External agency notification may consist of verbal or written notification to the National Response Center, Environmental Protection Agency Region VI, or the New Mexico Environment Department (NMED). The determination for the type of reporting will be made by the SEO/EM&R Office, FOD and EPC-CP in accordance with Laboratory and DOE policies and federal and state regulatory reporting requirements. Copies of internal spill reports are maintained by the responsible organization.

Additional EPC-CP procedures (documents provided in Attachments 21 and 22) for spill reporting and response include:

- ENV-CP-QP-007, Spill Investigations
- EPC-DO-QP-101.3, Environmental Reporting Requirements for Releases or Events

3.1.5 Erosion and Sediment Control

At the northeast corner of the TA-60 MRF stormwater flows into a concrete retention pond and through four drop inlets with floc logs 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 Enviro-soxx with Metal-Loxx wattle. East of the Dome 60-0085 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 an asphalt 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 and Enviro-soxx with Metal-Loxx wattle. East of Dome 60-0085 and along the north perimeter fence line

there's also a small sediment trap made of angular rock. There's also an asphalt 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 de-icing 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. Due to the millings and the asphalt lot, there is little potential for either dust generation or tracking of sediment.

3.2 MSGP 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 waste, 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 Dome 60-0085 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 Material Recycling Facility is classified under **Sector N- Scrap Recycling and Waste Recycling Facilities** and does not meet the industrial category requirements for effluent monitoring as listed in Part 2.1.3 *(Table 2-1 Applicable Effluent Limitations Guidelines)* of the 2015 MSGP. Benchmark monitoring is not required at the facility.

3.4 Water Quality-based Effluent Limitations and Water Quality Standards Impaired Receiving Waters/TMDLs

Impaired waters monitoring is performed annually at the facility as listed in Section 4.7 of this SWPPP. The pollutants sampled can change yearly based on the requirements of the MSGP. Section 4.7 lists the current sampling requirements and parameters.

Stormwater from the TA-60 Material Recycling Facility discharges to Sandia Canyon. Certain stream reaches within Sandia Canyon have been identified as impaired waters by the NMED Surface Water Quality Bureau (SWQB). According to the 2014-2016 State of NM Clean Water Act 303b/305b Integrated Report and Final List of Assessed Surface Waters, pollutants causing the impairment are listed as: *Gross Alpha, Aluminum, PCB (Aroclors), Copper, and Thallium*. Primary potential pollutant sources have been identified as post development erosion/sedimentation and urban runoff (NMED 2014). EPA has not yet approved or established TMDLs for Sandia Canyon.

4.0 SCHEDULES AND PROCEDURES

4.1 Good Housekeeping

See Section 3.2 of this SWPPP.

4.2 Maintenance

See Section 3.3 of this SWPPP.

4.3 Spill Prevention and Response

See Section 3.4 of this SWPPP. All referenced procedures will be provided in Attachments 21 and 22 of this SWPPP.

4.4 Erosion and Sediment Control

See Section 3.5 of this SWPPP.

4.5 Employee Training

Employee training is essential to effective implementation of the SWPPP. The goals for the training program are to ensure that employees are more capable of preventing spills, responding safely and effectively to an accident when one occurs, and recognizing situations that could lead to stormwater contamination.

Per section 2.1.2.8 of the 2015 MSGP, training relevant to the SWPPP is required for all operational workers at the facility who work in areas where industrial materials or activities are exposed to stormwater (MSGP sites); managers and supervisors who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel); and all members of the PPT. Training

provided and assigned to these personnel cover both the specific control measures used at the facility; along with monitoring, inspection, planning, reporting, and documentation requirements described in this SWPPP. Training is conducted at least annually.

Training activities are documented in accordance with LANL's Training Standards. In cases where training is formalized enough to require specific curricula and reoccurrence, the training activity will be recorded in LANL's official U-TRAIN database. Informal briefings, such as those included in group safety meetings are not typically recorded in U-TRAIN. Sign-in sheets are used to document attendance and will be kept on file in Appendix I of this SWPPP.

The topics in this SWPPP that are covered in the latest version of LANL's training (EPC-CP-QAPP-MSGP Attachment 15), Multi-Sector General Permit for Industrial Activities Program) include the following:

- Overview and goals of the SWPPP;
- Spill response and cleanup procedures, good housekeeping, maintenance requirements, and material management practices to prevent stormwater pollution;
- 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.

4.6 Routine Facility Inspections and Quarterly Visual Assessments

4.6.1 Routine Facility Inspections

Routine inspections at this facility will be conducted and documented monthly and per EPC-CP-QP-023, MSGP Routine Facility Inspections (document provided in Attachment 16).

At least once each calendar year, the routine inspection will be conducted during a period when a stormwater discharge is occurring. The inspection will be performed by a qualified member of the Stormwater PPT (typically the DEP or EPC-CP Technical Lead). The 2015 MSGP consolidates the different and separate documentation requirements in the Comprehensive Site Inspection Procedures and Routine Facility Inspection Procedures from the 2008 MSGP. EPC-CP will perform at least one routine

inspection per year in order to evaluate corrective action status for the Annual Report requirements.

Routine inspections will evaluate the following areas, at a minimum:

- Areas where industrial materials or activities are exposed to stormwater;
- Areas identified in the SWPPP and those that are potential pollutant sources;
- Areas where spills and leaks have occurred in the last three years;
- Discharge points(outfalls/SIOs); and
- Control measures used to comply with the effluent limits contained in this permit.
- Specific areas of the facility to be inspected are described in Sections 3.5 through 3.8.

During routine inspections the following must be examined and looked out for:

- 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 waste or 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 maintenance, repairs or replacement.

The Stormwater PPT member performing the inspection will document the inspection and will note potential storm water pollution problems that were encountered on the routine facility inspection form. Any required corrective actions identified during the inspection will be addressed in accordance with Section 6.0 Corrective Actions and Deadlines of this plan. Facility personnel or the DEP may also perform daily, weekly, or other periodic facility surveys in between monthly routine inspections to further ensure compliance with the SWPPP. The routine inspection form can be found in Attachment 7 of this SWPPP and meets the requirements listed in the 2015 MSGP (Section 3.1.2.).

4.6.2 Quarterly Visual Assessments

Visual inspections are conducted in accordance with EPC-CP-QP-064, MSGP Stormwater Visual Assessments (document provided in Attachment 18).

Once each quarter (April 1-May 31, June 1-July 31, August 1-September 30, October 1-November 30) a sample and visual assessment must be collected and performed at each outfall. The visual assessment will be conducted by a qualified member of the Stormwater PPT (DEP or EPC-CP Technical Lead). The visual assessment must be:

- Of a sample in a clean, clear 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 or as soon as practical thereafter. Or document why it was not possible to collect the sample within the first 30 minutes (i.e. adverse conditions, not enough flow, etc.)
- Conducted at least 72 hours since the last storm event; or document that the 72-hour period is representative of your local storm events during the sampling period.

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.

Exceptions to visual assessments:

- Document rationale if a visual assessment is unable to be collected in a quarter (no precipitation event or adverse conditions, etc.);
- Perform an additional assessment during the next qualifying storm event if unable to perform in a particular quarter; and
- Perform one quarterly assessment during snow melt discharge (taken during a measurable discharge from the site).

For facilities with significantly identical outfalls, quarterly visual assessments may be performed at only one of the outfalls; provided that you perform visual inspections on a rotating basis at each outfall.

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 (Attachment 8). Any required corrective actions identified during the assessment will be addressed in accordance with Section 6.0 Corrective Actions and Deadlines of this plan.

4.7 Monitoring

Outfall: 029 (60-MRF-1)

Monitoring Requirement	Industrial Sector	Assessment Unit	Analyte	Filtered/ Unfiltered	Regulatory Standard	Units	Regulatory Standard Type	Regulatory Standard Reference
Impaired Waters	-	NM-9000.A_047	Total Aroclors	UF	0.2	ug/L	2007 EPA R6 MQL	20.6.4.900 NMAC Subpart J/ 20.6.4.12 NMAC Subpart E
Impaired Waters	-	NM-9000.A_047	Al	F10u[1]	1010	ug/L	NM 2010 Aquatic Chronic 80 mg	20.6.4.900 NMAC Subpart I
Impaired Waters	-	NM-9000.A_047	Cu	F[2]	7	ug/L	NM 2010 Aquatic Chronic 80 mg	20.6.4.900 NMAC Subpart I
Impaired Waters	-	NM-9000.A_047	Temp	UF	24	°C	NM 2010 Aquatic Chronic	20.6.4.900 NMAC Subpart H (2)
Quarterly Benchmark	N2	No Benchmark Monitoring Required						

[1]F10u – 10 µm filter
[2]F - 0.45 µm filter

5.0 DOCUMENTATION FOR ELIGIBILITY CONSIDERATIONS UNDER OTHER FEDERAL LAWS

5.1 Endangered Species

The Final Site-Wide Environmental Impact Statement for the Operation of Los Alamos National Laboratory (DOE/EIS-0380) was issued in May 2008, and a Record of Decision in September 2008. Stormwater issues and associated pollution prevention requirements and activities at LANL are analyzed in Chapters 4 and 5 of the 2008 Site-Wide EIS. These activities are integrated into environmental reviews on a project-specific level through LANL's Integrated Review Tool (IRT), which incorporates both the Excavation Permit (EX-ID) and Permit Requirements Identification (PR-ID) process. Stormwater issues are identified and pollution prevention activities are implemented during the design and construction phases of all LANL projects, and as part of facility operations, including routine maintenance. LANL staff monitors stormwater pollution prevention compliance at the MSGP sites in accordance with Section 4.7 Monitoring of this plan. Corrective actions are taken as necessary as described in Section 6.0 Corrective Actions and Deadlines of this plan.

5.2 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 RANT

6.0 CORRECTIVE ACTIONS AND DEADLINES

When any of the following conditions occur or are detected during an inspection, monitoring or any other means, this SWPPP (e.g., sources of pollution; spill and leak procedures; non-stormwater discharges; the selection, design, installation and implementation of control measures) will be reviewed and revised (as appropriate) so that the effluent limits of the 2015 MSGP permit are met and pollutant discharges are minimized:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-storm water not authorized by this or another NPDES permit to a water of the U.S.) occurs at the facility;
- A discharge violates a numeric effluent limit;
- Control measures are not stringent enough for the discharge to meet applicable water quality standards or non-numeric effluent limits;
- An inspection identifies that a required control measure was never installed, was installed incorrectly or is not being properly operated or maintained; and
- Whenever a visual assessment shows evidence of stormwater pollution.

If the event triggering corrective action is associated with an outfall that is identified as an SIO, the review of the need for action must encompass all related SIOs.

6.1 Immediate Actions

If a corrective action is required, immediate steps must be reasonably taken to minimize or prevent discharges from occurring (i.e. spill clean-up, scheduling repairs) until a permanent solution (if needed) can be implemented. Immediate action means all reasonable steps must be taken the same work day or no later than the following work day (when it is too late in the day to take corrective action).

6.2 Subsequent Actions

If further corrective actions are required (e.g. installing or making operational a new or modified control, completing repairs, ordering BMPs) they must be completed by the next storm event, if possible or within 14 calendar days (from initial discovery). If it is infeasible to complete corrective actions within 14 days, documentation of why it is infeasible must be provided in the SWPPP. This documentation must also include a timeframe and schedule for completion of the work, which must be completed no later than 45 days (from initial discovery). If time needed to make corrective actions will exceed 45 days, EPA must be notified and provided a justification of why actions will exceed the timeframe.

6.3 Corrective Action Documentation

Upon discovery, required corrective actions will be documented by the DEP (or EPC-CP) and entered into the Corrective Action Database (CAR). The action will be kept open in the database until the issue has been resolved. Documentation of maintenance and repairs of control measures (BMPs) will be kept in this SWPPP. Where corrective actions result in changes to procedures or controls documented in this SWPPP, modifications to the SWPPP will be made accordingly within 14 days of completing the corrective action(s).

7.0 ACRONYMS

BMPs: Best Management Practices

CAR: Corrective Action Report

DO: Division Office

DEP: Deployed Environmental Professional

DESH: Deployed Environmental Safety and Health

EPC-CP: Environmental Protection and Compliance – Compliance Programs (Division)

FOD: Facilities Operations Directorate

MSGP: Multi Sector General Permit

NPDES: National Pollutant Discharge Elimination System

PPT: Pollution Prevention Team

SWPPP: Stormwater Pollution Prevention Plan

UI: Utilities and Institutional Facilities (Utilities Division)

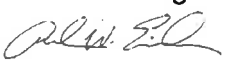
SIO: Substantially Identical Outfall

8.0 SWPPP CERTIFICATION

STORMWATER POLLUTION PREVENTION PLAN
TA-60 Material Recycling Facility
Los Alamos National Laboratory

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 (Affiliate)
Date: 2019.01.22 15:16:06 -07'00'

Date_____

Andrew W. Erickson
Facility Operations Director
Utilities and Institutional Facilities, UI-DO

FIGURE A: REGIONAL LOCATION MAP

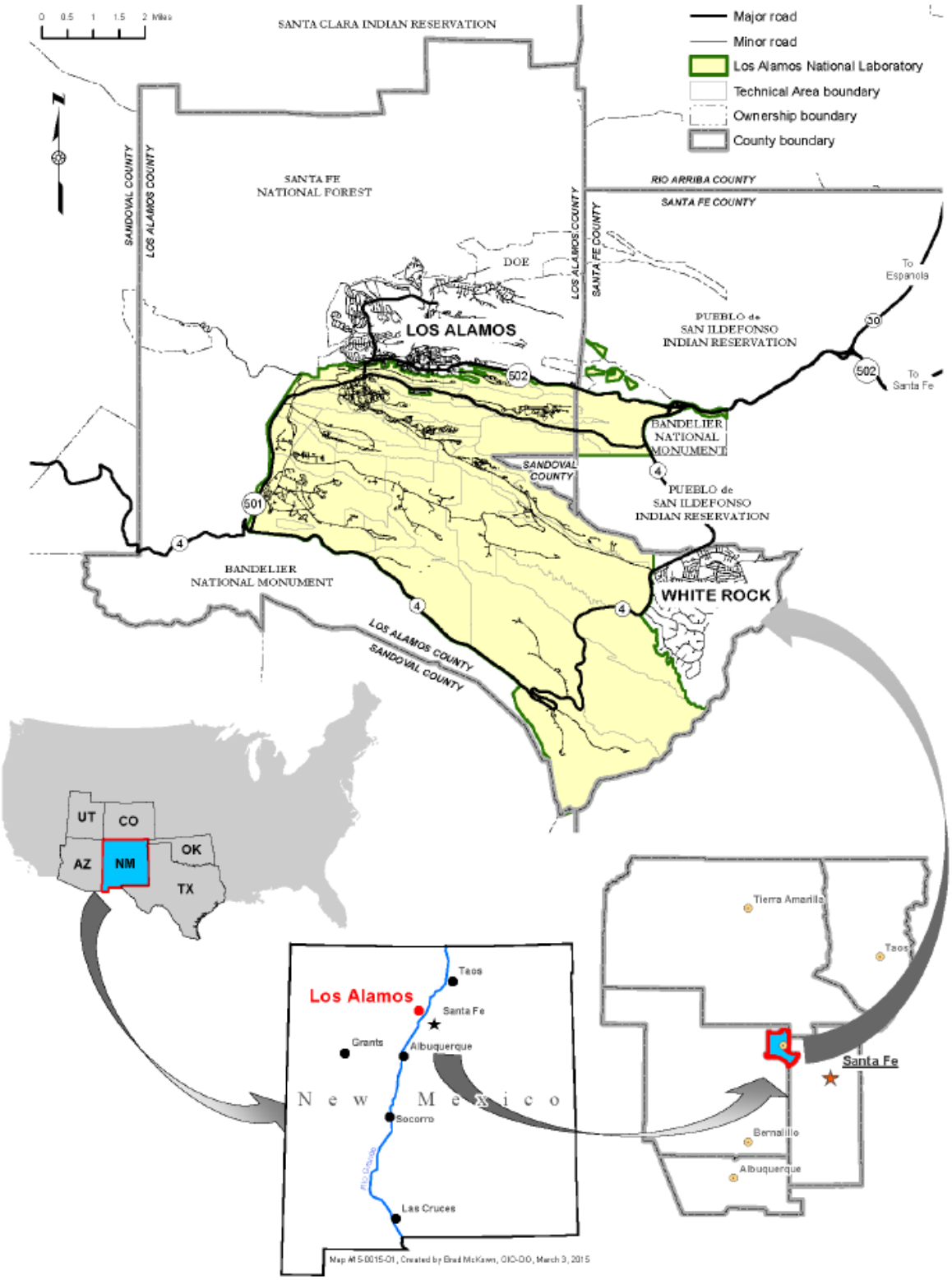


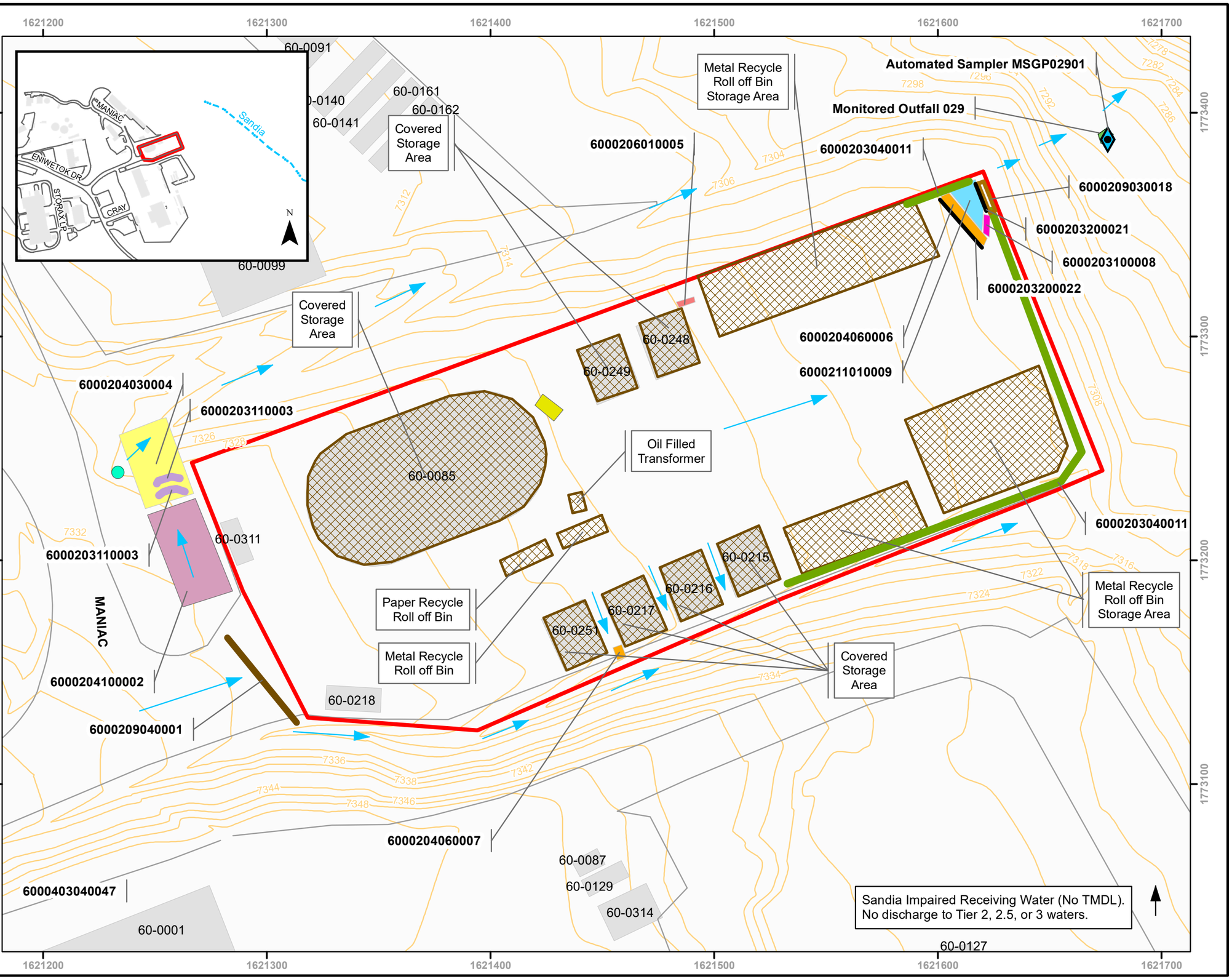
FIGURE B: SITE MAPS

Figures B-1: General Location Map

Figure B-2: Facility Site Map (Includes nearby surface waters and receiving waters)

Figure B-3: Endangered Species Habitat within LANL

TA-60 MRF
FIGURE C2 SITE MAP



- Automated Sampler
- Monitored Outfall
- Culvert Outlet
- Drainage
- Paved Roads
- 2 ft Contour
- Asphalt Berm
- Drop Inlet with Floc Logs
- Eco-Blok
- EnviroSoxx w/ MetalLoxx
- Trench Drain
- Boundary of Industrial Activity
- Angled Rock Rip Rap
- Base Course Swale
- Eco-Blok
- Gravel Bags
- Retention Pond
- Rock Channel/Swale
- Rock Check Dam
- Industrial Activity Areas
- Dumpster
- LANL Structures
- Flow Direction

1.27 Acres, 75% Impervious Surface.
Note - No Critical Habitat Areas.

Map number: 16-0015-TA-60 MRF
Map modified by: Ben Sutter, OI-FD
Date: September 5, 2018
Version 3

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

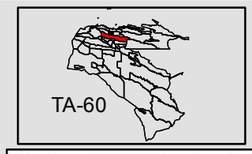
DISCLAIMER: This map was created for work processes associated with the Multi-Sector General Permit. All other uses for this map should be confirmed with LANL EPC-CP staff.

N
0 40 80 Feet

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



INSTITUTIONAL FACILITIES

U12024 rev.1

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

Endangered Species Habitat Within Los Alamos National Laboratory

SANTA FE NATIONAL FOREST

LOS ALAMOS TOWNSITE

PUEBLO de SAN ILDEFONSO

BANDELIER NATIONAL MONUMENT

WHITE ROCK

TA-43 TA-41 TA-02 TA-21 TA-73 TA-74 TA-61 TA-53 TA-60 TA-59 TA-48 TA-62 TA-03 TA-58 TA-69 TA-06 TA-64 TA-22 TA-08 TA-09 TA-55 TA-50 TA-52 TA-35 TA-05 TA-63 TA-40 TA-66 TA-67 TA-14 TA-46 TA-51 TA-16 TA-15 TA-18 TA-11 TA-28 TA-36 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
Stamers Gulch
Bulldog Gulch
Pajarito Canyon
Canon de Valle
Three-Mile Canyon
Water Canyon
Potrillo Canyon
Fence Canyon
Indio Canyon
North Ancho Canyon
Ancho Canyon
Chaquehui Canyon
Rio Grande
Sandia Canyon
Mortandad Canyon
Cañada del Buey

EAST JEMEZ ROAD
PAJARITO ROAD

501 502 4 126

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

ATTACHMENT 1: NOTICE OF INTENT, SUPPORTING DOCUMENTATION, AND UPDATES

Los Alamos
NATIONAL LABORATORY
EST 1943

Environmental Protection & Compliance
Los Alamos National Laboratory
PO Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-0666

Date: **APR 2 3 2018**
Symbol: EPC-DO: 18-165
LA-UR: 18-23181
Locates Action No.: *N/A*

Helen Nguyen
NetDMR & ICIS-NPDES Coordinator
Surface Water Compliance Section (6EN-WC)
U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Subject: National Pollutant Discharge Elimination System (NPDES) Permit Tracking No. NMR053195, Multi-Sector General Permit (MSGP) Change Notice of Intent (Change NOI) Reporting Pursuant to Part 7.4

Dear Ms. Nguyen:

The purpose of this letter is to submit Change NOI information to modify outfall and monitoring requirements related to MSGP Permit Tracking No. NMR053195. Due to system limitations, Los Alamos National Security (LANS) was previously unable to submit a complete and accurate NOI using the MSGP NeT reporting tool, and was granted a waiver to submit paper NOI forms by Nasim Jahan on February 9, 2016. As LANS submitted a paper NOI, subsequent Change NOIs or Notice of Termination (NOTs) must also be submitted via the paper form.

Additionally, pursuant to MSGP Part 9.6.2, Permittees in New Mexico must also comply with benchmark values that are modified to reflect New Mexico water quality standards based on the Standards for Interstate and Intrastate Surface Waters (20.6.4.900 NMAC). These modified benchmarks, as well as New Mexico impaired waters standards, are currently not incorporated into the electronic reporting tools so as to automatically populate correct monitoring requirements in NetDMR. EPA R6 is aware of this issue and has previously assisted in the resolution of LANS' limit sets in NetDMR. Per discussion during our meeting on March 29, 2018, LANS is requesting the assistance of EPA R6 to facilitate implementation of the enclosed Change NOI to ensure assignment of the correct monitoring requirements in NetDMR. The Change NOI is included in Enclosure 1; correct limit sets for new monitored outfall 017 are included in Enclosure 2. The Change NOI needs to be implemented no later than the end of LANS' monitoring period 1, May 31, 2018, to allow accurate reporting in NetDMR by the DMR due date of July 30, 2018.

Your assistance is appreciated as LANS is committed to maintaining compliance with the MSGP requirements. If you have any questions, please contact Terrill Lemke (505) 665-2397 or Leslie Dale (505) 606-2371.

Sincerely,

Taunia S. Van Valkenburg
Group Leader
Environmental Compliance Programs
Los Alamos National Security, LLC

TSV:TWL:LJD:eim

Enclosures: 1) Change NOI for MSGP Permit Tracking No. NMR053195
2) Limit Sets to Assign to Monitored Outfall 017 in NetDMR for Permit Tracking No. NMR053195

Copy: Karen E. Armijo, NA-LA, (E-File)
Timothy A. Dolan, LC-ESH, (E-File)
William R. Mairson, ADESH, (E-File)
Benjamine B. Roberts, EPC-DO, (E-File)
Taunia S. Van Valkenburg, EPC-CP, (E-File)
Terrill W. Lemke, EPC-CP (E-File)
Holly L. Wheeler, EPC-CP (E-File)
Leslie J. Dale, EPC-CP (E-File)
Ellena I. Martinez, EPC-CP, (E-File)
adesh-records@lanl.gov. (E-File)
epc-correspondence@lanl.gov, (E-File)

ENCLOSURE 1

Change NOI for MSGP Permit Tracking No. NMR053195

EPC-DO: 18-165

LA-UR-18-23181

Date: APR 2 3 2018

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: Nasim Jahan

Date approval obtained: 02/09/2016

Note: This form is submitting Change NOI information. Modified items/sections are highlighted.

* **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): NMR053195

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: 125.25 (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	018 (Sector AA, F)	Sandia Canyon (Sigma Canyon to NPDES outfall 001) Note: Remove Outfall 018. Outfall no longer exists and was replaced by Outfall 017 as the monitored outfall effective December 17, 2016.	01040 Copper, dissolved [as Cu]; 01057 Thallium, dissolved [as Tl]; 01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.872834			
Longitude	-106.317653			
Outfall ID	017 (Sector AA, F)	Sandia Canyon (Sigma Canyon to NPDES outfall 001) Note: Change Outfall 017 from an SIO to a monitored outfall. Outfall 017 replaced Outfall 018 as the monitored outfall effective December 17, 2016 and is associated with the SIOs listed below. In ICIS, please assign the limit sets provided in Enclosure 2 of this submittal.	01040 Copper, dissolved [as Cu]; 01057 Thallium, dissolved [as Tl]; 01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.872599			
Longitude	-106.317066			
If substantially identical to other outfall, list identical outfall ID: _____				

Outfall ID	013 (Sector AA, F)	Mortandad Canyon (Within LANL)	01040 Copper, dissolved [as Cu]; 01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.870797			
Longitude	-106.317867			
If substantially identical to other outfall, list identical outfall ID: 017				
Outfall ID	014 (Sector AA, F)	Mortandad Canyon (Within LANL)	01040 Copper, dissolved [as Cu]; 01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.870890			
Longitude	-106.317393			
If substantially identical to other outfall, list identical outfall ID: 017				
Outfall ID	015 (Sector AA, F)	Mortandad Canyon (Within LANL)	01040 Copper, dissolved [as Cu]; 01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.871389			
Longitude	-106.316397			
If substantially identical to other outfall, list identical outfall ID: 017				
Outfall ID	016 (Sector AA, F)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01040 Copper, dissolved [as Cu]; 01057 Thallium, dissolved [as Tl]; 01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.872447			
Longitude	-106.316721			
If substantially identical to other outfall, list identical outfall ID: 017				

Outfall ID	019 (Sector AA, F)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01040 Copper, dissolved [as Cu]; 01057 Thallium, dissolved [as Tl]; 01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.872682			
Longitude	-106.318467			
If substantially identical to other outfall, list identical outfall ID: 017				
Outfall ID	004 (Sector AA)	Two Mile Canyon (Pajarito to headwaters) Note: Remove Outfall 004. Site achieved No Exposure status effective July 17, 2017.	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.8714131			
Longitude	-106.323832			
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	047 (Sector K)	Canada del Buey (within LANL) Note: Remove Outfall 047 and associated SIOs listed below. Site achieved No Exposure status effective March 20, 2018.	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.844895			
Longitude	-106.264513			
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	044 (Sector K)	Canada del Buey (within LANL)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.845868			
Longitude	-106.265279			
If substantially identical to other outfall, list identical outfall ID: 047				

Outfall ID	045 (Sector K)	Canada del Buey (within LANL)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.845586			
Longitude	-106.265214			
If substantially identical to other outfall, list identical outfall ID: 047				
Outfall ID	046 (Sector K)	Canada del Buey (within LANL)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.845200			
Longitude	-106.264844			
If substantially identical to other outfall, list identical outfall ID: 047				
Outfall ID	048 (Sector K)	Canada del Buey (within LANL)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.844590			
Longitude	-106.265044			
If substantially identical to other outfall, list identical outfall ID: 047				
Outfall ID				TMDL Name and ID: Pollutant(s) for which there is a TMDL:
Latitude				
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: Benjamine B Roberts

Title: Division Leader

Signature: _____ Date: 04/04/2018

E-mail: bbroberts@lanl.gov

ENCLOSURE 2

Limit Sets to Assign to Monitored Outfall 017 in NetDMR for Permit Tracking No. NMR053195

EPC-DO: 18-165

LA-UR-18-23181

Date: APR 2 3 2018

Limit Sets to Assign to Monitored Outfall 017 in NetDMR

Permit ID	Facility	Permitted Feature	Discharge #	Discharge Description	Parameter Code	Parameter Name	Symbol	Quality Value	Limit Type	Units	Freq. of Analysis	Smpl. Type	Monitoring Period Begin Date	Monitoring Period End Date	DMR Due Date
NMR053195	TA-3-66 Sigma Complex	017	017-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	4/1	5/31	7/31
NMR053195	TA-3-66 Sigma Complex	017	017-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	681	Maximum	ug/L	1/60	Gr	4/1	5/31	7/31
NMR053195	TA-3-66 Sigma Complex	017	017-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	4/1	5/31	7/31
NMR053195	TA-3-66 Sigma Complex	017	017-11	UC - Copper: Water Hardness 50-74.99 mg/L	01040 1 0	Copper, dissolved [as Cu]	<=	6	Maximum	ug/L	1/60	Gr	4/1	5/31	7/31
NMR053195	TA-3-66 Sigma Complex	017	017-11	ZC - Zinc: Water Hardness 50-74.99 mg/L	01090 1 0	Zinc, dissolved [as Zn]	<=	76	Maximum	ug/L	1/60	Gr	4/1	5/31	7/31
NMR053195	TA-3-66 Sigma Complex	017	017-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	6/1	7/31	9/30
NMR053195	TA-3-66 Sigma Complex	017	017-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	681	Maximum	ug/L	1/60	Gr	6/1	7/31	9/30
NMR053195	TA-3-66 Sigma Complex	017	017-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	6/1	7/31	9/30
NMR053195	TA-3-66 Sigma Complex	017	017-11	UC - Copper: Water Hardness 50-74.99 mg/L	01040 1 0	Copper, dissolved [as Cu]	<=	6	Maximum	ug/L	1/60	Gr	6/1	7/31	9/30
NMR053195	TA-3-66 Sigma Complex	017	017-11	ZC - Zinc: Water Hardness 50-74.99 mg/L	01090 1 0	Zinc, dissolved [as Zn]	<=	76	Maximum	ug/L	1/60	Gr	6/1	7/31	9/30
NMR053195	TA-3-66 Sigma Complex	017	017-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	8/1	9/30	11/30
NMR053195	TA-3-66 Sigma Complex	017	017-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	681	Maximum	ug/L	1/60	Gr	8/1	9/30	11/30
NMR053195	TA-3-66 Sigma Complex	017	017-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	8/1	9/30	11/30
NMR053195	TA-3-66 Sigma Complex	017	017-11	UC - Copper: Water Hardness 50-74.99 mg/L	01040 1 0	Copper, dissolved [as Cu]	<=	6	Maximum	ug/L	1/60	Gr	8/1	9/30	11/30
NMR053195	TA-3-66 Sigma Complex	017	017-11	ZC - Zinc: Water Hardness 50-74.99 mg/L	01090 1 0	Zinc, dissolved [as Zn]	<=	76	Maximum	ug/L	1/60	Gr	8/1	9/30	11/30
NMR053195	TA-3-66 Sigma Complex	017	017-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	10/1	11/30	1/31
NMR053195	TA-3-66 Sigma Complex	017	017-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	681	Maximum	ug/L	1/60	Gr	10/1	11/30	1/31
NMR053195	TA-3-66 Sigma Complex	017	017-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	10/1	11/30	1/31
NMR053195	TA-3-66 Sigma Complex	017	017-11	UC - Copper: Water Hardness 50-74.99 mg/L	01040 1 0	Copper, dissolved [as Cu]	<=	6	Maximum	ug/L	1/60	Gr	10/1	11/30	1/31
NMR053195	TA-3-66 Sigma Complex	017	017-11	ZC - Zinc: Water Hardness 50-74.99 mg/L	01090 1 0	Zinc, dissolved [as Zn]	<=	76	Maximum	ug/L	1/60	Gr	10/1	11/30	1/31
NMR053195	TA-3-66 Sigma Complex	017	017-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	6	Maximum	ug/L	1/YR	Gr	4/1	11/30	1/31
NMR053195	TA-3-66 Sigma Complex	017	017-IW	IW - Impaired Water	01057 1 0	Thallium, dissolved [as Tl]	<=	0.47	Maximum	ug/L	1/YR	Gr	4/1	11/30	1/31
NMR053195	TA-3-66 Sigma Complex	017	017-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	681	Maximum	ug/L	1/YR	Gr	4/1	11/30	1/31
NMR053195	TA-3-66 Sigma Complex	017	017-IW	IW - Impaired Water	51931 1 0	Adjusted Gross Alpha	<=	15	Maximum	pCi/L	1/YR	Gr	4/1	11/30	1/31
NMR053195	TA-3-66 Sigma Complex	017	017-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1	11/30	1/31

Los Alamos
NATIONAL LABORATORY
EST.1943

Environmental Protection & Compliance
Los Alamos National Laboratory
PO Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-0666

Date: JUL 10 2018
Symbol: EPC-DO: 18-223
LA-UR: 18-25473
Locates Action No.: *N/A*

Stormwater Notice Processing Center
William Jefferson Clinton East Building – Room 7420
ATTN: 2015 MSGP
U.S. Environmental Protection Agency
1201 Constitution Avenue, NW
Washington, DC 20004

Subject: National Pollutant Discharge Elimination System (NPDES) Permit Tracking No. NMR053195, Multi-Sector General Permit (MSGP) Change Notice of Intent (Change NOI) Reporting Pursuant to Part 7.4

To Whom It May Concern:

The purpose of this letter is to submit Change NOI information to remove outfall and monitoring requirements related to MSGP Permit Tracking No. NMR053195. Due to system limitations, Los Alamos National Security (LANS) was previously unable to submit a complete and accurate NOI using the MSGP NeT reporting tool, and was granted a waiver to submit paper NOI forms by Nasim Jahan (EPA Region 6) on February 9, 2016. As LANS submitted a paper NOI, subsequent Change NOIs must also be submitted on the paper form.

Pursuant to MSGP Part B.12.C, three industrial sites within the Los Alamos National Laboratory complex that were formerly managed by LANS have been transferred to a new operator, N3B-Los Alamos, effective April 30, 2018. As such, LANS is submitting a Change NOI to remove these sites from coverage under NPDES Tracking No. NMR035195. Per direction from EPA Region 6 staff on March 29, 2018, LANS is not submitting a Notice of Termination because LANS will continue to manage nine active MSGP industrial facilities under NPDES Tracking No. NMR035195. LANS' required 2018 NetDMR reporting for these three sites is complete. The Change NOI is included as Enclosure 1, and needs to be implemented upon receipt to remove all future "Ready for Data Entry" Discharge Monitoring Reports associated with benchmark and impaired water limit sets at these sites.

Your assistance is appreciated as LANS is committed to maintaining compliance with the MSGP requirements. If you have any questions, please contact Terrill Lemke (505) 665-2397 or Leslie Dale (505) 606-2371.

Sincerely,

Taunia S. Van Valkenburg
Group Leader

TSV:TWL:LJD:cmh

Enclosure: 1) Change NOI for MSGP Permit Tracking No. NMR053195

Copy: Nasim Jahan, EPA Region 6, (E-File),
Helen Nguyen, EPA Region 6, (E-File),
Karen E. Armijo, NA-LA, (E-File)
Timothy A. Dolan, LC-ESH, (E-File)
William R. Mairson, ADESH, (E-File)
Enrique Torres, EPC-DO, (E-File)
Taunia S. Van Valkenburg, EPC-CP, (E-File)
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ENCLOSURE 1

Change NOI for MSGP Permit Tracking No. NMR053195

EPC-DO: 18-223

LA-UR-18-25473

Date: JUL 10 2018

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: Nasim Jahan

Date approval obtained: 02/09/2016

Note: This form is submitting Change NOI information. Modified items/sections are highlighted.

* **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): NMR053195

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: 60.50 (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:** ***Note: REMOVE the following Sector / Subsector from permit coverage.***

Identify the applicable sector(s) and subsector(s) of any co-located industrial activity for which you are requesting permit coverage:

Sector: K **Subsector:** K1 **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	049 (Sector P)	Pajarito Canyon (within LANL below Arroyo de la Delfe) Note: Remove Outfall 049 from NOI and DMRs with a monitoring period end date after 6/1/2018 for limit set 049-IW from NetDMR. Site and outfall transferred to new operator effective 4/30/2018.	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.837228			
Longitude	-106.254840			
Outfall ID	050 (Sector K)	Canada del Buey (within LANL) Note: Remove Outfall 050 from NOI and DMRs with a monitoring period end date after 6/1/2018 for limit sets 050-K1 and 050-IW from NetDMR. Site and outfall transferred to new operator effective 4/30/2018.	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.835746			
Longitude	-106.250832			
If substantially identical to other outfall, list identical outfall ID: _____				

Outfall ID	051 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe) Note: Remove Outfall 051 and the associated SIO listed below from NOI and DMRs with a monitoring period end date after 6/1/2018 for limit sets 051-K1 and 051-IW from NetDMR. Site and outfalls transferred to new operator effective 4/30/2018.	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.830143			
Longitude	-106.242662			
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID	052 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.831852			
Longitude	-106.242928			
If substantially identical to other outfall, list identical outfall ID: 051				
Outfall ID	053 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe) Note: Remove Outfall 053 and the associated SIOs listed below from NOI and DMRs with a monitoring period end date after 6/1/2018 for limit sets 053-K1 and 053-IW from NetDMR. Site and outfalls transferred to new operator effective 4/30/2018.	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.829232			
Longitude	-106.236793			
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID	065 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.829028			
Longitude	-106.236029			
If substantially identical to other outfall, list identical outfall ID: 053				

Outfall ID	066 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.830185			
Longitude	-106.236107			
If substantially identical to other outfall, list identical outfall ID: 053				
Outfall ID	069 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe) Note: Remove Outfall 069 and the associated SIOs listed below from NOI and DMRs with a monitoring period end date after 6/1/2018 for limit sets 069-K1 and 069-IW from NetDMR. Site and outfalls transferred to new operator effective 4/30/2018.	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.830285			
Longitude	-106.234518			
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	054 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.829036			
Longitude	-106.235125			
If substantially identical to other outfall, list identical outfall ID: 069				
Outfall ID	055 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.829173			
Longitude	-106.235121			
If substantially identical to other outfall, list identical outfall ID: 069				

Outfall ID	056 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.829310			
Longitude	-106.236107			
If substantially identical to other outfall, list identical outfall ID: 069				
Outfall ID	057 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.829440			
Longitude	-106.235117			
If substantially identical to other outfall, list identical outfall ID: 069				
Outfall ID	058 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.829573			
Longitude	-106.235112			
If substantially identical to other outfall, list identical outfall ID: 069				
Outfall ID	059 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: NA
Latitude	35.829711			
Longitude	-106.235108			
If substantially identical to other outfall, list identical outfall ID: 069				

Outfall ID	060 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.830340			
Longitude	-106.234802			
If substantially identical to other outfall, list identical outfall ID: 069				
Outfall ID	061 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.830343			
Longitude	-106.234766			
If substantially identical to other outfall, list identical outfall ID: 069				
Outfall ID	062 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.830344			
Longitude	-106.234725			
If substantially identical to other outfall, list identical outfall ID: 069				
Outfall ID	063 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.830342			
Longitude	-106.234692			
If substantially identical to other outfall, list identical outfall ID: 069				

Outfall ID	064 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.830340			
Longitude	-106.234656			
If substantially identical to other outfall, list identical outfall ID: 069				
Outfall ID	067 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.829856			
Longitude	-106.235110			
If substantially identical to other outfall, list identical outfall ID: 069				
Outfall ID	068 (Sector K)	Pajarito Canyon (within LANL below Arroyo de la Delfe)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.830051			
Longitude	-106.235103			
If substantially identical to other outfall, list identical outfall ID: 069				
Outfall ID	072 (Sector K)	Canada del Buey (within LANL) Note: Remove Outfall 072 and the associated SIOs listed below from NOI and DMRs with a monitoring period end date after 6/1/2018 for limit sets 072-K1 and 072-IW from NetDMR. Site and outfalls transferred to new operator effective 4/30/2018.	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.832885			
Longitude	-106.239444			
If substantially identical to other outfall, list identical outfall ID:				

Outfall ID	070 (Sector K)	Canada del Buey (within LANL)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.832404			
Longitude	-106.240510			
If substantially identical to other outfall, list identical outfall ID: 072				
Outfall ID	071 (Sector K)	Canada del Buey (within LANL)	01104 Aluminum, total recoverable; 39516 Polychlorinated biphenyls [PCBs]; 51931 Alpha, gross adjusted	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.832701			
Longitude	-106.240994			
If substantially identical to other outfall, list identical outfall ID: 072				
Outfall ID				TMDL Name and ID: Pollutant(s) for which there is a TMDL:
Latitude				
Longitude				
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID				TMDL Name and ID: Pollutant(s) for which there is a TMDL:
Latitude				
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 Eligibility 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: Enrique Torres

Title: Division Leader

Signature: [signature]

Date: 6/10/2018

E-mail: etorres@lanl.gov

ATTACHMENT 2: SWPPP AMENDMENTS

Date	Plan Section	Reason for Amendment	Amendment
Jan 2019	All	New MSGP Plan for new Laboratory Contract	New MSGP Plan for Triad, LLC (Replacing LANS, LLC)

ATTACHMENT 3: CERTIFICATION OF NO UNAUTHORIZED STORMWATER DISCHARGES

NON-STORM WATER DISCHARGE

ASSESSMENT AND CERTIFICATION

Completed by: Leonard F. Sandoval

Title: Deployed Environmental Professional

Date: 1/15/2019

Date of Evaluation	Outfall Directly Observed During Test (Location)	Identify Potential Significant Sources of Non-Storm Water	Method Used to Test or Evaluate Discharge	Is Non-Storm Water Present?	How Often?	Describe Results from Test for Presence of Non-Storm Water Discharge
1/15/2019	Outfall 60-MRF-1 ID # 029	None	Visual evaluation of Outfall at concrete 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 GL DESH-4115

Signature: 

Date Signed: 1/15/2019

ATTACHMENT 4: DULY AUTHORIZED SIGNATORY MEMORANDUM

Los Alamos
NATIONAL LABORATORY
EST.1943

Environmental Protection & Compliance Division
Los Alamos National Laboratory
PO Box 1663, K490
Los Alamos, NM 87545
505-667-0666

Symbol: EPC-DO: 18-453
LAUR: 18-31574
Date: DEC 1 1 2018

Ms. Anne L. Idsal, Regional Administrator
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Mail Code: 6RA
Dallas, TX 75202-2733

Subject: Notification of Triad National Security, LLC, Signatory Officials and Authorized Representatives for NPDES Permits

Dear Ms. Idsal:

The purpose of this letter is to provide an update to the U. S. Environmental Protection Agency (EPA) Region 6 on the Triad National Security, LLC delegation of authority for signature of documents associated with the various Los Alamos National Laboratory (LANL) NPDES Permits, pursuant to 40 CFR 122.22(c). This letter supersedes and replaces the signatory authority letter dated March 14, 2018 (ADESH: 18-017).

The positions of Associate Laboratory Director of Environment, Safety, Health & Quality and Safeguards & Security (ESHQSS), and Division Leader of the Environmental Protection & Compliance Division (EPC-DO) are identified as Triad's primary signatory officials under 40 CFR 122.22(a) for certifying and signing permit applications (including Notice of Intents (NOIs)) required under the LANL NPDES Industrial Point Source Outfall Permit (Permit No. NM0028355), the NPDES Storm Water Construction General Permit, the NPDES Multi-Sector General Permit (Permit No. NMR050013), and the NPDES Pesticide General Permit (Permit No. NMG87B113).

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

NPDES Industrial Point Source Outfall Permit (No. NM0028355)

- Positions listed as primary signatory officials above.
- Group Leader or Team Leaders within the Environmental Compliance Programs Group.
- Responsible Facility Operations Director (FOD).

NPDES Construction General Permit:

- Positions listed as primary signatory officials above.
- Group Leader or Team Leaders within the Environmental Compliance Programs Group.
- Cognizant Project Manager, Construction Manager, or Subcontractor Technical Representative for the regulated construction activity.

NPDES Multi-Sector General Permit (ID No. NMR053195)

- Positions listed as primary signatory officials above.
- Group Leader or Team Leaders within the Environmental Compliance Programs Group.
- Division Leader, Deputy Division Leader, or Group Leader of the LANL division responsible for the overall operation of the regulated facility or activity.
- Responsible FOD; Deputy FOD, Operations Manager; or Deployed Environment, Safety, & Health Manager responsible for the overall operation of the regulated facility or activity.

NPDES Pesticide General Permit (No. NM687A041)

- Positions listed as primary signatory officials above.
- Group Leader or Team Leaders within the Environmental Compliance Programs Group.

If you have questions, please contact me at (505) 667-7269 or at etorres@lanl.gov.

Sincerely,

Enrique Torres
Division Leader
Environmental Protection & Compliance Division

ET/TWL/MTS:jdm

Attachment(s): None.

Copy: Nancy Williams, USEPA, Region 6, williams.nancy@epa.gov, (E-File)
Brent E. Larsen, USEPA, Region 6, Larsen.brent@epa.gov, (E-File)
Robert Houston, USEPA, Region 6, Houston.robert@epa.gov, (E-File)
Sarah Holcomb, NMED, sarah.holcomb@state.nm.us, (E-File)
Karen E. Armijo, LASO-MA-LS, Karen.armijo@nnsa.doe.gov, (E-File)
Jody Pugh, NA-LA, jody.pugh@nnsa.doe.gov, (E-File)
Michael W. Hazen, ESHQSS, mhazen@lanl.gov, (E-File)
William R. Mairson, ESHQSS, wrmairson@lanl.gov, (E-File)
Enrique Torres, EPC-DO, etorres@lanl.gov, (E-File)
Taunia Van Valkenburg, EPC-CP, tauniav@lanl.gov, (E-File)
Michael T. Saladen, EPC-CP, saladen@lanl.gov, (E-File)
Terrill W. Lemke, EPC-CP, tlemke@lanl.gov, (E-File)
Tim Dolan, GC-ESH, tdolan@lanl.gov, (E-File)
emla.docs@em.doe.gov, (E-File)
locatesteam@lanl.gov, (E-File)
epc-correspondence@lanl.gov, (E-File)
adesh-records@lanl.gov, (E-File)

ATTACHMENT 5: DISCHARGE MONITORING REPORTS

SINCE TRIAD, LLC TOOK OVER THE OPERATING CONTRACT AFTER THE MONITORING PERIOD FOR 2018, DMRS FOR 2018 WILL BE KEPT ON FILE IN THE ARCHIVED SWPPP FOR LANS, LLC.

ATTACHMENT 6: ANNUAL REPORTS

THE 2018 ANNUAL REPORT WILL BE SUBMITTED TO EPA ON JANUARY 30, 2019. A HARD COPY WILL BE KEPT ON FILE WITH THE SWPPP.

ATTACHMENT 7: ROUTINE FACILITY INSPECTIONS

Los Alamos National Lab - ADESH

Work Order MSGP-RI-63351

MSGP Routine Inspection
Printed 11/7/2018 - 3:31 PM

Maintenance Details

Requested: 10/29/2018 10:35:50 AM
Procedure: MSGP Routine Facility Inspection (EPC-CP-Form-1020.1)
Last PM: 10/26/2018
Project: Routine Facility Inspections Nov. 2018 (P-MSGP-RI-5346)

Target: 11/30/2018
Priority/Type: Normal / Inspection
Department: Utilities and Infrastructure

MSGP Program
RG121.9
TA-60 MRF

Contact:
Phone:

11/9/2018 Temp. 26°F Low of 44°F
Clear/Sunny
Wind – Calm
7:53 a.m.

Reason: 2018 November Inspections

Special Instructions: NMR053195

Tasks

#	Description	Meas.	No	N/A	Yes
	Weather Information				
20	Describe the weather at time of inspection and document the temperature (F°).		☐	☐	☑
	Within the Facility Boundary				
40	Is the facility free of new discharges of pollutants that have occurred since the last inspection? If "Failed" describe.		☐	☐	☑
50	If "No" has a CAR been previously initiated for this new discharge?		☐	☑	☐
60	Is the facility free of discharge of pollutants at the time of inspection? If "No" describe.		☐	☐	☑
70	Is the facility free of evidence of, or the potential for, pollutants entering the drainage system. If "No" describe.		☐	☐	☑
	Outfall Inspection (identify needed maintenance and repairs, failed control measures that need replacement, or a description of corrective actions in relevant task comment)				
90	**Monitored Outfall [029]** Free of Evidence of Erosion? If "No", describe.		☐	☐	☑
100	**Monitored Outfall [029]** Flow Dissipation Devices Operating Effectively? If "No", describe.		☐	☐	☑
110	**Monitored Outfall [029]** Free of Evidence of Pollutants in Discharges and/or Receiving Water? If "No", describe.		☐	☐	☑
	Control Measures (identify needed maintenance and repairs, failed control measures that need replacment, or a description of corrective actions in relevant task comments).				
130	**Asphalt Berm [6000203040011]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
140	**Gravel Bags [6000203100008]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
150	**Eco-Block [6000203110003]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
160	**Rock Channel/Swale [6000204030004]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
170	**Rip Rap [6000204060006]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
180	**Rip Rap [6000204060007]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
190	**Base Course Swale [6000204100002]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
200	**Rock Check Dam [6000206010005]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
210	**Trench Drain [6000209040001]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
220	**Retention Pond [6000211010009]** Control Measure is operating effectively? If "No"		☐	☐	☑

	describe condition & need for Maintenance, Repair, or Replacement.				
230	**Drop Inlet with Floc logs [6000209030018]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
240	**EnviroSoxx w/ MetalLoxx [6000203200021]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
250	**EnviroSoxx w/ MetalLoxx [6000203200022]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
	Area/Activity exposed to stormwater (identify needed mainteance or a description of corrective actions in relevant task comment).				
270	Material loading/unloading and storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☑
280	Transfer areas for substances in bulk: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
290	Product/chemical storage areas (raw material): controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
300	Liquid tank storage/secondary containment: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
310	Industrial processing and finished product storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
320	Equipment operation and maintenance areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
330	Fueling areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
340	Outdoor vehicle and equipment washing areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
350	Machinery: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☑
360	Waste handling and disposal areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
370	Erodible areas/construction: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
380	Locations and sources of run-on to the site: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
390	Non-stormwater/illicit connections: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
400	Salt storage piles or pile containing salt: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
410	Dust generation and vehicle tracking: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
420	Housekeeping (Industrial materials/residues/trash in contact with stormwater): controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☑
430	Leaks and spills: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
	Non-Compliance				
450	Free of incidents of observed non-compliance not already identified above? If "No" describe.		☐	☐	☑
	Additional Control Measures				
470	Are permit requirements satisfied with existing control measure(s)? If "No" describe additional control measures needed.		☐	☐	☑

Labor

Labor	Assigned	Work Date	Reg Hrs	OT Hrs	Other Hrs
Leonard Sandoval	11/1/2018 / 1				

Labor Report

Completed: _____

Report:

WO ID:_____ Page____ of_____

Name/Z#: Leonard F. Sandoval 114326

Signature (lead inspector): Leonard F. Sandoval Date and Time: 11/9/2018 8:35a.m.

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

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DESH Group Leader, EPC Group Leader)

Print name and title: Russell Stone GSL DESH-LCLS

Signature: Russell Stone Date: 12/12/2018

The 30-yard bins for shredded paper, Cardboard, & plastic/aluminum cans had Dumpster Gard Covers on them. Bins with metal in them inside the yard were covered w/ tarps. The concrete retention pond had ice in it.

Los Alamos National Lab - ADESH

Work Order MSGP-RI-63451

MSGP Routine Inspection
Printed 12/17/2018 - 4:43 PM

Maintenance Details

Requested: 12/17/2018 4:33:38 PM
Procedure: MSGP Routine Facility Inspection (EPC-CP-Form-1020.1)
Last PM: 10/26/2018
Project: Routine Facility Inspections Dec. 2018 (P-MSGP-RI-5353)
Reason: 2018 December Inspections

Target: 12/31/2018
Priority/Type: Normal / Inspection
Department: Utilities and Infrastructure

MSGP Program
RG121.9
TA-60 MRF

Contact:
Phone:

12/17/2018
Temp. 33°F & high of 45°F
Cloudy/Overcast
Wind - Calm
10:00 a.m.

Tasks

#	Description	Meas.	No	N/A	Yes
Weather Information					
20	Describe the weather at time of inspection and document the temperature (F°).		☐	☐	☑
Within the Facility Boundary					
40	Is the facility free of new discharges of pollutants that have occurred since the last inspection? If "Failed" describe.		☐	☐	☑
50	If "No" has a CAR been previously initiated for this new discharge?		☐	☑	☐
60	Is the facility free of discharge of pollutants at the time of inspection? If "No" describe.		☐	☐	☑
70	Is the facility free of evidence of, or the potential for, pollutants entering the drainage system. If "No" describe.		☐	☐	☑
Outfall Inspection (identify needed maintenance and repairs, failed control measures that need replacement, or a description of corrective actions in relevant task comment)					
90	**Monitored Outfall [029]** Free of Evidence of Erosion? If "No", describe.		☐	☐	☑
100	**Monitored Outfall [029]** Flow Dissipation Devices Operating Effectively? If "No", describe.		☐	☐	☑
110	**Monitored Outfall [029]** Free of Evidence of Pollutants in Discharges and/or Receiving Water? If "No", describe.		☐	☐	☑
Control Measures (identify needed maintenance and repairs, failed control measures that need replacment, or a description of corrective actions in relevant task comments).					
130	**Asphalt Berm [6000203040011]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
140	**Gravel Bags [6000203100008]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
150	**Eco-Block [6000203110003]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
160	**Rock Channel/Swale [6000204030004]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
170	**Rip Rap [6000204060006]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
180	**Rip Rap [6000204060007]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
190	**Base Course Swale [6000204100002]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
200	**Rock Check Dam [6000206010005]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
210	**Trench Drain [6000209040001]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
220	**Retention Pond [6000211010009]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
230	**Drop Inlet with Floc logs [6000209030018]** Control Measure is operating effectively? If		☐	☐	☑

	"No" describe condition & need for Maintenance, Repair, or Replacement.				
240	**EnviroSoxx w/ MetalLoxx [6000203200021]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑
250	**EnviroSoxx w/ MetalLoxx [6000203200022]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☑

Area/Activity exposed to stormwater (identify needed mainteance or a description of corrective actions in relevant task comment).

270	Material loading/unloading and storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe. Refer to Labor Report		☑	☐	☐
280	Transfer areas for substances in bulk: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
290	Product/chemical storage areas (raw material): controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
300	Liquid tank storage/secondary containment: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
310	Industrial processing and finished product storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
320	Equipment operation and maintenance areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
330	Fueling areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
340	Outdoor vehicle and equipment washing areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
350	Machinery: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☑
360	Waste handling and disposal areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
370	Erodible areas/construction: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
380	Locations and sources of run-on to the site: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
390	Non-stormwater/illicit connections: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
400	Salt storage piles or pile containing salt: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
410	Dust generation and vehicle tracking: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐
420	Housekeeping (Industrial materials/residues/trash in contact with stormwater): controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☑
430	Leaks and spills: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☑	☐

Non-Compliance

450	Free of incidents of observed non-compliance not already identified above? If "No" describe.		☐	☐	☑

Additional Control Measures

470	Are permit requirements satisfied with existing control measure(s)? If "No" describe additional control measures needed.		☐	☐	☑

Labor

Labor	Assigned	Work Date	Reg Hrs	OT Hrs	Other Hrs
Leonard Sandoval	12/17/2018 / 1				
Wheeler, Holly	12/17/2018 / 1				

Labor Report

Completed: _____

Report:
10 yard roll-off bin # B-0326 has tears on its cover that need to be repaired & metal shavings at the bottom of both ends that need to be swept up entered into the MSGP tracking database as CAR # 1430.
There is a 15 yard roll-off bin with metal in it that needs to be covered entered into the MSGP tracking database as CAR # 1431.

WO ID: _____ Page ___ of ___

Holly Wheeler from EPC-CP helped perform the inspection which is considered an annual inspection.

Name/Z#: Leonard F. Sandoval 114326

Signature (lead inspector): Leonard F. Sandoval Date and Time: 12/11/2018 10:21 a.m.

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

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DESH Group Leader, EPC Group Leader)

Print name and title: Russell Stone GL DESH-WIS

Signature: _____ Date: 11/7/2019

There is another 10 yard roll-off bin with metal shavings at the back of the roll-off bin # on the ground that need to be swept up entered into the MSGP tracking database as CAR # 1432.

ATTACHMENT 8: QUARTERLY VISUAL ASSESSMENTS

SINCE TRIAD, LLC TOOK OVER THE OPERATING CONTRACT AFTER THE QVA PERIOD FOR 2018, QVAS FOR 2018 WILL BE KEPT ON FILE IN THE ARCHIVED SWPPP FOR LANS, LLC.

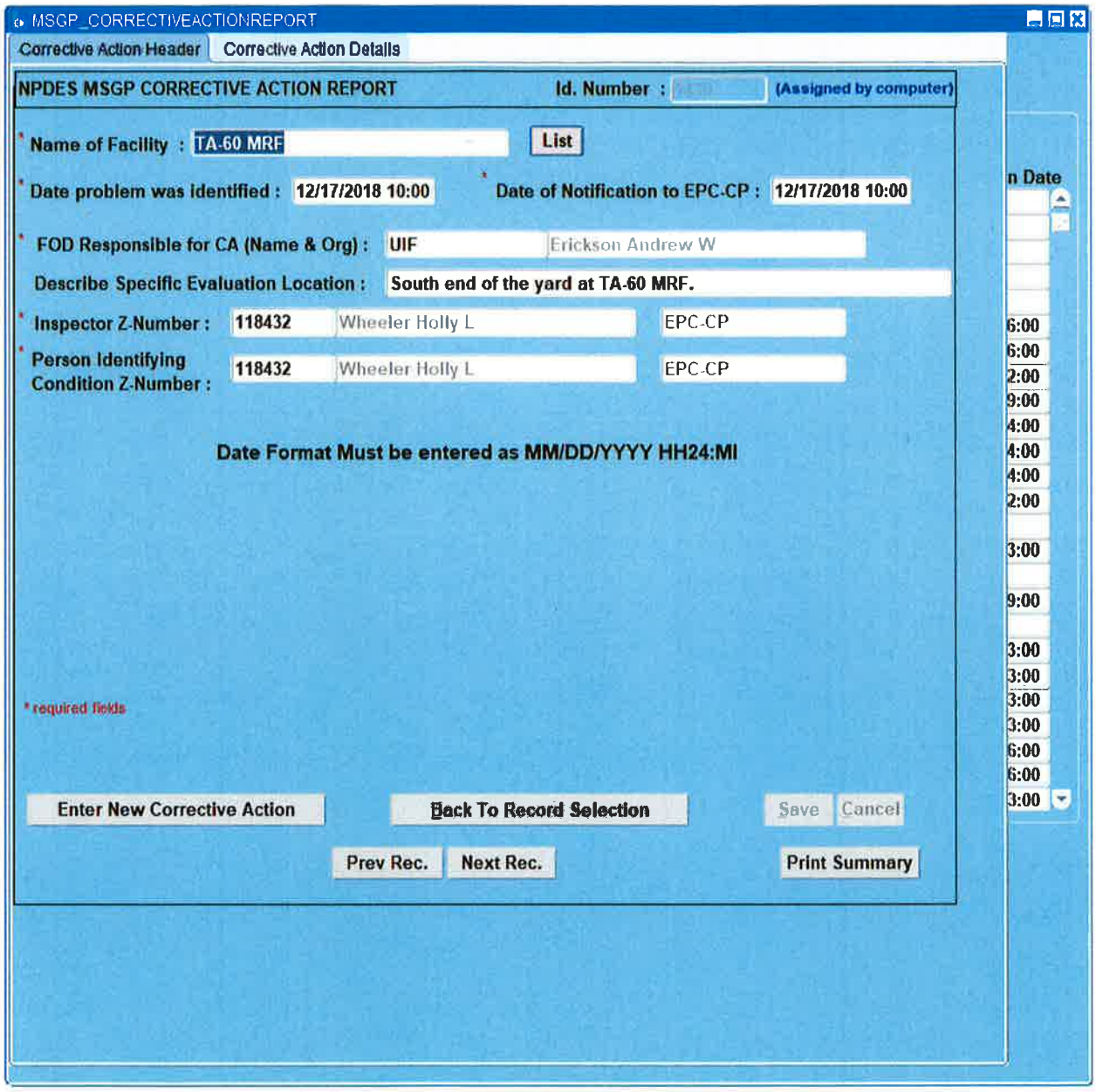
ATTACHMENT 9: CORRECTIVE ACTION DOCUMENTATION AND CERTIFICATION

CERTIFICATION FOR CORRECTIVE ACTIONS

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.

Printed Name: Russell Stone **Title:** GC DESH-UES

Signature: [signature] **Date:** 1/15/2019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Corrective Action Header
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NPDES MSGP CORRECTIVE ACTION REPORT
Id. Number :
(Assigned by computer)
Name of Facility : TA-60 MRF
List
Date problem was identified : 12/17/2018 10:00
Date of Notification to EPC-CP : 12/17/2018 10:00
FOD Responsible for CA (Name & Org) : UIF
Erickson Andrew W
Describe Specific Evaluation Location : South end of the yard at TA-60 MRF.
Inspector Z-Number : 118432
Wheeler Holly L
EPC-CP
Person Identifying Condition Z-Number : 118432
Wheeler Holly L
EPC-CP
Date Format Must be entered as MM/DD/YYYY HH24:MI
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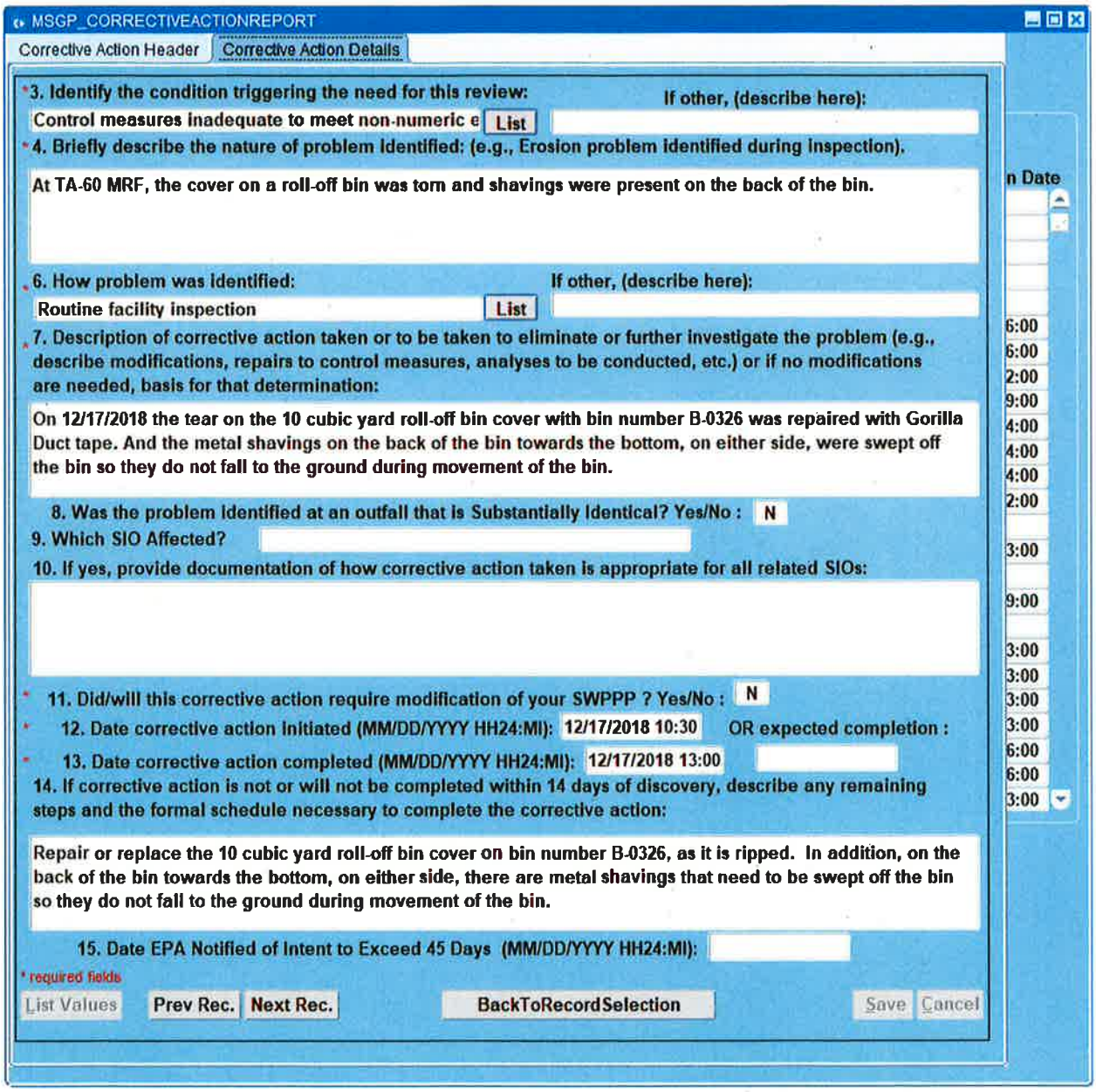
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Corrective Action Header | Corrective Action Details

*3. Identify the condition triggering the need for this review: — If other, (describe here):

Control measures inadequate to meet non-numeric e [List]

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

At TA-60 MRF, the cover on a roll-off bin was torn and shavings were present on the back of the bin.

*6. How problem was identified: — If other, (describe here):

Routine facility inspection [List]

*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:

On 12/17/2018 the tear on the 10 cubic yard roll-off bin cover with bin number B-0326 was repaired with Gorilla Duct tape. And the metal shavings on the back of the bin towards the bottom, on either side, were swept off the bin so they do not fall to the ground during movement of the bin.

8. Was the problem identified at an outfall that is Substantially Identical? Yes/No : N

9. Which SIO Affected?

10. If yes, provide documentation of how corrective action taken is appropriate for all related SIOs:

* 11. Did/will this corrective action require modification of your SWPPP ? Yes/No : N

* 12. Date corrective action initiated (MM/DD/YYYY HH24:MI): 12/17/2018 10:30 OR expected completion :

* 13. Date corrective action completed (MM/DD/YYYY HH24:MI): 12/17/2018 13:00

14. If corrective action is not or will not be completed within 14 days of discovery, describe any remaining steps and the formal schedule necessary to complete the corrective action:

Repair or replace the 10 cubic yard roll-off bin cover on bin number B-0326, as it is ripped. In addition, on the back of the bin towards the bottom, on either side, there are metal shavings that need to be swept off the bin so they do not fall to the ground during movement of the bin.

15. Date EPA Notified of Intent to Exceed 45 Days (MM/DD/YYYY HH24:MI):

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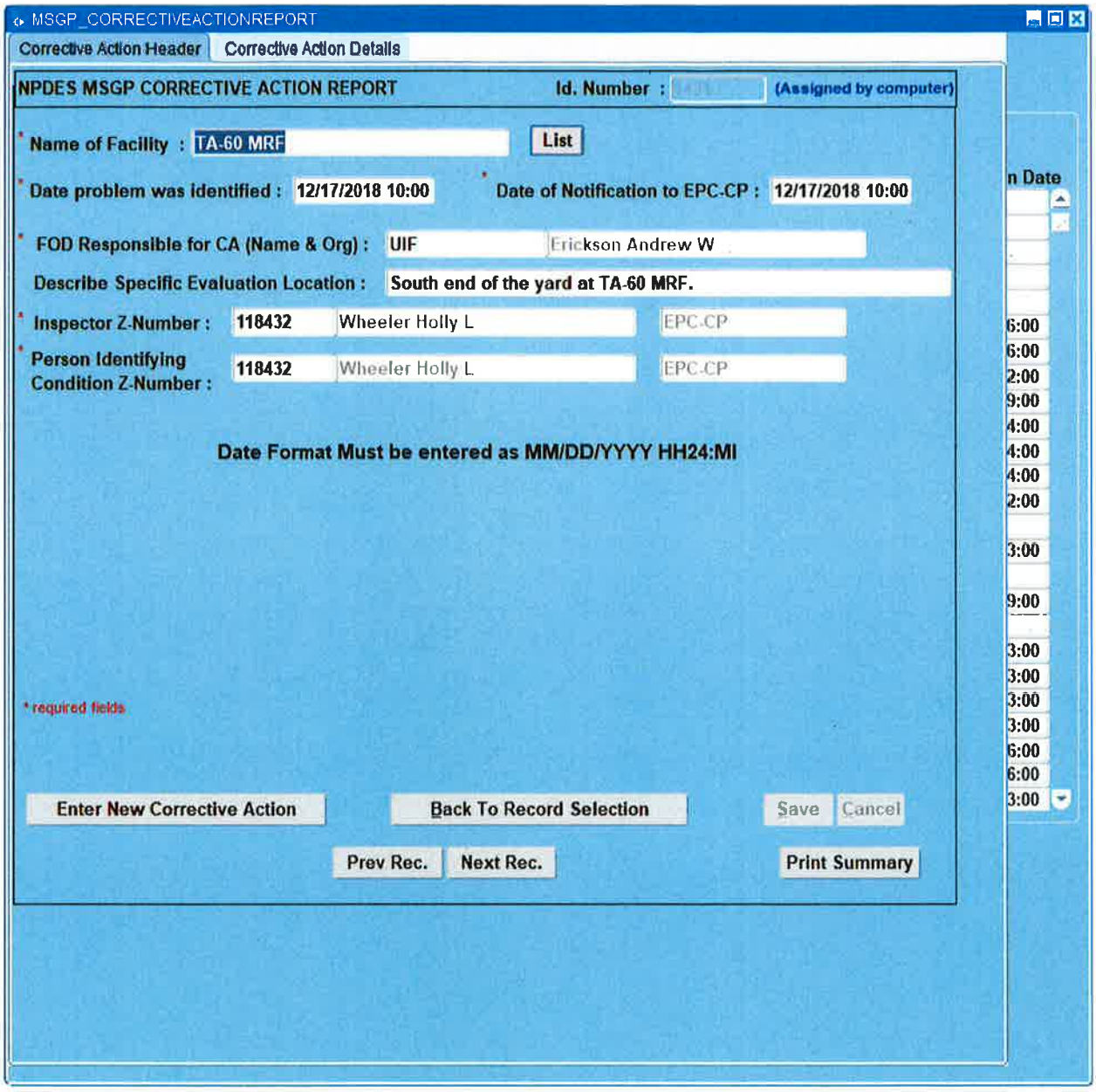
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Date of Notification to EPC-CP : 12/17/2018 10:00
FOD Responsible for CA (Name & Org) : UIF
Erickson Andrew W
Describe Specific Evaluation Location : South end of the yard at TA-60 MRF.
Inspector Z-Number : 118432
Wheeler Holly L
EPC-CP
Person Identifying Condition Z-Number : 118432
Wheeler Holly L
EPC-CP
Date Format Must be entered as MM/DD/YYYY HH24:MI
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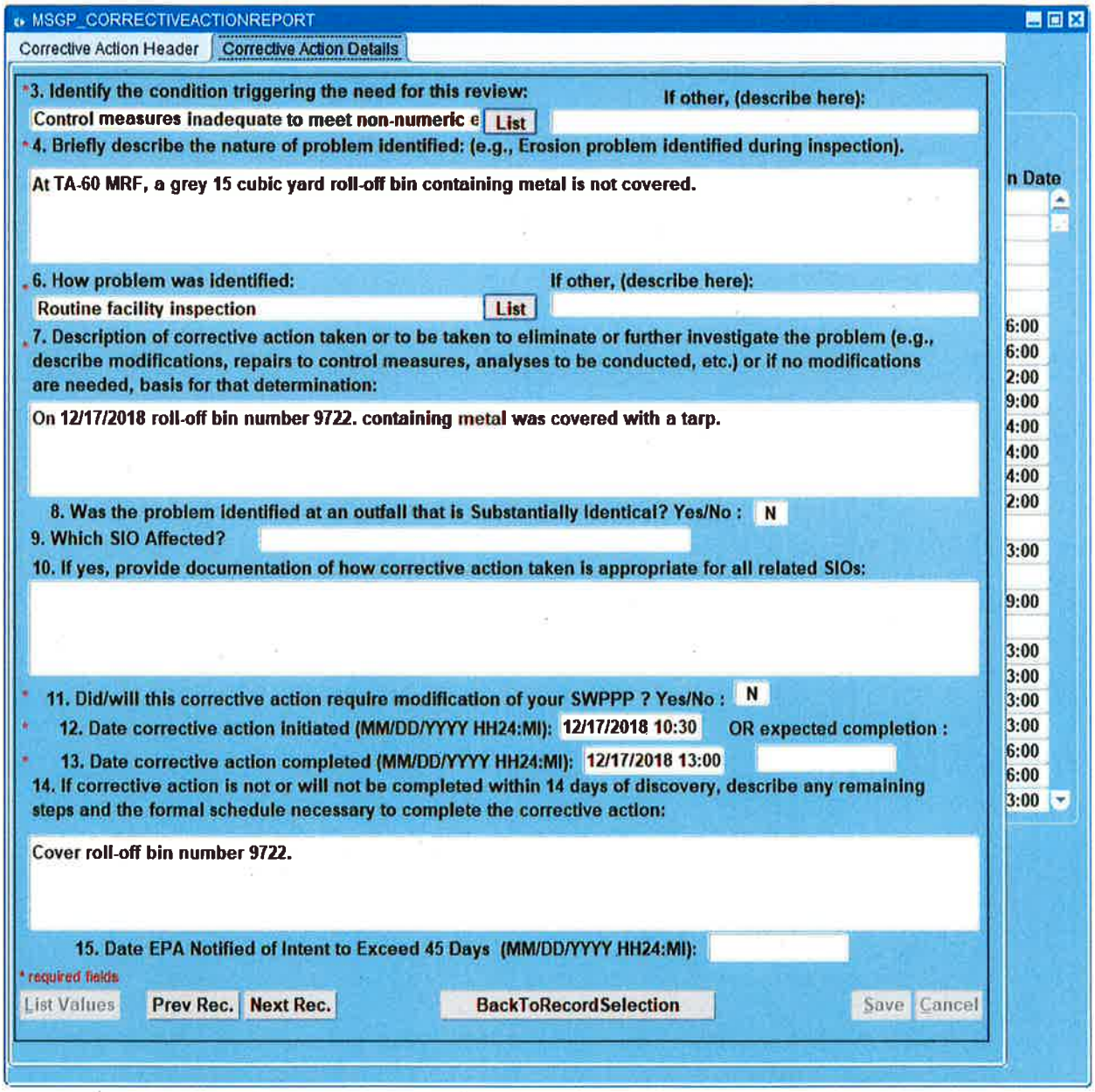
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*3. Identify the condition triggering the need for this review:
If other, (describe here):
Control measures inadequate to meet non-numeric e
List
* 4. Briefly describe the nature of problem identified: (e.g., Erosion problem identified during inspection).
At TA-60 MRF, a grey 15 cubic yard roll-off bin containing metal is not covered.
* 6. How problem was identified:
If other, (describe here):
Routine facility inspection
List
* 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:
On 12/17/2018 roll-off bin number 9722. containing metal was covered with a tarp.
8. Was the problem identified at an outfall that is Substantially Identical? Yes/No :
N
9. Which SIO Affected?
10. If yes, provide documentation of how corrective action taken is appropriate for all related SIOs:
* 11. Did/will this corrective action require modification of your SWPPP ? Yes/No :
N
* 12. Date corrective action initiated (MM/DD/YYYY HH24:MI):
12/17/2018 10:30
OR expected completion :
* 13. Date corrective action completed (MM/DD/YYYY HH24:MI):
12/17/2018 13:00
14. If corrective action is not or will not be completed within 14 days of discovery, describe any remaining steps and the formal schedule necessary to complete the corrective action:
Cover roll-off bin number 9722.
15. Date EPA Notified of Intent to Exceed 45 Days (MM/DD/YYYY HH24:MI):
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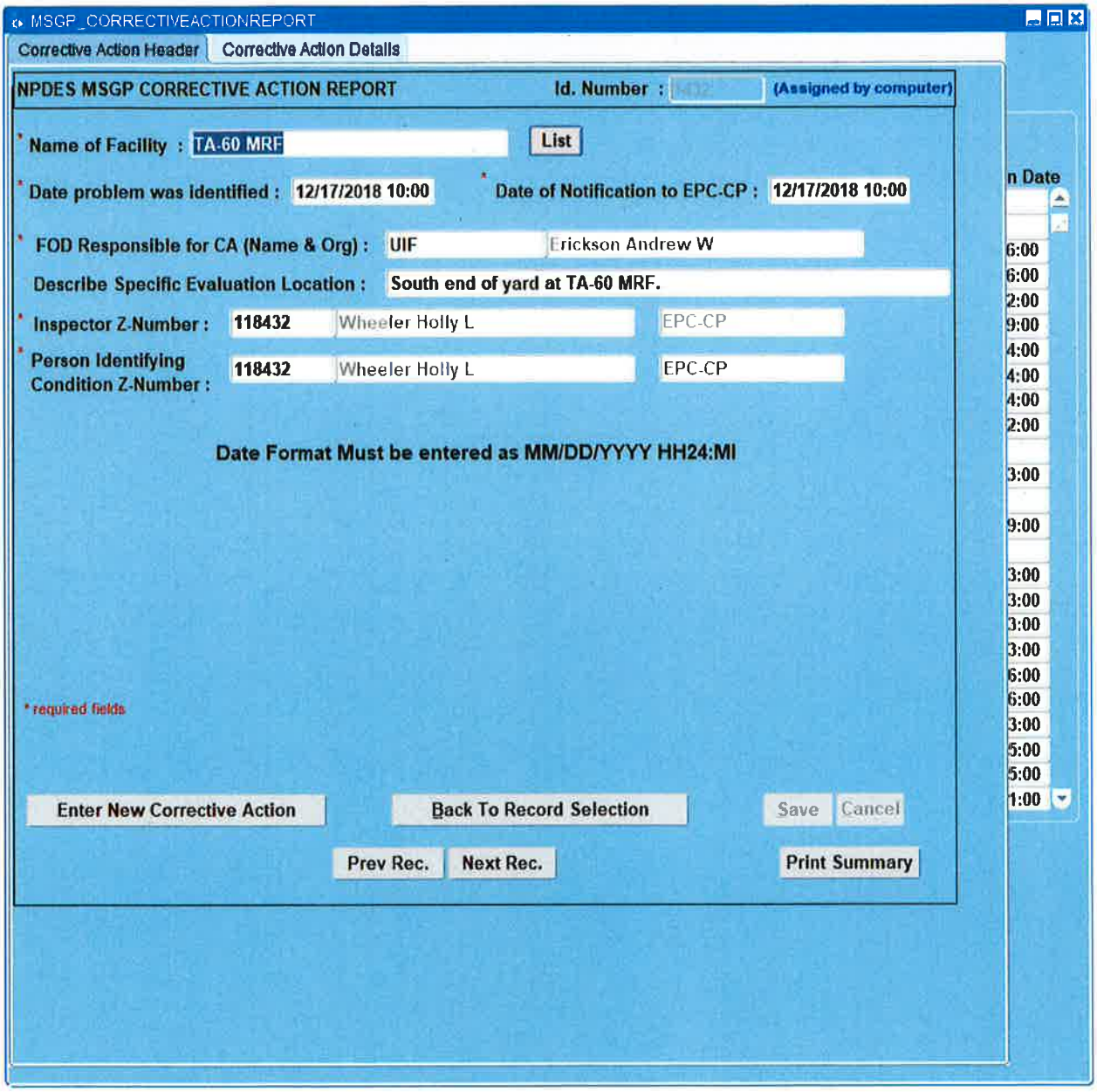
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Date of Notification to EPC-CP : 12/17/2018 10:00
FOD Responsible for CA (Name & Org) : UIF
Erickson Andrew W
Describe Specific Evaluation Location : South end of yard at TA-60 MRF.
Inspector Z-Number : 118432
Wheeler Holly L
EPC-CP
Person Identifying Condition Z-Number : 118432
Wheeler Holly L
EPC-CP
Date Format Must be entered as MM/DD/YYYY HH24:MI
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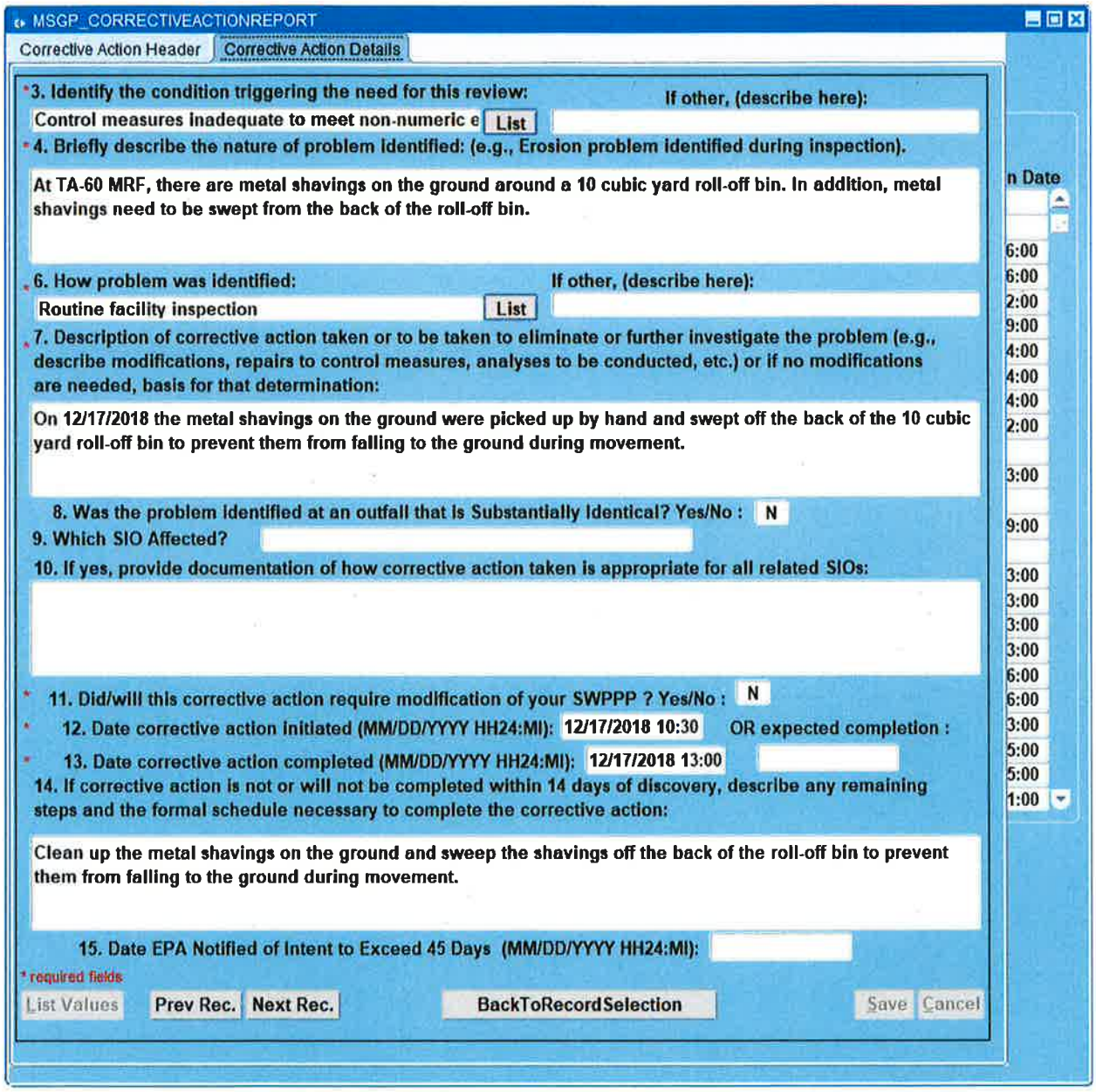
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Corrective Action Header | Corrective Action Details

*3. Identify the condition triggering the need for this review: — If other, (describe here):

Control measures inadequate to meet non-numeric e [List]

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

At TA-60 MRF, there are metal shavings on the ground around a 10 cubic yard roll-off bin. In addition, metal shavings need to be swept from the back of the roll-off bin.

* 6. How problem was identified: — If other, (describe here):

Routine facility inspection [List]

* 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:

On 12/17/2018 the metal shavings on the ground were picked up by hand and swept off the back of the 10 cubic yard roll-off bin to prevent them from falling to the ground during movement.

8. Was the problem identified at an outfall that is Substantially Identical? Yes/No : N

9. Which SIO Affected?

10. If yes, provide documentation of how corrective action taken is appropriate for all related SIOs:

* 11. Did/will this corrective action require modification of your SWPPP ? Yes/No : N

* 12. Date corrective action initiated (MM/DD/YYYY HH24:MI): 12/17/2018 10:30 OR expected completion :

* 13. Date corrective action completed (MM/DD/YYYY HH24:MI): 12/17/2018 13:00

14. If corrective action is not or will not be completed within 14 days of discovery, describe any remaining steps and the formal schedule necessary to complete the corrective action:

Clean up the metal shavings on the ground and sweep the shavings off the back of the roll-off bin to prevent them from falling to the ground during movement.

15. Date EPA Notified of Intent to Exceed 45 Days (MM/DD/YYYY HH24:MI):

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ATTACHMENT 10: SPILLS AND LEAKS

Spills and Leaks (2016-2018)

Date	Spill Location	What Spilled	Quantity Spilled	Corrective Action Taken	Outfall Affected
3/23/2017	Compressor inside roll-off bin	Lubricant oil	Less than 1 cup	Absorbent was applied to the spill and impacted material was removed	None
7/25/2017	Entrance to covered structure 60-249	Hydraulic Fluid	Less than 5 ounces	Stain on asphalt was sprayed with micro-blaze	None
10/25/2017	Inside covered structure 60-85	Lubricant oil	Less than 3 ounces	Stain on concrete was sprayed with micro-blaze	None

ATTACHMENT 11: TRAINING DOCUMENTATION

New Mexico Water Quality Control Commission Compliance

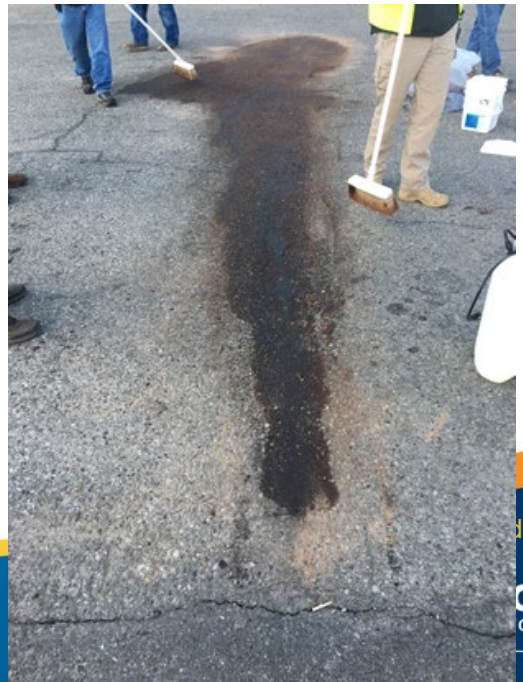
Spills and Unplanned Releases Legacy Equipment – Lesson's Learned

Presentation Overview

- Environmental Reporting Requirements
- Who to Contact in the Event of a Release
- Ways to Prevent Spills
- NPDES MSGP Requirements
- Legacy Equipment – Lessons Learned
- Questions

Spills- Unplanned Releases to the Environment

- Water Quality investigates and evaluates spills throughout LANL to determine if external reporting is required to comply with State and Federal Regulations
  - NMWQCC Regulations, Clean Water Act, CERCLA, EPCRA



Spills- Unplanned Releases to the Environment

- Corrective actions need to be taken for all spills that occur
- There is not a de minimis volume of spilled material that does not need to be addressed

Who to Contact in the Event of a Spill

- Notify Supervisor of Spill Occurrence
- Notify the Roads and Grounds Deployed Environmental Professional
  - Leonard Sandoval
- Notify Water Quality Spills Pager – **664-7722**
- Notify Emergency Operations in the event of an emergency **667-6211**

Spill Prevention and Minimization

- Plan work to eliminate avoidable spills
- Use secondary containment to prevent releases to the environment
- Ensure preventive maintenance on equipment is completed
- Know where spill kits are located and how to use contents
- Know who to contact in the event of a release

NPDES Multi-Sector General Permit (MSGP) Requirements

- 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.
  - At LANL-“an extended period of time” is considered to be 6 months.

Legacy Equipment
Sheep's Foot Compactor-Lesson's Learned

- Compactor discovered on Sigma Mesa-slated to be salvaged
- Diesel was identified to be leaking from equipment
- Initially thought to be empty
  - Actually filled with over 900 gallons of diesel/water

Legacy Equipment
Sheep's Foot Compactor-Lesson's Learned Continued

- Diesel filled compactor presented significant environmental compliance and safety concern
  - SPCC, NMWQCC, Site Safety
- Notify your management and environmental resources to investigate any unknown equipment or equipment suspected to contain potential water contaminants to mitigate safety and environmental issues

Questions?

Meeting Sign-In Sheet

Roads & Grounds Safety Meeting SWPPP Training	**Meeting Date:** Monday, October 29, 2018
Facilitator: Dana Parrett, Brian Icona Leonard Sandoval	**Place/Room:** TA-60 Bldg 250

Name	Z#	Signature
Victor Bustos	244917	
John Valdez	193103	
James Cosper	323005	
James Osborn	175205	
Bryan Voight	320601	
Thomas mtk	326925	
Ronald Lovato	205936	
Jon Antonk	320599	
RAYMOND BACA	202778	
BETTY Montoya	181675	
DENNIS Garcia	319111	
Jesse Garcia	241499	
Desiree Lujan	237616	
Bernadette Lopez	174810	
Eleazar Molina	204566	
Mario Arculeta	236804	
Ada Drake	328300	
Nicole Frisquez	165982	
Derrick Nunez	296647	
Bernie Archuleta	131481	

Meeting Sign-In Sheet

Roads & Grounds Safety Meeting SWPPP Training	**Meeting Date:** Monday, October 29, 2018
Facilitator: Dana Parrett, Brian Icona Leonard Sandoval	**Place/Room:** TA-60 Bldg 250

Name	Z#	Signature
Dominguez Juan	163502	
Nathan Serrano	230568	
Anthony Maes	305377	
Anthony Salazar	311020	
Adrian Trujillo	304295	
Alexander Trujillo	307018	
Francisco Trujillo	217516	
Esteban Madrid	305378	
Joseph Garcia	323250	
Simone Fresquez	251838	
Peter DeAguero	315451	
Nolan Sanchez	314172	
Miguel Caro	189748	
Kevin B Martinez	322719	
Joe Walker	223181	
Patricia Lopez	169389	
Mark A. Lopez	219923	
LouisC Chacon	321819	
Jack Caldwell	116986	

Meeting Sign-In Sheet

Roads & Grounds Safety Meeting SWPPP Training	**Meeting Date:** Monday, October 29, 2018
Facilitator: Dana Parrett, Brian Icona, Leonard Sandoval	**Place/Room:** TA-60 Bldg 250

Name	Z#	Signature
Dana Parrott	170040	
DANIEL M. ABEYTA	184462	
Gary R Medina	131563	
GARY GONZALES	320882	
ADAM CHACON	329863	
Chris Garcia	289219	
MARVIN L. MARTINEZ	116424	
Leslie McReynolds	106896	
JOE BOIES	224950	
Lawrence Garcia	294694	
Steven Martinez	200540	
Danny Esquibel	146331	
Leroy Gonzales	170592	
Cody L Garinger	304296	
TRAVIS LOWE	235607	
Randy Martinez	294724	
Isaiah Maldonado	297033	
Anna M Chavez	306989	
JOE Medina	154217	

Bill

Meeting Sign-In Sheet

Roads & Grounds Safety Meeting	**Meeting Date:** Monday, October 29, 2018
Facilitator: Dana Parrett	**Place/Room:** TA-60 Bldg 250

Name	Z#	Signature
Michael Martinez	094295	Michael Martinez
Joseph Martinez	231521	Joseph Martinez
Leonard F. Sandoval	114326	Leonard F. Sandoval
Duane Packer	119194	Duane Packer
Juliette R. Gallegos	237657	Juliette R. Gallegos
Benito Vigil	237258	Benito Vigil
Alfred Jaramillo	292839	Alfred Jaramillo
Sandra Gonzales	249366	Sandra Gonzales

Meeting Sign-In Sheet

Roads & Grounds Safety Meeting SWPP Training	**Meeting Date:** Monday, October 29, 2018
Facilitator: Dana Parrett, Brian Icona, Leonard Sandoval	**Place/Room:** TA-60 Bldg 250

Name	Z#	Signature
Christina Chavez	320833	
GARY McMinn	241759	
Daniel Mas	311184	
Julian Martinez	326075	
Camille	312040	
	314173	
	315453	Jin Paul Gonzales

Meeting Sign-In Sheet

Roads & Grounds Safety Meeting	**Meeting Date:** Monday, October 29, 2018
Facilitator: Dana Parrett	**Place/Room:** TA-60 Bldg 250

Name	Z#	Signature
Silviano Tucker	096056	

ATTACHMENT 12: MSGP (OR ACTIVE URL)

THE APPLICABLE STORMWATER DISCHARGE PERMIT IS EPA GENERAL PERMIT TRACING NUMBER NMR050013 [TRIAD NATIONAL SECURITY, LLC (TRIAD)]. CLICK HERE TO VIEW CONTENTS OF THE 2015 MULTI-SECTOR GENERAL PERMIT.

ATTACHMENT 13: THREATENED AND ENDANGERED SPECIES HABITAT MANAGEMENT PLAN FOR LOS ALAMOS NATIONAL LABORATORY

LA-UR-14-21863
Approved for public release;
distribution is unlimited.

Title:	**Threatened and Endangered Species Habitat Management Plan for Los Alamos National Laboratory**
Author(s):	Environmental Protection Division Resources Management Team
Intended for:	Reference purposes
Date:	March 2014

Contents

Figure

Tables

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.

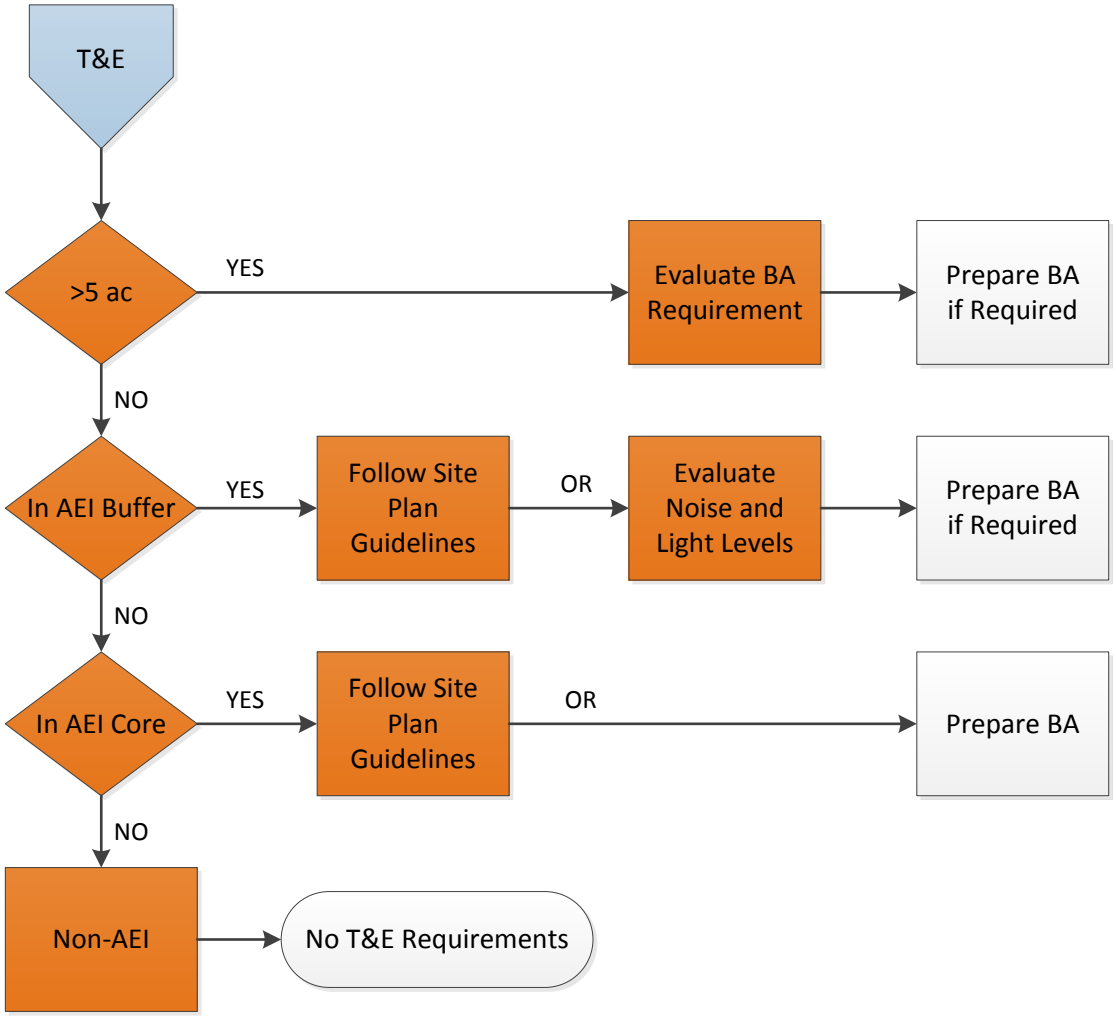


Figure 1. Process flowchart for determining site plan requirements.

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

Restrictions on Occupied Habitat		**Core**	**Buffer**
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

United States Department of the Interior

FISH AND WILDLIFE SERVICE
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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

ATTACHMENT 14: MSGP IPAC TRUST RESOURCES REPORT

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

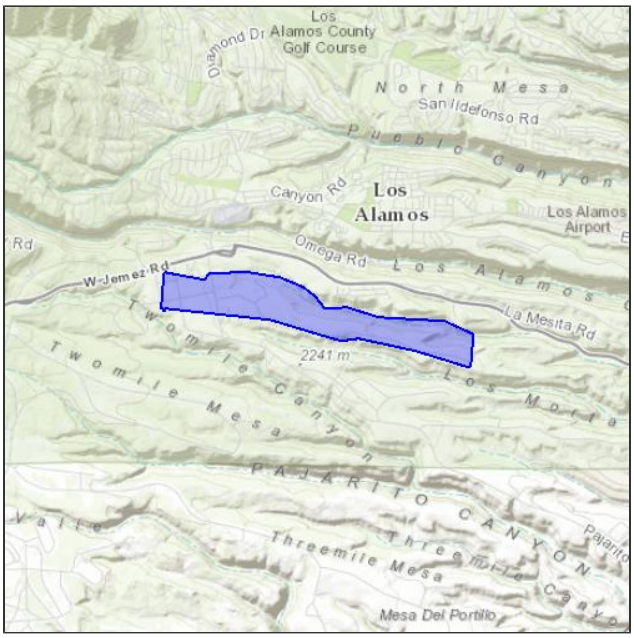
LXATM-TI5EJ-BAJEQ-3NC5E-SOGYTE

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

ATTACHMENT 15: EPC-CP-QAPP-MSGP

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:

Name:	Organization:	Signature:	Date:
Melanie Lamb	ADESH-OIO, QA Specialist	Signature on File	

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

Name:	Organization:	Signature:	Date:
Ellena Martinez	ADESH-OIO	Signature on File	

Approval Signatures:

Subject Matter Expert:	Organization:	Signature:	Date:
Holly Wheeler	ENV-CP	Signature on File	
Responsible Line Manager:	Organization:	Signature:	Date:
Mike Saladen	ENV-CP, Team Lead	Signature on File	
Responsible Line Manager:	Organization:	Signature:	Date:
Anthony Grieggs	ENV-CP, Group Leader	Signature on File	

CONTROLLED DOCUMENT

This copy is uncontrolled. The controlled copy can be found on the ENV Division Web page.

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

Table of Contents

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

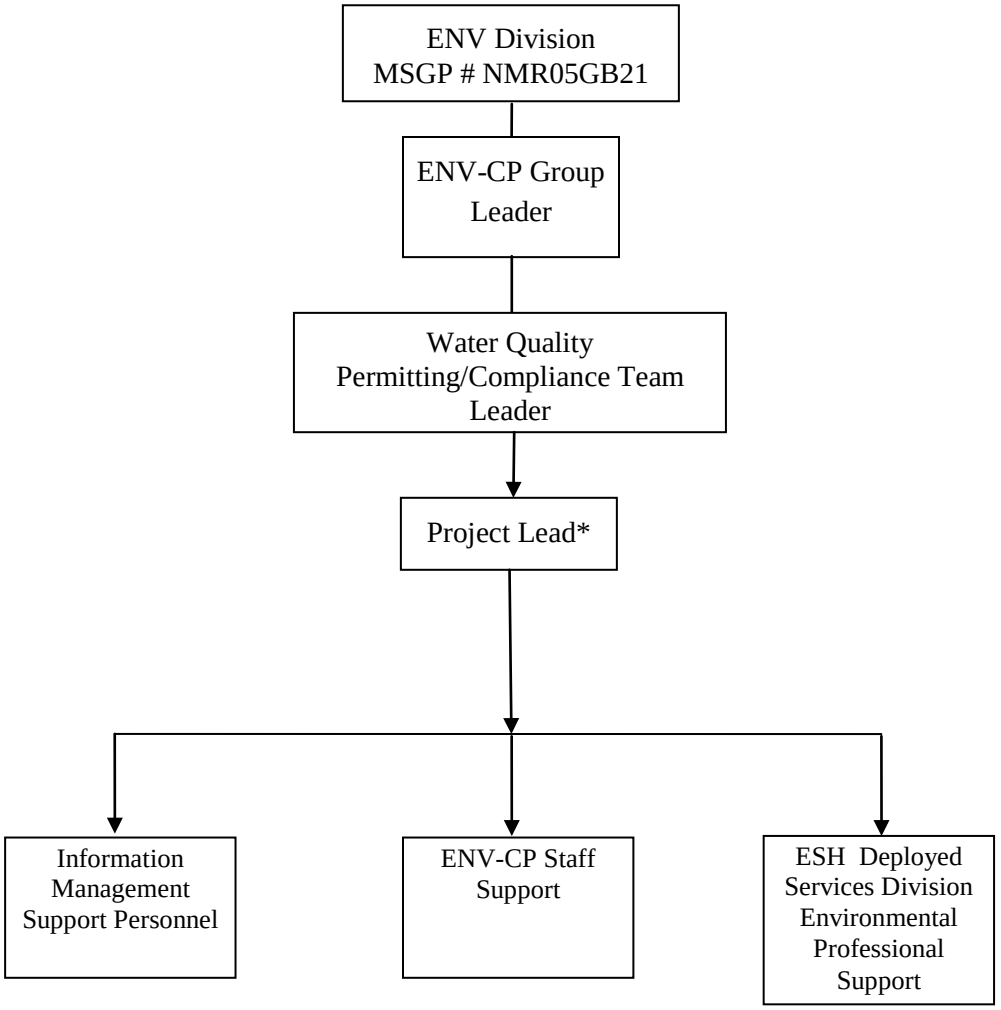
Attachment 5 – Pollutants under Impaired Waters Monitoring

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.:

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 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

ATTACHMENT 16: EPC-CP-QP-023 MSGP ROUTINE FACILITY INSPECTIONS

EPC-CP-QP-023	Revision: **0**	Los Alamos NATIONAL LABORATORY EST.1943
Effective Date: 05/17/2018	Next Review Date: 05/17/2021	

Environment, Safety, and Health Directorate

Environmental Protection and Compliance Division – Compliance Programs

Quality Procedure

MSGP Routine Facility Inspections

Document Owner/Subject Matter Expert:

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REVISION HISTORY

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EPC-CP-QP-023 R0	05/17/2018	New Document. Process formerly part of procedure ENV-RCRA-QP-022 R2, *MSGP Corrective Actions*.

Table of Contents

1.0 INTRODUCTION

The National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP), also referred to as the permit, (Tracking Number NMR053195) contains specific environmental requirements for inspecting areas of Los Alamos National Laboratory (LANL) covered by the permit. This includes areas where industrial materials or activities are exposed to stormwater, areas identified as potential pollutant sources, areas were leaks and spills have occurred in the past three years, discharge points, and control measures used to comply with the effluent limits of the MSGP.

Los Alamos National Security, LLC (LANS) inspectors and facility personnel are required to perform routine facility inspections for industrial stormwater discharge on LANL areas covered by the MSGP at least quarterly and document observations. Conditions (as described by the MSGP) found during an inspection, requiring a corrective action(s), are managed through EPC-CP-QP-022, *MSGP Corrective Actions*.

1.1 Purpose

Parts 3.1 and 3.1.2 of the MSGP contain specific requirements for conducting and documenting periodic industrial routine facility inspections. This procedure governs the activities of LANS personnel involved in conducting industrial routine facility inspections. It also contains information and specific steps to be used for identifying and documenting conditions in order to meet the permit requirements.

1.2 Scope

Requirements set forth in this document apply to LANS personnel responsible for meeting the permit conditions on behalf of LANL industrial facilities covered by the MSGP. The MSGP requires periodic inspection of facilities and identification, documentation, and reporting of conditions, including those requiring corrective actions.

Inspections conducted under this procedure are documented using the Maintenance Connection Express™ (MC Express) web application on a tablet or notebook style computer. (In the event of electronic hardware or web application failure, personnel may use a printed hard copy to conduct the inspection.)

1.3 Applicability

This procedure applies to Environmental Protection and Compliance-Compliance Programs (EPC-CP) technical staff, Deployed Environmental Professionals (DEPs), and subcontractor personnel (as applicable) who conduct inspections and monitoring activities at MSGP regulated LANL facilities.

2.0 ROLES AND RESPONSIBILITIES

Specific roles and responsibilities for implementation of requirements contained in the MSGP are provided below.

2.1 EPC-CP MSGP Stormwater Team

EPC-CP MSGP Stormwater personnel are fully knowledgeable of the specific regulatory requirements identified in the MSGP and are responsible for the following:

- Implementing this procedure;
- Performing routine facility inspections the last month or quarter of the year at regulated sites [depending on inspection frequency identified in site-specific Stormwater Pollution Prevention Plans (SWPPPs)];
- Performing “no exposure” site inspections once a year to ensure conditions of the “no exposure” exclusion are met;
- Performing routine facility inspections at inactive sites once a year;
- Identifying issues requiring a corrective action during any of the above inspections or assessments;
- Determining a condition of non-compliance;
- Notifying managers, or legal counsel of non-compliances;
- Modifying the site-specific MSGP Routine Facility Inspection Form to add new Best Management Practices (BMPs) or decommission retired ones;
- Training personnel to use MC Express;
- Performing a quality review of routine facility inspections and “no exposure” site inspections submitted in Maintenance Connection (MC); and
- Assisting customers with issues associated with MC Express.

2.2 Deployed Environmental Professionals

DEPs are responsible for the following.

- Implementing this procedure;
- Being educated (i.e., knowledgeable) of the requirements contained in site-specific SWPPPs within their assigned Facility Operations Directorate (FOD);
- Meeting qualification requirements identified in the Quality Assurance Project Plan EPC-CP-QAPP-MSGP, *Stormwater Multi-Sector General Permit for Industrial Activities Program*;
- Being trained on EPC-CP-QP-022, *Multi-Sector General Permit (MSGP) Corrective Actions;*
- Being trained on UTrain course number 53040, *MSGP Routine Inspections OJT*;
- Being familiar with industrial site and facility operations assigned to them so that they minimize sources of pollutants and pro-actively maintain controls to prevent issues that require corrective action;
- Performing routine facility inspections, either monthly or quarterly throughout the year at regulated sites within their FOD [depending on inspection frequency identified in site-

specific Stormwater Pollution Prevention Plans (SWPPPs)] and documenting results accurately;

- Acting as liaison between the FOD, Deployed Environment, Safety, and Health Services (DESHS) Manager and facility/operations personnel to ensure corrective actions are addressed appropriately by overseeing maintenance and/or installation of additional controls;
- Educating appropriate facility/operations personnel on the MSGP and site-specific SWPPPs so they successfully implement the conditions of the permit; and
- Notifying EPC-CP MSGP stormwater personnel when additional or substitute BMPs have been installed or old BMPs have been removed so the site-specific MSGP Routine Facility Inspection Form can be modified.

2.3 EPC-CP Stormwater Permitting and Compliance Team Leader

The EPC-CP Stormwater Permitting and Compliance Team Leader is responsible for compliance oversight relative to the MSGP. The Team Leader ensures adequate resources needed to implement the regulatory requirements identified in the MSGP are identified and environmental risks are assessed. The Team Leader will notify upper management of these required resources or environmental risks, as deemed necessary. In the event there is a dispute regarding the regulatory requirements contained in the MSGP, the Team Leader makes the final determination of the required action. The Team Leader notifies upper management of instances of non-compliance with the permit.

2.4 EPC-CP Group Leader

The EPC-CP Group Leader or designee is responsible for ensuring there are adequate resources to implement the regulatory requirements identified in the MSGP. The Group Leader or Team Lead also acts as the duly authorized signatory that certifies the Annual Report, MSGP Routine Facility Inspections, or “no exposure” site inspections conducted by EPC-CP personnel. The Group Leader notifies upper management of instances of non-compliance with the permit or other identified environmental risk.

2.5 DESHS Manager

The DESHS manager works with programmatic entities and the FOD to identify adequate resources for their industrial facilities to ensure permit requirements can be implemented. The DESHS Manager is responsible for the performance of DEPs under their management and to maintain trained and qualified DEPs. They also provide oversight by ensuring that industrial facilities complying with the MSGP and will notify upper management of instances of non-compliance with the permit or other identified environmental risk.

3.0 PRECAUTIONS AND LIMITATIONS

The hazard rating for the activities described in this procedure is **LOW** and therefore, does not require an IWD.

Field 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, or LANL operations such as firing shots or burns).

4.0 PREREQUISITE ACTIONS

4.1 Planning and Coordination

1. Schedule work to be completed by the target date appearing on the inspection or as requested by the MSGP program lead if an inspection is not issued.
2. Inform (e.g., by e-mail) facility contacts (as needed) of the schedule for facility 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 (as necessary).
3. Obtain any necessary additional paperwork before conducting this work, including SWPPPs and maps (as necessary).

4.2 Tools and Equipment

Ensure the following equipment is available.

- Sturdy hiking boots or steel toed shoes with soles that grip and other facility specific PPE as needed
- Cell phone (Only government cell phones are allowed in secure areas. See https://int.lanl.gov/policy/documents/P217.pdf for requirements for using portable electronic devices on Laboratory property.)
- Copy of this procedure
- Copy of facility specific SWPPP and map(s) (as needed)
- Current electronic or paper inspection form EPC-CP-Form-1020, *MSGP Routine Facility Inspection*
- LANS issued tablet or notebook style computer with Safari web browser and Blackberry UEM™ app (see https://int.lanl.gov/policy/documents/P217.pdf for requirements for using portable electronic devices on Laboratory property)
- Necessary access keys

5.0 MSGP ROUTINE FACILITY INSPECTIONS

MSGP routine facility inspections are conducted by the DEP or other qualified facility personnel (as defined in the MSGP or as determined by MSGP program lead) during periods when the facility is in operation and during standard operating hours. The inspections are performed on the following facility areas:

- Areas where industrial materials or activities are exposed to stormwater;

- Areas identified in the SWPPP and those that are potential pollutant sources;
- Areas where spills and leaks have occurred in the past;
- Discharge points; and
- Control measures used to comply with the effluent limits contained in the MSGP.

Routine facility inspections are conducted at least quarterly; however, some facilities may conduct monthly inspections (as specified in the facility specific SWPPP). At least once each calendar year, the routine facility inspections must be conducted during a period when stormwater discharge (either rain or snow) is occurring. During the inspection you must look 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; and
- Control measures need replacement, maintenance or repair.

Conditions requiring corrective action identified during an inspection, monitoring, or other means must be entered into the MSGP Corrective Action Report database by the DEP(s), EPC-CP stormwater personnel and/or other qualified facility personnel (as defined in the MSGP or as determined by MSGP program lead). Follow the process in EPC-CP-QP-022, *MSGP Corrective Actions* to address issues found during an inspection.

If the industrial facility is inactive and unstaffed and there are no industrial materials or activities exposed to stormwater, routine inspections may not be required. A determination of whether a facility is inactive or unstaffed is made in coordination with stormwater personnel from EPC-CP as there are specific documentation and certification requirements that have to be met prior to discontinuing routine inspections. Such a facility is only required to conduct an annual site inspection.

If the industrial facility is eligible for a "no exposure" exclusion routine inspections are no longer required. A condition of "no exposure" exists when all industrial materials and activities are protected by a storm resistant shelter (e.g., moved to an indoor location) to prevent exposure to rain, snow, snowmelt, and/or runoff. A determination of whether a facility is eligible for "no exposure" status is made in coordination with stormwater personnel from EPC-CP as there are specific documentation and certification requirements that have to be met prior to discontinuing routine inspections. Such a facility is only required to conduct an annual site evaluation and recertification every five years.

5.1 Conducting the Inspection

See Attachment 1 for screen shot examples of EPC-CP-Form-1020, *MSGP Routine Facility Inspection* in MC Express. See Attachment 2 for a crosswalk of the inspection form in hard copy format.

Some terminology varies between the MC Express software and the Maintenance Connection desktop software. The "Complete" option in MC Express is the same as a "Yes" answer; the "Failed" option in MC Express is the same as a "No" answer. Maintenance Connection desktop and hard copy (printed) work orders use "Yes" and "No" terminology.

If the inspector needs space, additional comments can be entered in the "Labor Report" field (see Section 5.2) when the work order is updated to "Complete" status in MC Express. If completing a hard copy enter additional comments in the "Labor Report" field at the bottom of the form.

1. Use the Internet Explorer web browser on a tablet or similar portable computer and navigate to http://express.maintenanceconnection.com. Log into the MC Express application using your login credentials.
2. Open the inspection form for the location to be inspected and select "Tasks" to navigate to the Tasks page.

   Note: Each item number listed in red font below corresponds to a numbered box on both screen shots (Attachment 1) and hard copy format (Attachment 2).
3. Item 1: Observe the weather at time of inspection. Describe the weather and record the temperature in the "Comments" field. Document this task is or is not completed by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes".

   CAUTION
   Click the "Save" bar after entries for a task line have been completed and before proceeding to the next question. Failure to "Save" results in lost data entries.
4. Item 2: Observe and document the facility is free of **new** discharges of pollutants **since the last inspection** by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe any new discharges and the specific location in the "Comments" field of the task line.
5. Item 3: If the response to Item 2 is "Complete" click the expand arrow located on the right side of this task line and change the "N/A" line to "Yes". If the response to Item 2 is "Failed" document any CAR previously initiated for the discharge by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes".
6. Item 4: Observe and document the facility is free of discharges of pollutants at the time of inspection by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe any pollutant discharge and the specific location in the "Comments" field of the task line.

7. Item 5: Observe and document the facility is free of evidence of pollutants entering the drainage system OR the potential for pollutants entering the drainage system by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe any discharge or potential discharge and the specific location in the "Comments" field of the task line.

8. Item 6: Observe and document the outfall does not have any **new** evidence of erosion **since the last inspection** by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe any erosion observed in the "Comments" field of the task line.

9. Item 7: Observe and document all flow dissipation devices are operating effectively and are not in need of repair by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe any non-functional status of devices in the "Comments" field of the task line.

10. Item 8: Observe and document the outfall is free of evidence of pollutants in the discharge and/or the receiving water by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe any pollutants observed in the "Comments" field of the task line.

11. If the location has more than one outfall, complete Steps 8 through 10 for each outfall shown on the work order.

12. Item 9: Observe and document each control measure is operating effectively by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe any non-operational condition of the control measure (e.g., erosion, damage, etc.) and if the control measure needs maintenance, repair, or replacement in the "Comments" field of the task line.

13. If the location has more than one control measure complete Step 12 for each control measure shown on the work order.

14. Item 10: Observe and document each sector of NPDES specified industrial area/activity (e.g., metal fabrication; foundry operations; power generation; asphalt production; fabricating timber products; material recycling; warehouse and transportation activity; treatment and storage of hazardous waste) is inspected for exposure to stormwater by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes".

    Determine if the control measures associated with each industrial area/activity are appropriate for the activity, effectively controlling stormwater exposure, and operating. Describe any non-operational condition of the control(s) and needed maintenance or a description of corrective actions in the "Comments" field of the task line.

15. If the facility has more than one sector of NPDES specified industrial area/activity complete Step 14 for each industrial area/activity shown on the work order. If an industrial activity does not apply to the facility click the expand arrow located on the right side of the task line and change the "N/A" line to "Yes".

16. Item 11: Observe and document the facility is free of discharges of any non-compliance not documented elsewhere on the inspection form by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe any additional incidences of non-compliance in the "Comments" field of the task line.
17. Item 12: Observe and document the facility meets the MSGP requirements with existing control measures by clicking the expand arrow located on the right side of the task line and changing the "Complete" to "Yes". If additional control measures are needed to comply with the Permit, clicking the expand arrow located on the right side of the task line and changing the "Failed" to "Yes" and describe the control measures in the "Comments" field of the task line.
18. When all task lines have been completed, make sure you have clicked the "Save" bar at the bottom of the page.
19. Click the "Back" arrow button in the upper left hand corner to exit the work order Tasks page and return to the Work Order Summary page.

    Always log out of MC Express when you have finished work OR if work is interrupted.

5.2 Completing the Inspection Form in MC Express

See Attachment 1 for screen shot examples of EPC-CP-Form-1020, *MSGP Routine Facility Inspection* in MC Express.

1. Click the checkered flag in the upper right corner of the work order Summary page.

CAUTION
MC Express automatically changes the work order status to "Closed" and auto-populates the date and time fields.

2. Item 13: Click on the expand arrow located on the right side of the "New Status" field and select "Completed" from the available dropdown menu. Ensure the date and time auto-populated are the date and time the on-site **field inspection was completed** (not the date/time the form was filled out).

   If these fields need to be updated, click the "Date" field to modify it. Make necessary adjustments using the available timestamp application and click "Set" to apply changes.
3. Item 14: The inspector types in his/her name in the "Labor Report Update" field.

   Any additional notes, observations, or site conditions not documented in a task line "Reading" or "Comments" field can be documented in the "Labor Report Update" section.
4. Scroll down the page to the "Signature" bar and click the expand arrow on the left side of the bar to open the "Signature" field.
5. Item 15: Capture an electronic signature by drawing with a finger on the tablet screen. The field inspector is certifying that the information submitted is "true, accurate, and complete" by electronically signing work order.

Note: If using MC Express on a desktop screen (not a tablet), the mouse is used to draw a signature.

6. Click on the "Save" bar at the bottom of the page to close the "Signature" field.
7. Click on the "Back" button located in the upper left hand corner to return to the "My Open Work Orders" page.
8. Once you have completed an inspection, click on the Menu button again, and then click the "Logout" bar. Close the browser. All work will be automatically uploaded from the MC Express application to the MC database.

Always log out of MC Express when you have finished work OR if work is interrupted.

5.3 Completing the Inspection Form on Hardcopy

See Attachment 2 for a crosswalk of EPC-CP-Form-1020, *MSGP Routine Facility Inspection* to hard copy format.

1. Item 13: Write in the date and time the **inspection was completed** and ***not* the date/time the form was filled out**. If an inspection needs to be performed over multiple days, note the date and time the inspection began in the Labor Report field.
2. Item 14: The field inspector prints his/her name.
3. Item 15: The field inspector reviews the inspection form for accuracy and certify that the information submitted is "true, accurate, and complete" by signing his/her name and dating when the form was signed.

5.4 Completing the Certification Statement

Follow Steps 1 through 5 in this section if the inspection form was completed electronically (see Attachment 1). If the inspection form was completed on a hard copy form skip to Step 6.

1. Using the Internet Explorer web browser on a desktop computer, navigate to http://www.maintenanceconnection.com. Log into the MainConn desktop application using your login credentials.
2. Click "Open" in the tool bar at the top of the page to open the MainConn module selections. Click on the "Work Orders" module.
3. Click on the "Search" tab at the top left of the page and enter the work order number in the "Search Value" field. Click the arrow to the right of the "Search Value" field to open the work order in the right split screen.
4. Click on the "Report" tab at the top of the page and click the "Work Order Statement" sub-tab.
5. Click the Tools drop down menu  in the top right corner of the page and select "Print" from the options. The print dialog box will open. Select the print options as appropriate for your local printer.

6. Item 16: Obtain a printed name and title, signature, and date on the certification statement. The routine facility inspection form must be certified with a signature from a manager that meets the definition of a signatory in MSGP Permit Section B.11.A (e.g., FOD, Operations Manager, DSESH Group Leader, EPC-CP Group Leader, EPC-CP Team Lead). The manager is certifying the information submitted is "true, accurate, and complete" by signing the form.
7. Attach the completed, signed, and certified inspection form to the facility SWPPP.

6.0 TRAINING

The following personnel require training before implementing this procedure.

- DESHS Group and Team Leaders
- EPC-CP MSGP stormwater compliance personnel
- DEPs
- Other LANL or subcontract personnel identified as being required to conduct stormwater assessments as part of their job duties

For EPC-CP staff, the training method for this procedure is "self-study" (reading). Other participating groups may require training documentation pursuant to local procedures.

Personnel performing this procedure will be familiar with the most current versions of the following procedures.

- EPC-CP QAPP-MSGP *Quality Assurance Project Plan for the Stormwater Multi-Sector General Permit for Industrial Activities*
- EPC-CP-QP-022, *Multi-Sector General Permit (MSGP) Corrective Actions*
- Training Course 53040, *MSGP Routine Inspections OJT*

7.0 RECORDS

MSGP Routine Facility Inspection forms are signed and certified by individual facilities. These completed forms are maintained in the facility's SWPPP and managed by the facility's document management system. The MSGP team may obtain a copy for reference purposes.

8.0 DEFINITIONS AND ACRONYMS

See LANL *Definition of Terms*.

8.1 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.

8.2 Acronyms

See LANL Acronym Master List.

EPC-CP	Environmental Protection and Compliance – Compliance Programs
DEP	Deployed Environmental Professional
DESHS	Deployed Environment, Safety, and Health Services
IWD	Integrated Work Document
FOD	Facility Operations Director
LANL	Los Alamos National Laboratory
LANS	Los Alamos National Security, LLC
MC	Maintenance Connection
MC Express	Maintenance Connection Express
MSGP	Multi-Sector General Permit
NPDES	National Pollutant Discharge Elimination System
SWPPP	Stormwater Pollution Prevention Plan

9.0 REFERENCES

Federal Register, Final National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Industrial Activities. Federal Register: June 16, 2015, Volume 80, Number 115.

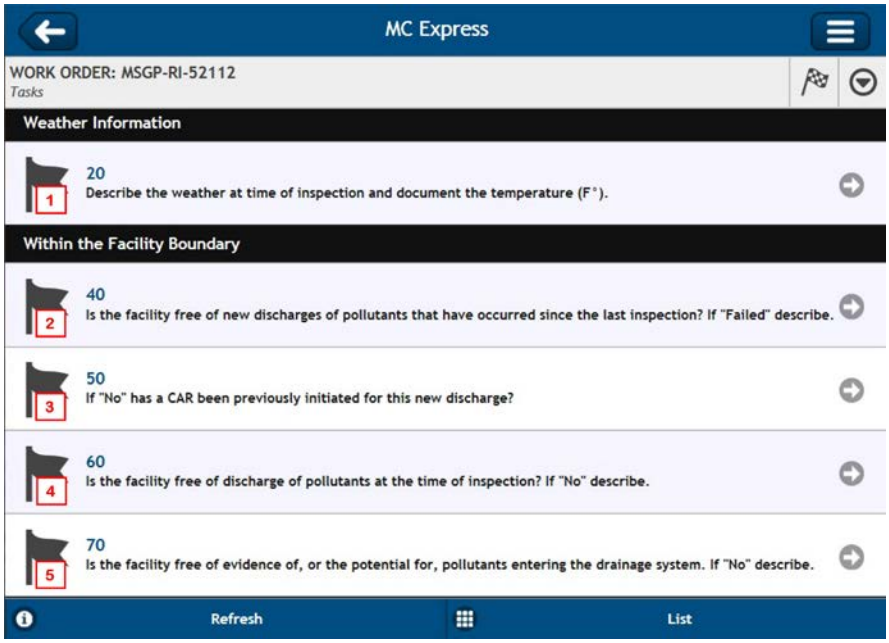
10.0 ATTACHMENTS

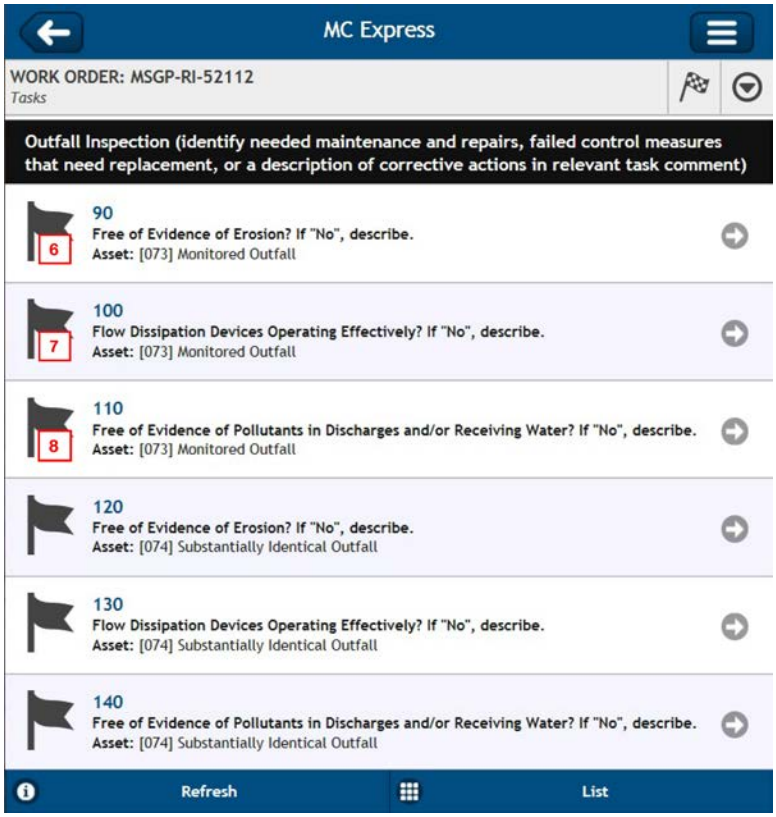
Attachment 1: *Screenshot Example of EPC-CP-Form-1020, MSGP Routine Facility Inspection in MC Express*

Attachment 2: *Crosswalk of EPC-CP-Form-1020, MSGP Routine Facility Inspection to Hard Copy Format*

ATTACHMENT 1: SCREENSHOT EXAMPLE OF EPC-CP-FORM-1020, *MSGP ROUTINE FACILITY INSPECTION* IN MC EXPRESS

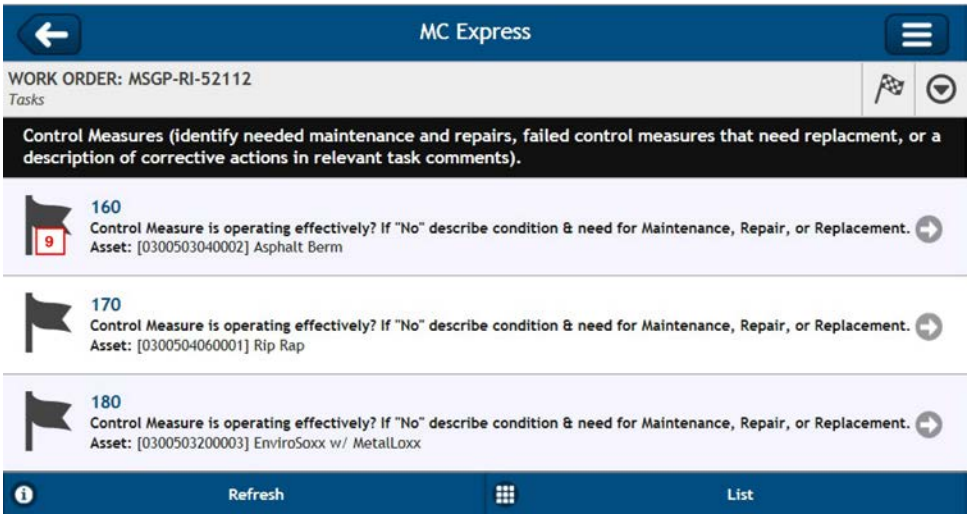
Page 1 of 3

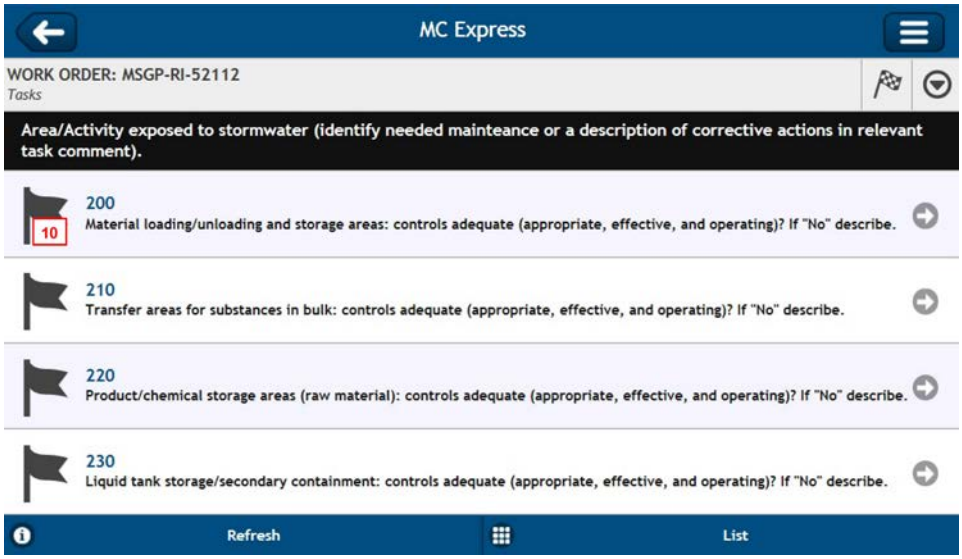


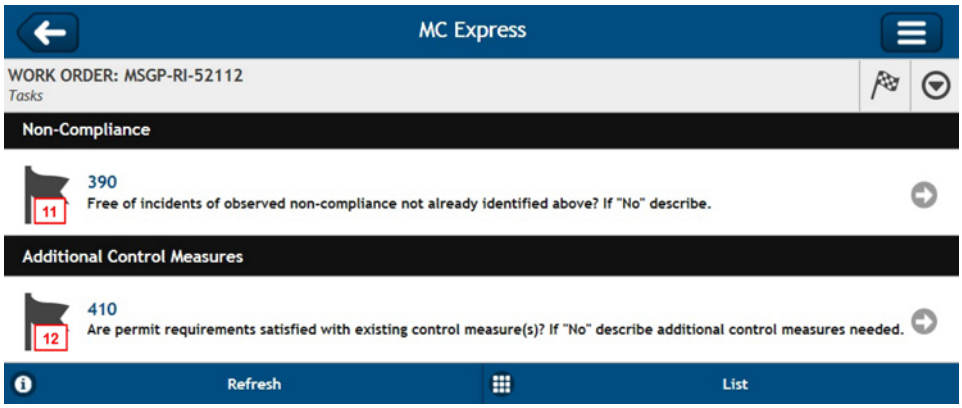


ATTACHMENT 1: SCREENSHOT EXAMPLE OF EPC-CP-FORM-1020, *MSGP ROUTINE FACILITY INSPECTION* IN MC EXPRESS (CONT.)

Page 2 of 3

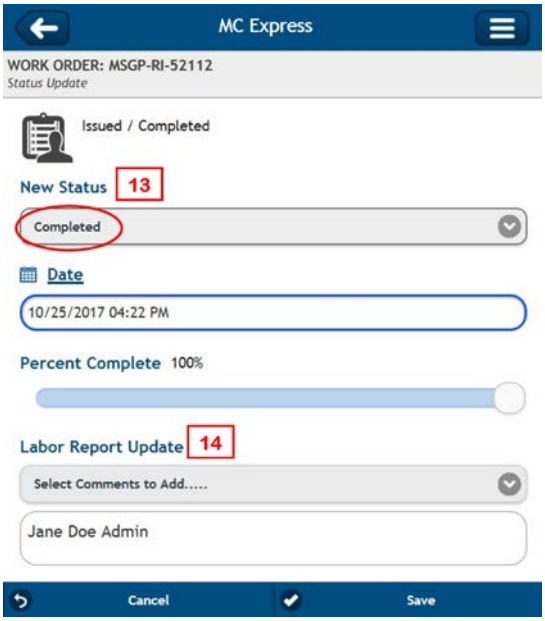






ATTACHMENT 1: SCREENSHOT EXAMPLE OF EPC-CP-FORM-1020, *MSGP ROUTINE FACILITY INSPECTION* IN MC EXPRESS (CONT.)

Page 3 of 3



ATTACHMENT 2: CROSSWALK OF EPC-CP-FORM-1020, *MSGP ROUTINE FACILITY INSPECTION* TO HARD COPY FORMAT

Los Alamos National Lab - ADESH

Work Order MSGP-RI-52112
MSGP Routine Inspection
Printed 10/25/2017 - 4:07 PM (Duplicate Copy)

Maintenance Details

Requested By: Admin, Jane on 10/25/2017 4:03:00 PM
Taken By: Admin, Jane
Procedure: MSGP Routine Facility Inspection (EPC-CP-Form-1020.1)
Target: 12/31/2020
Priority/T ype: / Inspection
Department: Utilities and Infrastructure
MSGP Program
RG121.9
TA-3-38 Carpenter Shop
Contact: Admin, Jane
Phone: 665-1234
Last PM: N/A
Reason: EXAMPLE MSGP Routine Facility Inspection
Special Instructions: NMR053195

Tasks

	#	Description	Meas.	No	N/A	Yes
		Weather Information				
1	20	Describe the weather at time of inspection and document the temperature (F°).		☐	☐	☐
		Within the Facility Boundary				
2	40	Is the facility free of new discharges of pollutants that have occurred since the last inspection? If "Failed" describe.		☐	☐	☐
3	50	If "No" has a CAR been previously initiated for this new discharge?		☐	☐	☐
4	60	Is the facility free of discharge of pollutants at the time of inspection? If "No" describe.		☐	☐	☐
5	70	Is the facility free of evidence of, or the potential for, pollutants entering the drainage system. If "No" describe.		☐	☐	☐
		Outfall Inspection (identify needed maintenance and repairs, failed control measures that need replacement, or a description of corrective actions in relevant task comment)				
6	90	Monitored Outfall [073] Free of Evidence of Erosion? If "No", describe.		☐	☐	☐
7	100	Monitored Outfall [073] Flow Dissipation Devices Operating Effectively? If "No", describe.		☐	☐	☐
8	110	Monitored Outfall [073] Free of Evidence of Pollutants in Discharges and/or Receiving Water? If "No", describe.		☐	☐	☐
	120	Substantially Identical Outfall [074] Free of Evidence of Erosion? If "No", describe.		☐	☐	☐
	130	Substantially Identical Outfall [074] Flow Dissipation Devices Operating Effectively? If "No", describe.		☐	☐	☐
	140	Substantially Identical Outfall [074] Free of Evidence of Pollutants in Discharges and/or Receiving Water? If "No", describe.		☐	☐	☐
		Control Measures (identify needed maintenance and repairs, failed control measures that need replacment, or a description of corrective actions in relevant task comments).				
9	160	Asphalt Berm [0300503040002] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☐
	170	Rip Rap [0300504060001] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☐
	180	EnviroSoxx w/ MetalLoxx [0300503200003] Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☐
		Area/Activity exposed to stormwater (identify needed mainteance or a description of corrective actions in relevant task comment).				
10	200	Material loading/unloading and storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
	210	Transfer areas for substances in bulk: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
	220	Product/chemical storage areas (raw material): controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐

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ATTACHMENT 2: CROSSWALK OF EPC-CP-FORM-1020, *MSGP ROUTINE FACILITY INSPECTION* TO HARD COPY FORMAT (CONT.)

230	Liquid tank storage/secondary containment: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
240	Industrial processing and finished product storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
250	Equipment operation and maintenance areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
260	Fueling areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
270	Outdoor vehicle and equipment washing areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
280	Machinery: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
290	Waste handling and disposal areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
300	Erodible areas/construction: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
310	Locations and sources of run-on to the site: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
320	Non-stormwater/illicit connections: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
330	Salt storage piles or pile containing salt: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
340	Dust generation and vehicle tracking: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
350	Housekeeping (Industrial materials/residues/trash in contact with stormwater): controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
360	Leaks and spills: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
370	Sector A [03005-] Wood processing, transport or treated wood storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
	Non-Compliance				
11 390	Free of incidents of observed non-compliance not already identified above? If "No" describe.		☐	☐	☐
	Additional Control Measures				
12 410	Are permit requirements satisfied with existing control measure(s)? If "No" describe additional control measures needed.		☐	☐	☐

Labor Report

13 Completed: 10/25/2017 10:08:00 AM

14 Report: Jane Doe Admin

15

Signature / Name	Date	Signature / Name	Date
Jane D Admin	10/25/2017		

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

EPC-CP-Form-1020.1 03/2018

ATTACHMENT 2: CROSSWALK OF EPC-CP-FORM-1020, *MSGP ROUTINE FACILITY INSPECTION* TO HARD COPY FORMAT (CONT.)

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

(Signatory must meet definition in Section B.11.A, eg., FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

16 Print name and title:_____

Signature:_____Date:_____

ATTACHMENT 17: EPC-CP-QP-022 MSGP CORRECTIVE ACTIONS

ENV-RCRA-QP-022.2	
Effective Date: February 28, 2013	Next Review Date: January 28, 2015

Environment, Safety, Health Directorate

Environmental Protection – Water Quality and RCRA Quality Procedure

MSGP Storm Water Corrective Actions

Reviewers:

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

Derivative Classifier: ☒ **Unclassified**

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

Approval Signatures:

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

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.

Table of Contents

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:**_____

ATTACHMENT 18: EPC-CP-QP-064 MSGP STORMWATER VISUAL ASSESSMENTS

EPC-CP-QP-064	Revision: 0	
Effective Date: 10/04/2017	Next Review Date: 10/04/2020	

Environment, Safety, and Health Directorate

Environmental Protection and Compliance-Compliance Programs

Quality Procedure

MSGP Stormwater Visual Assessments

Document Owner:

Name:	Organization:	Signature:	Date:
Holly L. Wheeler	EPC-CP	Signature on File	10-2-17

Derivative Classifier: ☐ **Unclassified or** ☒ **DUSA ENVPRO**

Name:	Organization:	Signature:	Date:
Ellena I. Martinez	EPC-CP	Signature on File	10-2-17

Approval Signatures:

Subject Matter Expert:	Organization:	Signature:	Date:
Holly L. Wheeler	EPC-CP	Signature on File	10-2-17
Responsible Line Manager:	Organization:	Signature:	Date:
Terrill W. Lemke	EPC-CP Team Leader	Signature on File	10-4-17
Responsible Line Manager:	Organization:	Signature:	Date:
Michael T. Saladen	EPC-CP Acting Group Leader	Signature on File	10-4-17

REVISION HISTORY

Document Number and Revision *[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]*
ENV-RCRA-QP-064, R0	7/09	New document *MSGP Storm Water Visual Inspection*s.
ENV-RCRA -QP-064, R1	3/10	Clarifications and added attachments.
ENV-RCRA -QP-064, R2	2/12	Biennial review/revision
EPC-CP-QP-064, R0	10/04/2017	This document replaces ENV-RCRA-QP-064 R2. Converted into new format, and new organization name, clarified steps, updated attachments.

Table of Contents

1.0 INTRODUCTION

Los Alamos National Security, LLC (LANS) through Environmental Protection and Compliance-Compliance Programs (EPC-CP) conducts stormwater monitoring activities required pursuant to the National Pollutant Discharge Elimination System (NPDES), Multi-Sector General Permit (MSGP) at Los Alamos National Laboratory (LANL). The MSGP requires LANL to monitor stormwater runoff from industrial sites relative to potential pollutants.

1.1 Purpose

This procedure describes the process for conducting visual assessments of stormwater from outfall locations monitored under the MSGP for industrial facilities at LANL.

Assessments conducted under this procedure should be documented using the Maintenance Connection Express™ (MC Express) web application. (In the event of electronic hardware or web application failure, personnel may use a printed hard copy to conduct inspection and sample retrieval.)

1.2 Scope

Requirements set forth in this document apply to Los Alamos National Laboratory industrial facilities covered by the MSGP. These facilities include, a warehouse, several metal fabrication areas/shops, a heavy equipment yard, an asphalt batch plant, roads and grounds, a foundry, a power plant, a material recycling facility, a carpenter shop, and several hazardous waste treatment, storage or disposal (TSD) facilities. Inspection waivers may be granted by EPC-CP for adverse weather conditions and unstaffed or inactive sites.

At least once each MSGP monitoring quarter a stormwater sample must be collected from each discharge point covered by the MSGP and site specific SWPPP and visually inspected for water quality characteristics. Stormwater samples can be collected with an automated sampler, single stage sampler, or by taking a grab sample.

1.3 Applicability

This procedure applies to the EPC-CP technical staff and subcontractor personnel (as applicable) who conduct stormwater visual assessments during or after measurable storm events at MSGP outfalls.

Note: *A measurable storm event is identified as one what results in an actual discharge from your site that follows the preceding measurable storm event by at least 72 hours (3 days)*.

2.0 PRECAUTIONS AND LIMITATIONS

Hazards in the work described in this procedure are controlled through site specific Integrated Work Documents (IWDs). The hazard level for the activities described in this procedure is **low**, however the cumulative hazard rating for activities described in the IWD is **moderate**.

Assessments may be discontinued during periods or conditions that make sites dangerous for worker safety or prevent personnel from safely accessing sites (e.g., weather-related events such as flash floods, flooding, lightning, wildfires, hail, icy roads, deep snow, or LANL operations such as firing shots or burns).

Click the "Save" bar after all entries for a task line have been completed and before proceeding to the next question. Failure to "Save" results in lost data entries.

Some terminology varies between the MC Express software and the Maintenance Connection desktop software.

- The "Reading" field in MC Express is the same field as "Reading Final" in Maintenance Connection desktop and "Meas." on a hard copy (printed) work order.
- The "Complete" option in MC Express is the same as a "Yes" answer; the "Failed" option in MC Express is the same as a "No" answer. Maintenance Connection desktop and hard copy (printed) work orders use "Yes" and "No" terminology.

Throughout this procedure the field inspector should document comments and notations in the "Reading" field of the associated task line. Any additional comments not documented in a "Reading" field can be entered in the "Comments" field of the same task line. If the inspector needs more space, additional comments can be entered in the "Labor Report Update" field (see Section 4.3) when the work order is updated to "Complete" status.

3.0 PREREQUISITE ACTIONS

3.1 Planning and Coordination

1. Schedule work to be completed by the target date appearing on the work order(s) or as requested by the MSGP Program Lead if a form is not issued.
2. Inform (e.g., by e-mail) Facility contacts, as specified in the IWD, of the schedule for inspection work and locations up to a week (preferred) before but no later than the day before (for minor changes) to be added to the appropriate plan of the day.

   Note: For some Facility Operations Divisions (FODs) like the Utilities and Institutional Facilities FOD, MSGP stormwater monitoring activities are on a standing plan of the day. However, this must be requested each year at the beginning of the monitoring season.
3. The IWD Part II (2101 Form) addresses specific requirements and training for FODs.
4. Obtain any necessary additional paperwork before conducting this work, including IWD's, and excavation permits (as necessary).
5. Gather the required equipment (see section below) for the work to be done.
6. Using the Safari web browser on a tablet or notebook style computer, navigate to http://express.maintenanceconnection.com and select English from the available dropdown menu.

7. Log into the MC Express application using your login credentials. Contact the MSGP Data Management Team if MC Express generates any message stating the field inspector does not have access.
8. Confirm that the work order list displayed in the "My Open Work Orders" section matches your sites. If work orders are not displayed, click the "Refresh" bar at the bottom of the page. The page will refresh and any work orders issued since you logged in will be loaded to the application. If the work order lists still do not match, contact the MSGP Data Management Team for clarification.
9. Ensure that field personnel have access to accurate time measurement at the Site. When at the site, the clock time on the ISCO sampler must be set to Mountain Standard Time at all times, with no daylight saving time adjustment.

3.2 Tools and Equipment

Ensure the following equipment is available in the field vehicle:

- Safety glasses with side shields
- Nitrile gloves
- Sturdy hiking boots or steel toed shoes with soles that grip
- Cell phone (only government cell phones with batteries removed are allowed in secure areas)
- Copy of this procedure
- Copy of the Integrated Work Documents (IWDs)
- Copy of the MSGP Sampling and Analysis Plan
- Site Map(s) (as needed)
- Current electronic or paper inspection form EPC-CP-Form-1021, MSGP Stormwater Visual Assessments
- Necessary access and station keys
- Clean replacement sample bottles (clear glass or clear poly)
- Paper Towels

4.0 VISUAL ASSESSMENT OF STORMWATER

1. Take the sample bottle with water out of automated sampler or single stage jar off the ground, or fill a clear sample bottle with a grab sample and wipe off exterior.

   Note: If a grab sample is collected it shall be collected during daylight hours in a wide mouth clear glass bottle or plastic container within 30 minutes of discharge from a storm event.

2. In MC Express, open the work order issued for the current location by clicking on the appropriate line. If needed, use the expand arrow located on the right side of the display to expand the work order detail information. The work order will open in the display to the work order Summary page.

3. Click on the "Tasks" bar to navigate to the work order Tasks page. See MC Express screen shot example in Attachment 1 and a hard copy example in Attachment 2.

4.1 Documenting Sample Information

4. Item 1: Verify the monitoring period by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe the monitoring period (e.g., Apr-May, Jun-Jul, Aug-Sep, Oct-Nov).

   Note: If the discharge collected is from a rain event from the previous monitoring period but the visual assessment is made in the following monitoring period, document monitoring period on the inspection to correspond to the period in which the rain event took place.

CAUTION

Click the "Save" bar after all entries for a task line have been completed and before proceeding to the next question. Failure to "Save" results in lost data entries.

   Note: Any additional comments not documented in a "Reading" field can be entered in in the "Comments" field of the same task line. If the inspector needs more space additional comments can be entered in the "Labor Report Update" field.

5. Item 2: Verify the visual assessment is performed on an unfiltered sample and document by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". If the sample was filtered, conduct the visual assessment and document "Filtered sample".

6. Item 3: Verify the date and time stormwater discharge began and document by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes".

   Enter the date and time in the following date formats: MM/DD/YY, or MM-DD-YY. Time must be entered in 24-hr format.

   Note: If the discharge date/time is not available (e.g. precipitation report) when the visual is performed in the field, leave this Task Line incomplete and complete when the information is available.

7. Item 4: Verify the date and time the sample was collected and document by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes".

   Enter the date and time in the following date formats: MM/DD/YY, or MM-DD-YY. Time must be entered in 24-hr format.

Note: If the collection date/time is not available (e.g. precipitation report) when the visual is performed in the field, leave this Task Line incomplete and complete when the information is available.

8. Item 5: Verify the date and time stormwater was visually assessed and document by clicking on the right side of the task line and changing the "Complete" or "Failed" line to "Yes".

   Enter the date and time in the following date formats: MM/DD/YY, or MM-DD-YY. Time must be entered in 24-hr format.

9. Item 6: Verify the nature of the discharge and document by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe the discharge (e.g., rainfall or snowmelt) and the TOTAL amount of precipitation from the event.

   Note: If the total amount of precipitation is not available (e.g., precipitation report) when the visual is performed in the field, leave this Task Line incomplete and complete when the information is available.

10. Item 7: Verify the sample was collected in the first 30 minutes of discharge and document by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes. The field inspector will document the reason a sample could not be collected within the first 30 minutes.

4.2 Assessing Parameters

While conducting the visual examinations, personnel should constantly be attempting to relate any pollutant that is observed in the sample to a pollutant source on the site.

Note if there are any potential sources of pollutants on site. If yes, contact an MSGP representative of EPC-CP and document the following:

- Potential sources;
- Indicate if there are any BMPs on site and evaluate and note effectiveness; and
- If no BMPs, determine if installation could correct future pollutant migration.

11. Item 8: Verify the color of the discharge in the sample container and document by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe the color.

12. Item 9: Verify any odors detected from sample and document by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe the odor (e.g., musty, sewage, sulfur, sour, solvents, petroleum/gas, etc.).

13. Item 10: Verify the clarity of the discharge and document by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe the clarity (e.g., slightly cloudy, cloudy, opaque).

    Clarity can be described as the depth in which you can look into or through water. For example an individual can see through a clear glass of clean water in daylight. Generally the clarity of the water is a good visual indicator of the purity of water. If the water is poor in clarity there is most likely suspended solids throughout the water.

14. Item 11: Verify any floating solids and document by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Careful examination should determine whether the solids are raw materials (e.g., product used to fabricate something, or ingredients used in a formulation) or waste materials (e.g., shavings, woodchips and sawdust, trash). Describe any floating solids observed.

15. Item 12: Verify any settled solids in the sample and document by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe any settled solids observed (e.g., fine, course).

    Settled solids may be an indicator of unstable ground cover combined with a high intensity stormwater runoff event.

16. Item 13: Verify any suspended solids in the sample and document by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe any settled solids observed (e.g., fine, course).

    Most often suspended solids include fine sediment. This may be an indication of an unstable channel that may have eroding banks. Some water appears to be colored because of relatively coarse particulate material in suspension such as sediment.

17. Item 14: Verify the sample is free of foam and document by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Gently shake the sample container. Describe any bubbles in or on the surface of the water and the color of the foam.

CAUTION

Contact the EPC-CP Project Leader for MSGP **immediately if it is determined that the foam is caused by a pollutant**. Follow-up action is required within 24 hours.

18. Item 15: Verify the sample is devoid of any oil sheen and document by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". If an oil sheen is present, describe the thickness and consistency (e.g., flecks, globs).

CAUTION

Contact the EPC-CP Project Leader for MSGP **immediately**. Then determine the nature of the discharge (rain, snow, hail), the source of the sheen and if existing BMPs are effective in mitigation of potential pollutants or if a new BMP needs to be installed. Follow-up action is required within 24 hours.

19. Item 16: Verify the discharge is free of any other indicators of stormwater pollution not described in any other task line above and document by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe any observations.
20. When all task lines have been completed, click the "Back" arrow button in the upper left hand corner to exit the work order Tasks page and return to the work order Summary page.

4.3 Completing the Assessment Form

1. Ensure the inspection form has been filled out completely including information not available during the field inspection (e.g., date/time of discharge, date/time of sample collection, total precipitation amount).
3. Click the checkered flag in the upper right corner of the work order Summary page. MC Express auto-populates the date and time fields.

CAUTION

MC Express automatically changes the work order status to "Closed."

4. Item 17: Click on the expand arrow located on the right side of the "New Status" field and select "Completed" from the available dropdown menu.

   Ensure the "Date" field has the date and time the **form was completed**. The completion date and time may be different from the date and time the visual assessment was performed if precipitation information was added to the form after the on-site field inspection.

   If these fields need to be updated, click the "Date" field to modify it. Make necessary adjustments using the available timestamp application and click "Set" to apply changes.

6. Item 18: The inspector must type in his/her name in the "Labor Report Update" field.

   Any additional notes, observations, or site conditions not documented in a task line "Reading" or "Comments" field can also be documented in the "Labor Report Update" field.

7. Scroll down the page to the "Signature" bar and click the expand arrow on the left side of the bar to open the "Signature" field.

8. Item 19: Capture an electronic signature by drawing with a finger on the tablet screen. The Lead Inspector is certifying that the information submitted is "true, accurate, and complete" by electronically signing the work order.

   Note: If using MC Express on a desktop screen (not a tablet), the mouse must be used to sign electronically.

9. Click on the "Save" bar at the bottom of the page to close the "Signature" field.
10. Click on the "Back" button located in the upper left hand corner to return to the "My Open Work Orders" page.
11. Once you have completed an inspection, click on the Menu button again, and then click the "Logout" bar. Close the browser. All work will automatically upload from the MC Express application to the MC database.

Always log out of MC Express when you have finished work OR if work is interupted.

4.4 Completing the Certification Statement

1. Using the Safari web browser on a desktop computer, navigate to http://www.maintenanceconnection.com. Log into the MainConn desktop application using your login credentials.
2. Click "Open" in the tool bar at the top of the page to open the MainConn module selections. Click on the "Work Orders" module (see Attachment 3).
3. Click on the "Search" tab at the top left of the page and enter the work order number in the "Search Value" field. Click the arrow to the right of the "Search Value" field to open the work order in the right split screen.
4. Click on the "Report" tab at the top of the page and click the "Work Order Statement" sub-tab.
5. Click the Tools drop down menu in the top right corner of the page and select "Print" from the options. The print dialog box will open. Select the print options as appropriate for your local printer.
6. Item 20: Obtain a printed name and title, signature, and date on the certification statement. The visual assessment form must be certified with a signature from a duly authorized representative of the facility as defined in Appendix B of the MSGP Permit, Section B.11.A (e.g., FOD, Operations Manager, DSESH Group Leader, EPC Group Leader). The duly authorized representative of the facility is certifying the information submitted is "true, accurate, and complete" by signing the form.

   EPC-CP will send out completed visual assessment forms at the end of each quarter that will contain a certification statement in the cover memorandum. The duly authorized signatory may sign and date this certification statement rather than the certification line associated with each attached form. However, the memorandum and associated completed forms must remain together.

7. Place the completed and signed visual assessment into the facility SWPPP.

5.0 EVIDENCE OF STORMWATER POLLUTION

If stormwater contamination is identified through visual assessment personnel should attempt to identify the pollutant source. Personnel should evaluate whether or not BMPs have already been implemented and evaluate whether or not these are working correctly or need maintenance. A design change could also be incorporated into the stormwater pollution prevention plan to eliminate or minimize the contaminant source from occurring in the future. Personnel should evaluate whether or not additional BMPs should be implemented in the pollution prevention plan to address the observed contaminant.

A clean up of the site should be conducted if the pollutant source is known and well defined. The FOD, ESH Manager, and MSGP representative of EPC-CP should also be contacted and made aware of the situation.

Corrective actions **MUST** be taken if BMPs are not performing effectively. Refer to EPC-CP-QP-022, *MSGP Stormwater Routine Facility Inspections and Corrective Actions*.

6.0 TRAINING

The following personnel require training before implementing this procedure:

- EPC-CP technical staff and subcontract or other personnel who retrieve stormwater samples and conduct visual assessments at automated or single stage stormwater samplers for the MSGP.

For EPC-CP staff the training method for this procedure is “self-study” (reading). Other participating groups may require training documentation pursuant to local procedures.

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

- EPC-CP MSGP Sampling and Analysis Plan for the current monitoring year

7.0 RECORDS

Records generated by this document and signed by the EPC-CP certifier will be submitted to the EPC-CP Records Management designated point of contact or document manager in accordance with P1020-1, *Laboratory Records Management* and with ADESH-AP-006, *Records Management Plan*.

- EPC-CP-Form-1021, *MSGP Quarterly Visual Assessment*

All other MSGP Quarterly Visual Assessment forms generated are forwarded to the duly authorized representative of each facility for submittal to that facility’s Records Management designated point of contact or document manager.

8.0 DEFINITIONS AND ACRONYMS

See LANL *Definition of Terms*.

8.1 Definitions

Adverse weather conditions – Weather that prohibits collection of samples such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc. Could also include drought, extended frozen conditions, etc.

Best Management Practices (BMPs) – Schedules of activities, practices, prohibitions of practices, structures, vegetation, maintenance procedures, and other management practices to prevent or reduce pollution. BMPs can also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Clarity – Clearness or cleanness of appearance. This includes the visual observation of suspended sediment.

Color – Unpolluted water will be clear and colorless. Color should not be confused with clarity.

Floating solids – Particulate material floating on the surface of the water. Examples include: raw or waste materials and common trash.

Foam – An accumulation of fine frothy bubbles formed in or on the surface of water. A mass of bubbles of air in a matrix of liquid film.

Odor – The property or quality of waters that affects or stimulates the sense of smell. Examples of odors that may be present are burnt oil, petroleum hydrocarbon, sewage, diesel, sulfuric, or detergent odors.

Oil sheen – The presence of rainbow-like colors glistening on the surface of a liquid. The color of oil sheen will vary dependent on thickness and consistency.

Settled solids – Settled particulate material i.e., heavier than water. Examples include sand, gravel, metal turnings, and glass.

Suspended solids – Particulate materials that are floating between the bottom of the sample and the surface of the water.

Unstaffed and Inactive Sites – A facility maintaining certification with the SWPPP that it is inactive and unstaffed and visual examinations are not required.

8.2 Acronyms

See LANL *Acronym Master List*.

EPC-CP	Environmental Protection and Compliance – Compliance Programs
IWD	Integrated Work Document
LANL	Los Alamos National Laboratory
LANS	Los Alamos National Security, LLC
MC Express	Maintenance Connection MC Express web application
MSGP	Multi-Sector General Permit

NPDES	National Pollutant Discharge Elimination System

9.0 REFERENCES

P1020-1, Laboratory Records Management

ADESH-AP-006, Records Management Plan

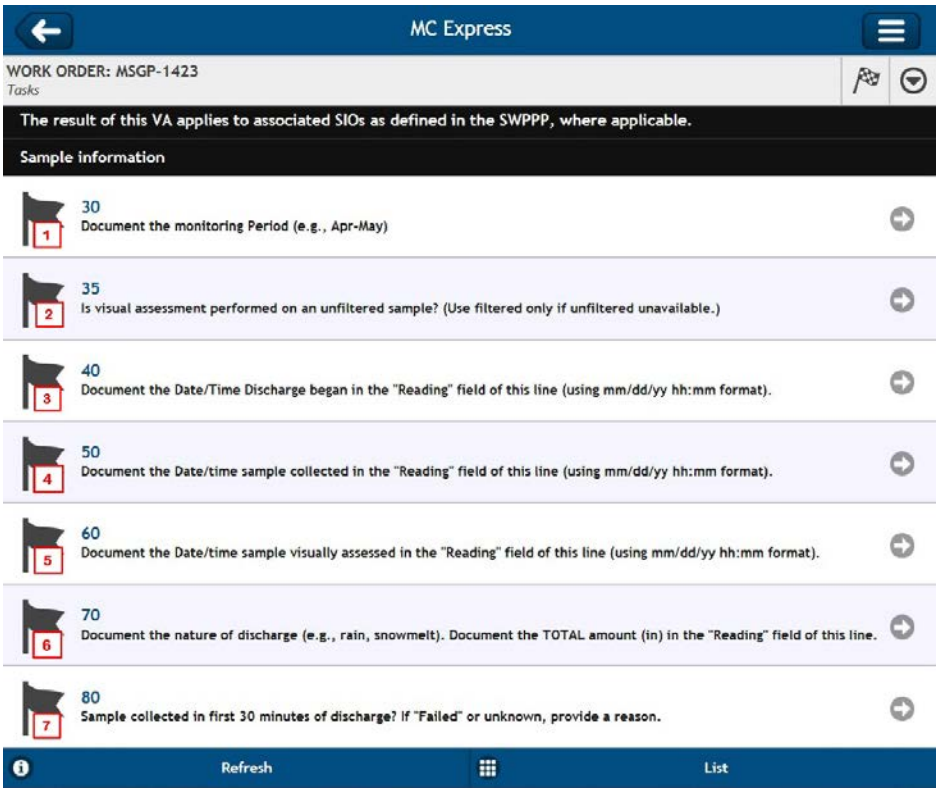
EPC-CP-QP-022, MSGP Stormwater Routine Facility Inspections and Corrective Actions

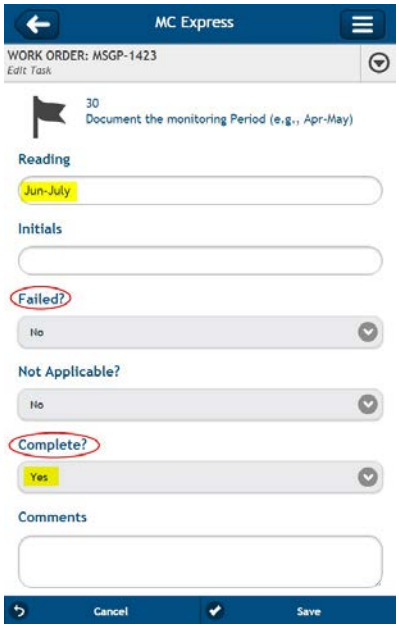
10.0 ATTACHMENTS

Attachment 1: *Screenshot Examples of EPC-CP-Form-1021 in MC Express*
Attachment 2: *Crosswalk of EPC-CP-Form-1021 Hard Copy Format to Electronic Format*
Attachment 3: *Screenshot Examples of Printing from Maintenance Connection*

Attachment 1: Screenshot Examples of EPC-CP-Form-1021 in MC Express

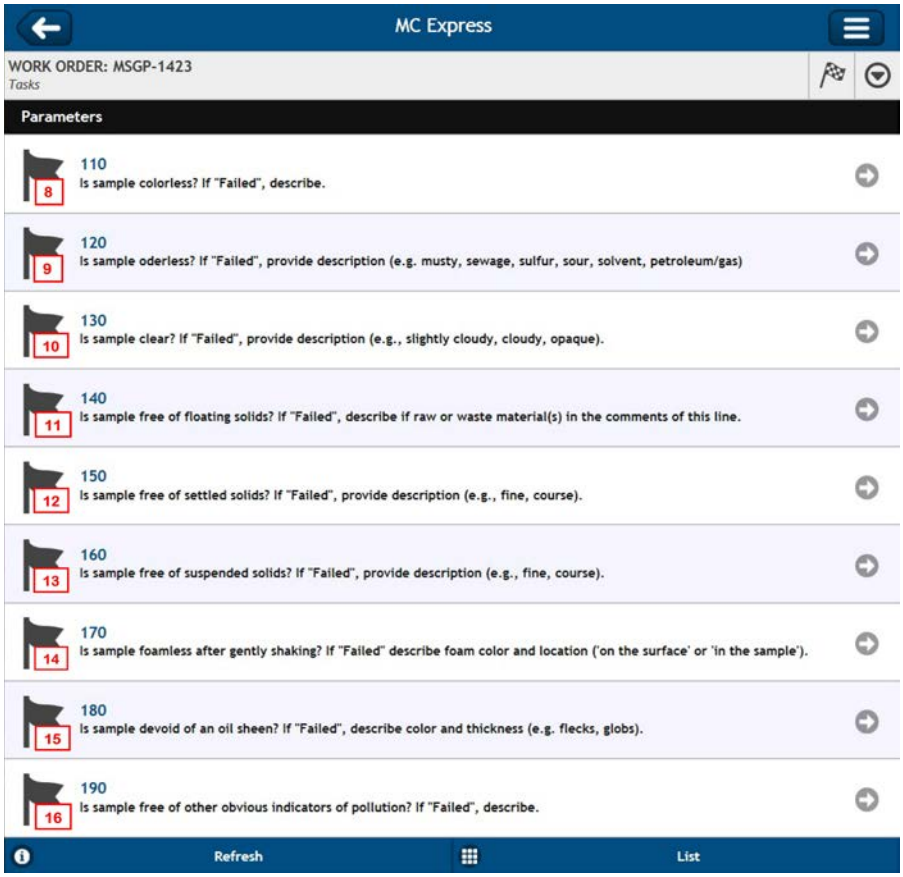
Page 1 of 3

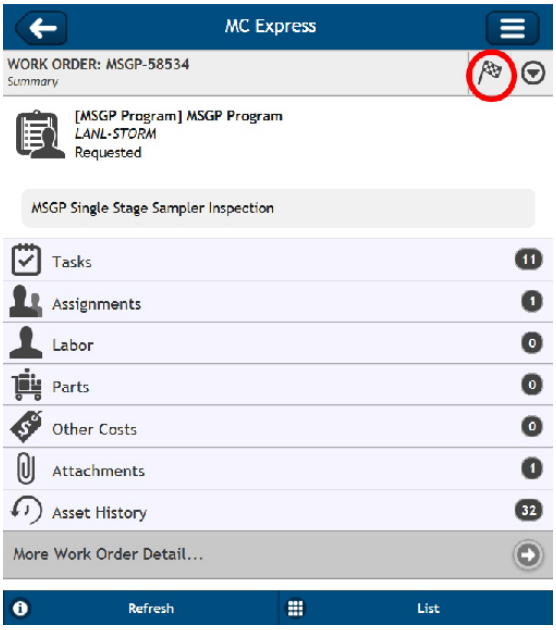




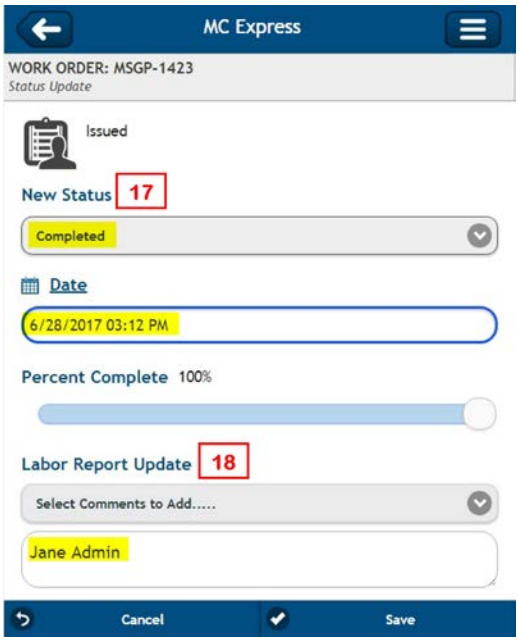
Attachment 1: Screenshot Examples of EPC-CP-Form-1021 in MC Express (cont.)

Page 2 of 3





Attachment 1: Screenshot Examples of EPC-CP-Form-1021 in MC Express (cont.)



Attachment 2: Crosswalk of EPC-CP-Form-1021 Hard Copy Format to Electronic Format

Los Alamos National Lab - ADESH

Work Order MSGP-1423

MSGP Monitoring Stations
Printed 7/12/2017 - 10:57 AM (Duplicate Copy)

Maintenance Details

Requested By: Admin, Jane on 7/11/2017 1:25:00 PM
Procedure: MSGP Quarterly Visual Assessment (EPC Sig) (EPC-CP-Form-1021.023)
Last PM: N/A
Reason: Hard Copy MSGP Visual Assessment Example

Target: 12/31/2017
Priority/Type: / Inspection
Department: Utilities and Infrastructure

MSGP Program
RG121.9
TA-3-38 Carpenter Shop
Monitored Outfall (073)
MSGP07302

Contact: Admin, Jane
Phone: 123-4567

Tasks

	#	Description	Meas.	No	N/A	Yes
		The result of this VA applies to associated SIOs as defined in the SWPPP, where applicable.				
		Sample information				
1	30	Document the monitoring Period (e.g., Apr-May)		☐	☐	☐
2	35	Is visual assessment performed on an unfiltered sample? (Use filtered only if unfiltered unavailable.)		☐	☐	☐
3	40	Document the Date/Time Discharge began in the "Reading" field of this line (using mm/dd/yy hh:mm format).		☐	☐	☐
4	50	Document the Date/time sample collected in the "Reading" field of this line (using mm/dd/yy hh:mm format).		☐	☐	☐
5	60	Document the Date/time sample visually assessed in the "Reading" field of this line (using mm/dd/yy hh:mm format).		☐	☐	☐
6	70	Document the nature of discharge (e.g., rain, snowmelt). Document the TOTAL amount (in) in the "Reading" field of this line.		☐	☐	☐
7	80	Sample collected in first 30 minutes of discharge? If "Failed" or unknown, provide a reason.		☐	☐	☐
		Parameters				
8	110	Is sample colorless? If "Failed", describe.		☐	☐	☐
9	120	Is sample oderless? If "Failed", provide description (e.g. musty, sewage, sulfur, sour, solvent, petroleum/gas)		☐	☐	☐
10	130	Is sample clear? If "Failed", provide description (e.g., slightly cloudy, cloudy, opaque).		☐	☐	☐
11	140	Is sample free of floating solids? If "Failed", describe if raw or waste material(s) in the comments of this line.		☐	☐	☐
12	150	Is sample free of settled solids? If "Failed", provide description (e.g., fine, course).		☐	☐	☐
13	160	Is sample free of suspended solids? If "Failed", provide description (e.g., fine, course).		☐	☐	☐
14	170	Is sample foamless after gently shaking? If "Failed" describe foam color and location (e.g.,'on the surface' or 'in the sample').		☐	☐	☐
15	180	Is sample devoid of an oil sheen? If "Failed", describe color and thickness (e.g. flecks, globs).		☐	☐	☐
16	190	Is sample free of other obvious indicators of pollution? If "Failed", describe.		☐	☐	☐

Labor Report

17 **Completed:** 6/28/2017 3:23:00 PM

18 **Report:** Jane Admin

19 Jane Admin — Signature / Name; 6/28/2017 — Date; Signature / Name; Date

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

EPC-CP-Form-1021.1 07/2017

Attachment 2: Crosswalk of EPC-CP-Form-1021 Hard Copy Format to Electronic Format (cont.)

CERTIFICATION STATEMENT

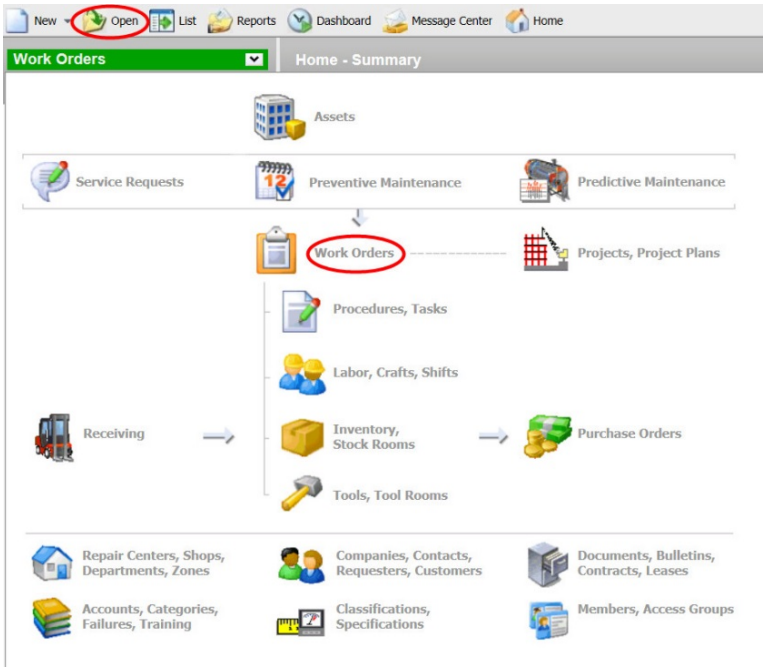
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

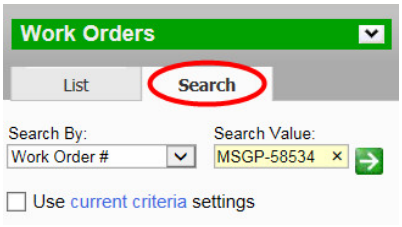
(Signatory must meet definition in Section B.11.A, eg. FOD, Ops Mgr, DSESH Group Leader, EPC Group Leader)

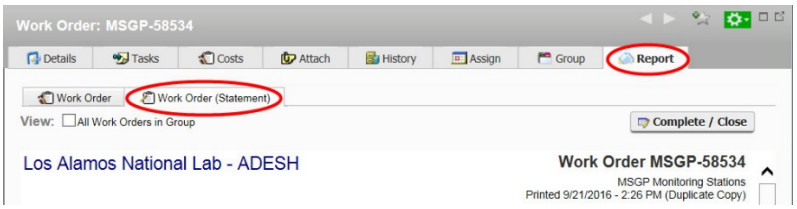
20 Print name and title:_____

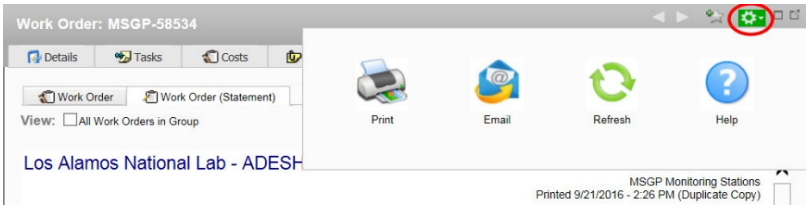
Signature:_____Date:_____

Attachment 3: Screenshot Examples of Printing from Maintenance Connection









ATTACHMENT 19: EPC-CP-QP-047 INSPECTING STORMWATER RUNOFF SAMPLES AND RETRIEVING SAMPLES FOR MSGP

EPC-CP-QP-047	Revision: 2	Los Alamos NATIONAL LABORATORY EST. 1943
Effective Date: 09/06/2017	Next Review Date: 09/06/2020	

Environment, Safety, and Health Directorate

Environmental Protection and Compliance Division – Compliance Programs

Quality Procedure

Inspecting Stormwater Runoff Samplers and Retrieving Samples for the MSGP

Document Owner/Subject Matter Expert:

Name:	Organization:	Signature:	Date:
Holly L. Wheeler	EPC-CP	Signature on File	9-5-17

Derivative Classifier: ☐ **Unclassified or** ☒ **DUSA ENVPRO**

Name:	Organization:	Signature:	Date:
Ellena I. Martinez	EPC-CP	Signature on File	8-22-17

Approval Signatures:

Subject Matter Expert:	Organization:	Signature:	Date:
Holly L. Wheeler	EPC-CP	Signature on File	9-5-17
Responsible Line Manager:	Organization:	Signature:	Date:
Terrill W. Lemke	EPC-CP Team Leader	Signature on File	9-5-17
Responsible Line Manager:	Organization:	Signature:	Date:
Anthony R. Grieggs	EPC-CP Group Leader	Signature on File	9-6-17

REVISION HISTORY

Document Number and Revision *[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]*
ENV-RCRA-QP-047, Rev. 0	03/11	New Document.
ENV-RCRA-QP-047, Rev. 1	02/13	Annual Review and Revision
EPC-CP-QP-047, Rev. 2	09/06//2017	Review and revision. Updated document to new template and new group name. Clarified steps, modified inspection form EPC-CP-Form-1010, and added crosswalk to electronic form in MC Express. This document replaces ENV-RCRA-QP-047 R1.

Table of Contents

1.0 INTRODUCTION

Los Alamos National Security, LLC (LANS) through Environmental Protection and Compliance-Compliance Programs (EPC-CP) conducts stormwater monitoring activities required pursuant to the National Pollutant Discharge Elimination System (NPDES), Multi-Sector General Permit (MSGP) at Los Alamos National Laboratory (LANL). The MSGP requires LANL to monitor stormwater runoff from industrial sites relative to potential pollutants.

1.1 Purpose

This procedure describes the process for inspecting ISCO stormwater samplers and retrieving stormwater runoff samples from monitored outfall locations where LANS conducts stormwater monitoring activities pursuant to the NPDES, MSGP at LANL.

Inspections and sample retrieval conducted under this procedure should be documented using the Maintenance Connection Express™ (MC Express) web application on a tablet or notebook style computer. (In the event of electronic hardware or web application failure, personnel may use a printed hard copy to conduct inspection and sample retrieval.)

1.2 Scope

This procedure applies to the EPC-CP technical staff and subcontractor personnel (as applicable) conducting activities at automated stormwater sampling stations used for monitoring industrial stormwater discharge under the MSGP.

The MSGP Program Lead is the primary person with responsibility for the steps in this procedure. EPC-CP personnel will be appointed with responsibility for a subset of sampling stations.

1.3 Applicability

Stormwater runoff samples are collected at MSGP Program stations either with a refrigerated Avalanche® or ISCO 3700 automated sampler, single stage sampler or grab sample. ISCOs are designed to automatically collect water when the water surface is high enough to trigger a liquid level actuator and fill the sample bottles. Field personnel are required to inspect the sampling station while retrieving water samples during MSGP stormwater monitoring periods and at other intervals determined by the program or as directed by program personnel.

2.0 PRECAUTIONS AND LIMITATIONS

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

Personnel performing steps in this procedure that involve electrical equipment **MUST** be trained to LANL electrical safety standards as prescribed in the IWD before performing those steps.

Inspections may be discontinued during periods or conditions that make sites dangerous for worker safety or prevent personnel from safely accessing sites (e.g., weather-related events such as flash

floods, flooding, lightning, wildfires, hail, icy roads, deep snow, or LANL operations such as firing shots or burns).

Some terminology varies between the MC Express software and the Maintenance Connection desktop software.

- The "Reading" field in MC Express is the same field as "Reading Final" in Maintenance Connection desktop and "Meas." on a hard copy (printed) work order.
- The "Complete" option in MC Express is the same as a "Yes" answer; the "Failed" option in MC Express is the same as a "No" answer. Maintenance Connection desktop and hard copy (printed) work orders use "Yes" and "No" terminology.

3.0 PREREQUISITE ACTIONS

3.1 Planning and Coordination

1. Schedule work to be completed by the target date appearing on the work order(s) or as requested by the MSGP Program Lead if a form is not issued.
2. Inform (e.g., by e-mail) Facility contacts, as specified in the IWD, of the schedule for sampler inspection work and locations up to a week (preferred) before but no later than the day before (for minor changes) to be added to the appropriate plan of the day.

   Note: For some Facility Operations Divisions (FODs) like the Utilities and Institutional Facilities FOD, MSGP stormwater monitoring activities are on a standing plan of the day. However, this must be requested each year at the beginning of the monitoring season.
3. The IWD Part II (2101 Form) addresses specific requirements and training for FODs.
4. Obtain any necessary additional paperwork before conducting this work, including IWD's, and excavation permits (as necessary).
5. Gather the required equipment (see section below) for the work to be done.
6. Using the Safari web browser on a tablet or notebook style computer, navigate to http://express.maintenanceconnection.com and select English from the available dropdown menu.
7. Log into the MC Express application using your login credentials.
8. Confirm that the work order list displayed in the "My Open Work Orders" section matches your sites (see example in Attachment 1). If work orders are not displayed, click the "Refresh" bar at the bottom of the page. The page will refresh and any work orders issued since you logged in will be loaded to the application. If the work order lists still do not match, contact the MSGP Data Management Team for clarification.
9. Ensure that field personnel have access to accurate time measurement at the Site. When at the site, the clock time on the ISCO sampler must be set to Mountain Standard Time at all times, with no daylight saving time adjustment.

3.2 Tools and Equipment

Ensure the following equipment is available in the field vehicle:

- Safety glasses with side shields
- Sturdy hiking boots or steel toed shoes with soles that grip
- Nitrile gloves
- Cell phone (only government cell phones with batteries removed are allowed in secure areas)
- Copy of this procedure
- Copy of the Integrated Work Documents (IWDs)
- Copy of the MSGP Sampling and Analysis Plan
- Site Map(s) (as needed)
- Current electronic or paper inspection form EPC-CP-Form-1010, MSGP ISCO Sampler Inspection and Sample Retrieval
- Sample Collection Log/Field Chain of Custody (see EPC-CP-QP-048)
- Government issued iPad equipment with Safari web browser and Good™ app.
- Necessary access and station keys
- Charged spare battery(s)
- Battery voltage tester
- Clean spare tubing (pump, suction, discharge types, sampler specific)
- Certified clean replacement sample bottles (glass and poly)
- Spare/replacement sampler parts (liquid level actuator, distributor arm)
- Shovel
- Wooden stakes
- Plastic wire “zip” ties
- Coolers with ice or Blue Ice®
- Paper Towels
- Marker pen (permanent, waterproof)
- Ball point pen
- Zip lock bags
- Chain of custody seals

- 0.45 micron filter (where applicable)

4.0 INSPECTING STORMWATER SAMPLERS AND RETRIEVING SAMPLES

Throughout this procedure the field inspector should document comments and notations in the "Reading" field of the associated task line. Any additional comments not documented in a "Reading" field can be entered in in the "Comments" field of the same task line. If the inspector needs more space additional comments can be entered in the "Labor Report Update" field (see Section 4.3) when the work order is updated to "Complete" status.

4.1 Inspecting the Sampler

1. If conditions prevent a sampler inspection, document the conditions in the "Labor Report Update" field on the work order and notify the Program Lead or designee within 24 hours. Multiple attempts can be documented on the original inspection work order. If the target date cannot be met, the inspector must contact the MSGP Program Lead no less than 24 hours before target date for guidance.
2. In MC Express open the work order issued for the current location by clicking on the appropriate line. If needed, use the expand arrow located on the right side of the display to expand the work order detail information. The work order will open in the display to the work order Summary page.
3. Click on the "Tasks" bar to navigate to the work order Tasks page.
4. Remove the top cover from the sampler.

4.1.1 On Arrival

5. Item 1: Verify and document the sampler is ON and its condition upon arrival by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes" (see example in Attachment 1). Explain any non-functional status (remember to use the "Reading" field unless more space is needed for comments). A hard copy inspection example is provided in Attachment 2 as a crosswalk to the electronic format.

   If a sampler has been inactivated (e.g., sample collection completed) prior to this inspection but continues to appear on the inspection form, change the "N/A" line to "Yes". Subsequent questions regarding this sampler may be left unanswered in this section.

CAUTION

Click the "Save" bar after all entries for a task line have been completed and before proceeding to the next question. Failure to "Save" results in lost data entries.

6. Item 2: Verify and document the ISCO programming displays the following by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes".

ISCO 3700 sampler display should indicate "Sampler Inhibited"

OR

Avalanche sampler display should indicate "Program Disabled"

If the display does not indicate these messages, describe the messages (e.g., "Done X samples", "sampler off", etc.). If there is no indication of flow and the sampler triggered due to a non-flow event (e.g., animal, tumbleweed, etc.), describe this. Document any messages from the ISCO display.

7. Item 3: Verify and document the sampler is set to the correct Mountain Standard Time +/- no more than 1 minute by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". If the sampler is set incorrectly, reprogram for the correct Mountain Standard Time. Describe the work performed and correction applied (e.g., "ISCO clock was X minutes slow").
8. If the location has more than one sampler complete Steps 5 through 7 for each sampler.
9. Don nitrile gloves and safety glasses.
10. Remove the center section from the sampler.

4.1.2 Water Collection Information

11. Item 4: Document any evidence of storm water flow at the sampling location by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Describe the evidence of flow (e.g. sediment or vegetation movement, erosion, standing water).
    - If the sampler did not trip but there is evidence of flow, document the date and time storm water discharge began from the precipitation report.
    - If the sampler tripped or collected storm water, document the date/time stamp from the sampler if available or from the precipitation report.
12. Item 5: Document if any storm water was collected (from either a sampler or by grab sample) by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". If any water was collected, complete the Bottle Information section (Item 20). Document if the water is taken by grab sample. Follow the steps in Section 4.2 of this procedure to retrieve samples.
13. Item 6: For Avalanche samplers only, verify and document the current refrigerator temperature of the sampler if water was collected by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Record the temperature. If unable to review temperature, check "No" and describe the condition (e.g. dead battery, electrical short).

    If no water was collected the field inspector may change the "N/A" line to "Yes".

14. Item 7: For Avalanche samplers equipped with an ISCO pH and Temp Module, verify and document a pH measurement was taken on the collected water by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Record the pH measurement taken at the time of Bottle 1 as "Average: Minimum:Maximum." If unable to review pH, check "No" and describe the condition (e.g. damaged meter).

    If no water was collected the field inspector may change the "N/A" line to "Yes".

4.1.3 Water Retrieval Information

15. Item 8: Verify and document whether a sample volume was retrieved (from either a sampler or by grab sample) and taken off site by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". If sample volume was retrieved, record the total volume **taken off site**.

16. Item 9: Verify and document whether a visual assessment of the water was performed by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". The MSGP program visual assessment form is not included in this procedure (see EPC-CP-QP-064). Ensure this form is submitted with the sampler inspection form. If the sample was filtered, conduct the visual assessment and document "Filtered sample."

4.1.4 On Departure

17. Item 10: Verify all cable and electrical connections are attached and firmly tightened (not loose) upon departure from the site by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes".

    Connections may work loose over time due to temperature changes and if there are dis-similar metals at the connection points. The loose connections can introduce voltage spikes which inherently cause current spikes that may result in blown fuses.

    If the cables require replacement, connections require tightening, or other maintenance performed, describe the work performed (e.g., "tightened connectors on battery).

    If maintenance cannot be completed at the time of inspection, then describe the condition (e.g. cables chewed through by animal) and follow-up work needed (e.g., replace cables).

18. Item 11: Verify and document power supply function. Use a voltage meter to check the voltage of the battery(s) and record the voltage(s). Change the "Complete" or "Failed" line to "Yes" to indicate if battery voltage is acceptable upon departure from the station (≥11.7 for non-floating charged batteries at ISCO 3700 samplers and ≥11.0 for floating-charged batteries at Avalanche samplers).

    Check the voltage of the solar panel if access can be gained to the weather protected terminal covers on the back of the panel.

4.1.5 Equipment Specific Tasks

19. Item 12: Verify and document the sampler passes the diagnostic test by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Directions for running the diagnostics test is provided in ENV-CP-QP-045.

    If a sampler has been inactivated (e.g., sample collection completed) prior to this inspection but continues to appear on the inspection form, change the "N/A" line to "Yes" on this task line. Subsequent questions regarding this sampler may be left unanswered in this section.

Warning

The internal pump tubing must be replaced if the pump tubing life has reached or exceeded the preset pump counts. The internal pump tubing life is set 500,000 pump counts for the 3700 and 1,000,000 for the Avalanche.

Only reset the pump counts after replacing the internal tubing.

    If maintenance is necessary and can be performed at the time of inspection, describe the work performed. If maintenance cannot be completed at the time of inspection, then describe the condition and follow up with a description of work needed.

    If a sampler has been inactivated (e.g., sample collection completed) prior to this inspection but continues to appear on the inspection form, change the "N/A" line to "Yes" on this task line. Subsequent questions regarding this sampler may be left unanswered in this section.

20. Item 13: Verify and document the sample tubing is free or clear of debris by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes".

    Check the physical condition of the sampler including the actuator and intake line for correct location and height in the channel. The actuator, intake line and strainer (if used) should be placed on the cutting side of the channel to help minimize the possibility of sediment burying the intake line/strainer. Adjust as necessary to capture flow within the channel. The actuator, intake line and strainer must be clear of debris (sediment, pine needles, etc.).

    If maintenance (e.g., clearing the tube, reposition tubing intake) is necessary and can be performed at the time of inspection, perform the work and describe. If maintenance cannot be completed at the time of inspection (e.g., can't clear intake tubing and spare intake tubing not on hand to replace) then describe the condition and follow up with description of work needed.

21. Item 14: Verify and document the sample tubing has passed a suction test by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". Check the condition of sample tubing and vent tubing.

    If maintenance (e.g., replace internal pump tubing) is necessary and can be performed at the time of inspection, perform the work and describe. If maintenance (e.g., replace sampler

pump) cannot be completed at the time of inspection then describe the condition and follow up with description of work needed.

22. Item 15: Verify and document the sampler is ON prior to departing the site by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes".

23. Item 16: Verify and document the liquid level actuator has been set to "Latch" prior to departing the site by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes". If the sampler tripped and requires reset of the sampling program, reset the actuator by toggling the switch to "Reset" and then back to "Latch".

24. Item 17: Verify and document the ISCO programming displays the following by clicking the expand arrow located on the right side of the task line and changing the "Complete" or "Failed" line to "Yes".

    ISCO 3700 sampler display should indicate "Sampler Inhibited"

    OR

    Avalanche sampler display should indicate "Program Disabled"

    If an error occurs, reconfigure the sampler per EPC-CP-QP-045.

25. If the location has more than one sampler complete Steps 19 through 24 for each sampler.

4.1.6 Maintenance Information

26. Item 18: Verify and document any maintenance completed while on site that is not documented elsewhere on work order by changing the "Complete" or "Failed" line to "Yes". Describe the work performed.

    Maintenance items may include (but are not limited to) site clearing, installing new or additional equipment, removing equipment, animal/pest mitigation, problems with equipment location, etc.

    If a battery was replaced record the voltage of the new battery and the battery identification number. If the battery does not have an identification number, contact the MSGP Program Manager to have one assigned. Once assigned, the number must be painted or written in a permanent manner on the battery.

27. Item 19: Verify and document any maintenance needed that could not be completed while on site that is not documented elsewhere on work order by changing the "Complete" or "Failed" line to "Yes". Describe any work needed. Refer to EPC-CP-QP-045 for sampler operation and maintenance.

4.1.7 Bottle Information

28. Item 20: Document water collected by clicking the expand arrow located on the right side of each bottle's task line and change the "Complete" or "Failed" line to 'Yes'. Record the following information for each bottle by position number in the carousel.
    - Date (MM/DD/YY or MM-DD-YY) and time the ISCO collected water.
    - Volume of water in the bottle
    - Type of bottle (e.g. G for glass, P for poly)
    - Specific ISCO displayed message, if present

    If the sampler(s) did not trigger, change the "N/A" line to 'Yes' for Bottle #1 of each sampler and leave the other Bottle task lines unanswered.

    If a sampler has been inactivated (e.g., sample collection completed) prior to this inspection but continues to appear on the inspection form, change the "N/A" line to "Yes" on this task line. Subsequent questions regarding this sampler may be left unanswered in this section.
29. If the location has more than one sampler complete Step 28 for each sampler.
30. Replace and secure the sampler top cover and secure the sampler shelter (if sampler is in a shelter).

4.2 Retrieving Samples

1. Don nitrile gloves and safety glasses.
2. Add up the volume of water collected (see flow chart in Attachment 3) and check that the total volume of water in glass and poly matches the required volume for the specific location identified in the MSGP Sampling and Analysis Plan. The volume of water required to complete analytical may vary by monitored location.
    - If sample volume is sufficient to fulfill all analytical requirements, continue with Step 3.
    - If sample volume is sufficient to fulfill part of the analytical requirements, consult the prioritization order on the MSGP Sampling and Analysis Plan to determine which analytical to fulfill OR contact the MSGP Data Manager, continue with Step 3 but retrieve only the volume needed.
    - If the collected sample will NOT fulfill the minimum required volume for any analytical:
        - Record total volume retrieved as "0" in Item 8
        - Complete a Visual Assessment (see EPC-CP-QP-064)
        - Pour out all water on the ground
        - Skip to Step 10 below

CAUTION

ISCO Avalanche samplers are programmed to cool samples to 4°C. If water is collected and the refrigerator temperature reads higher than 6°C, **do not** retrieve samples that require ICE preservation. Refer to the MSGP Sampling and Analysis Plan for preservation requirements.

3. Remove filled and partially-filled bottles from the carousel.
4. For samples retrieved, immediately place lids onto the sample bottles and securely seal. Place custody seal tape on each bottle.
5. Write the date and time collected, Sampler Location number, and the corresponding carousel number on each retrieved sample bottle. Retrieve the sample collection date and time from the ISCO sampler.
6. Record total volume retrieved in Item 8.
7. Conduct a Visual Assessment (see EPC-CP-QP-064).
8. Place retrieved sample bottles in a cooler with blue ice (or equivalent).
9. Return any excess water or collected volume that exceeded the amount required to the ground at the location collected.
10. Install new certified clean sample bottles in the carousel to replace those bottles that collected stormwater. The number and type of bottles may vary. Ensure bottles match the configuration specified in the MSGP Sampling and Analysis Plan.
11. The 0.45 micron filter may also need to be replaced. Consult the most current revision of the Sampling and Analysis Plan for specifics. If the sampler is turned off for the quarter but new certified clean sample bottles and/or the filter have not been replaced, note this as follow-up maintenance required (see Item 19).
12. Replace and secure the center section of the sampler.
13. Return to steps in Section 4.1.

4.3 Completing the Inspection Form

1. When all task lines have been completed, make sure you have clicked the “Save” bar at the bottom of the page.
2. Click the “Back” arrow button in the upper left hand corner to exit the work order Tasks page and return to the Work Order Summary page.
3. Click the checkered flag in the upper right corner of the work order Summary page.

CAUTION

MC Express automatically changes the work order status to “Closed” and auto-populates the date and time fields.

4. Item 21: Click on the expand arrow located on the right side of the "New Status" field and select "Completed" from the available dropdown menu. Ensure the date and time auto-populated are the date and time the inspection was completed.

   If these fields need to be updated, click the "Date" field to modify it. Make necessary adjustments using the available timestamp application and click "Set" to apply changes.

6. Item 22: The inspector must type in his/her name in the "Labor Report Update" field.

   Any additional notes, observations, or site conditions not documented in a task line "Reading" or "Comments" field can also be documented in the "Labor Report Update" field.

7. Scroll down the page to the "Signature" bar and click the expand arrow on the left side of the bar to open the "Signature" field.

8. Item 23: Capture an electronic signature by drawing with a finger on the tablet screen. The Lead Inspector is certifying that the information submitted is "true, accurate, and complete" by electronically signing the work order.

   Note: If using MC Express on a desktop screen (not a tablet), the mouse must be used to sign electronically.

9. Click on the "Save" bar at the bottom of the page to close the "Signature" field.

10. Click on the "Back" button located in the upper left hand corner to return to the "My Open Work Orders" page.

11. Once you have completed an inspection, click on the Menu button again, and then click the "Logout" bar. Close the browser. All work will automatically uploaded from the MC Express application to the MC database.

    Always log out of MC Express when you have finished work OR if work is interupted.

4.4 REMOVING STORMWATER SAMPLES FROM THE FIELD

1. If samples were collected, deliver the samples and corresponding Sample Collection Log/Field Chain of Custody form to the EPC-CP Stormwater Program Laboratory at TA-59-1.

2. Sign the Sample Collection Log/Field Chain of Custody and place it with the sample(s) in the refrigerator. Ensure custody seal tape is intact on each sample bottle. Lock the refrigerator to prevent tampering. Refer to EPC-CP-QP-048, *Processing MSGP Stormwater Samples* for instruction on processing samples and submitting samples for shipping to an analytical laboratory.

5.0 TRAINING

The following personnel require training before implementing this procedure:

- EPC-CP technical staff and subcontract or other personnel who inspect automated stormwater samplers and retrieve stormwater samples for the MSGP.

For EPC-CP staff the training method for this procedure is "self-study" (reading). Other participating groups may require training documentation pursuant to local procedures.

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

- EPC-CP MSGP Sampling and Analysis Plan for the current monitoring year
- Manual for Teledyne ISCO Sampler Model 3700
- Manual for Teledyne ISCO Avalanche® sampler
- Manual for Teledyne ISCO 701 pH/Temperature module (if equipped at station)

Personnel performing steps in this procedure that involve electrical equipment **MUST** be trained to LANL electrical safety standards as prescribed in the IWD before performing those steps.

6.0 RECORDS

Records generated by this document will be submitted to the EPC-CP Records Management designated point of contact or document manager in accordance with P1020-1, *Laboratory Records Management* and with ADESH-AP-006, *Records Management Plan*.

- Completed ISCO Sampler Inspection and Sample Retrieval form(s)

7.0 DEFINITIONS AND ACRONYMS

7.1 Definitions

See LANL *Definition of Terms*.

7.2 Acronyms

See LANL *Acronym Master List*.

EPC-CP	Environmental Protection and Compliance-Compliance Programs
IWD	Integrated Work Document
LANL	Los Alamos National Laboratory
LANS	Los Alamos National Security, LLC
MC Express	Maintenance Connection MC Express web application
MSGP	Multi-Sector General Permit
NPDES	National Pollutant Discharge Elimination System

8.0 REFERENCES

None.

9.0 ATTACHMENTS

Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express
Attachment 2: Crosswalk of EPC-CP-Form-1010.02 Hard Copy Format to Electronic Format Example
Attachment 3: Flow Chart for Sample Retrieval

Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express

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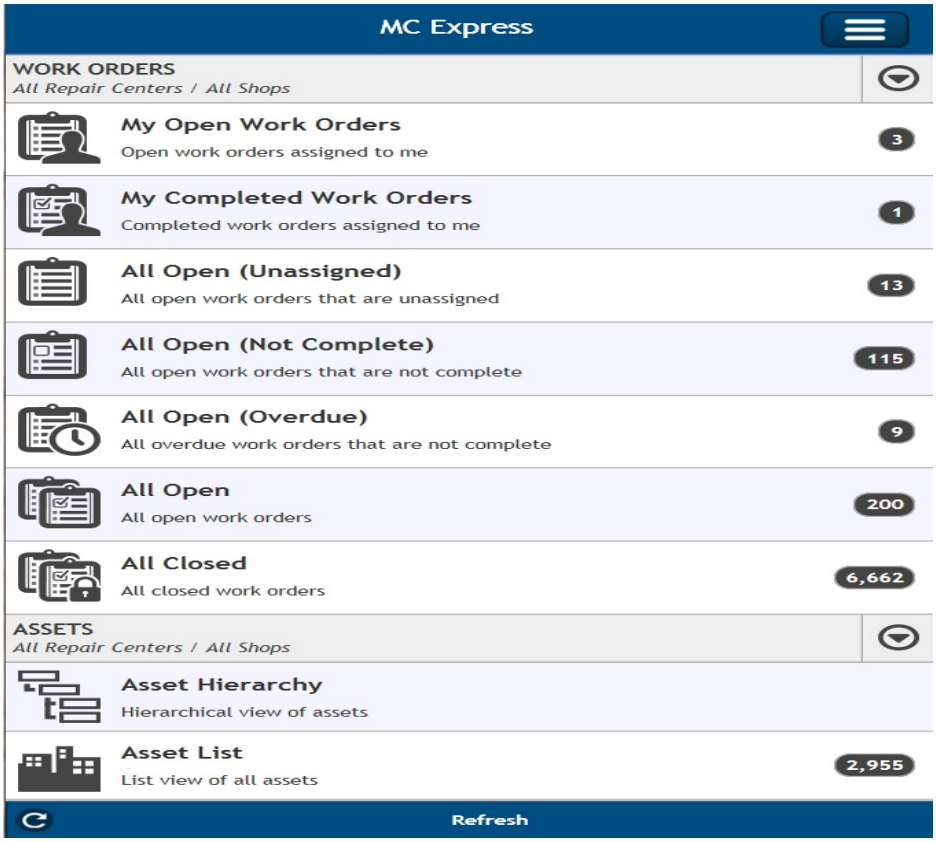

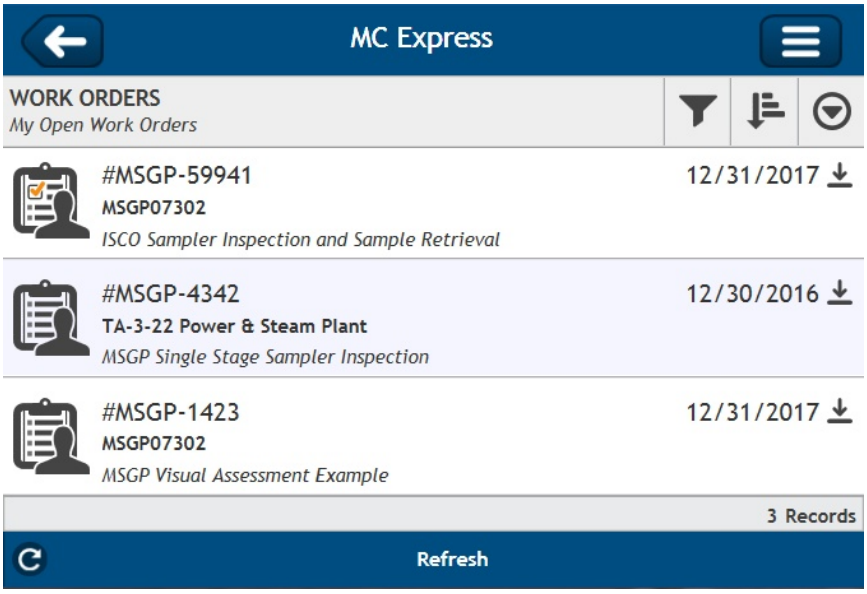

Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express (cont.)

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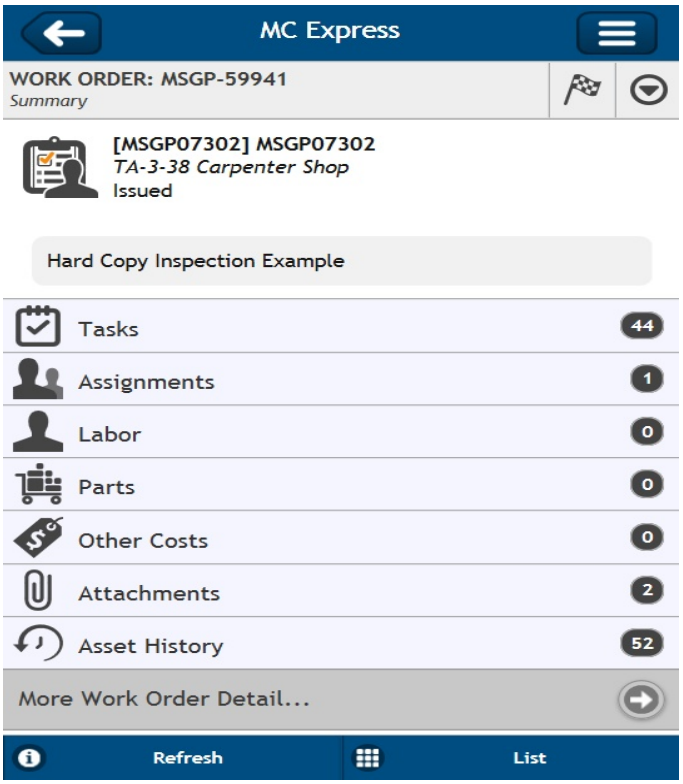

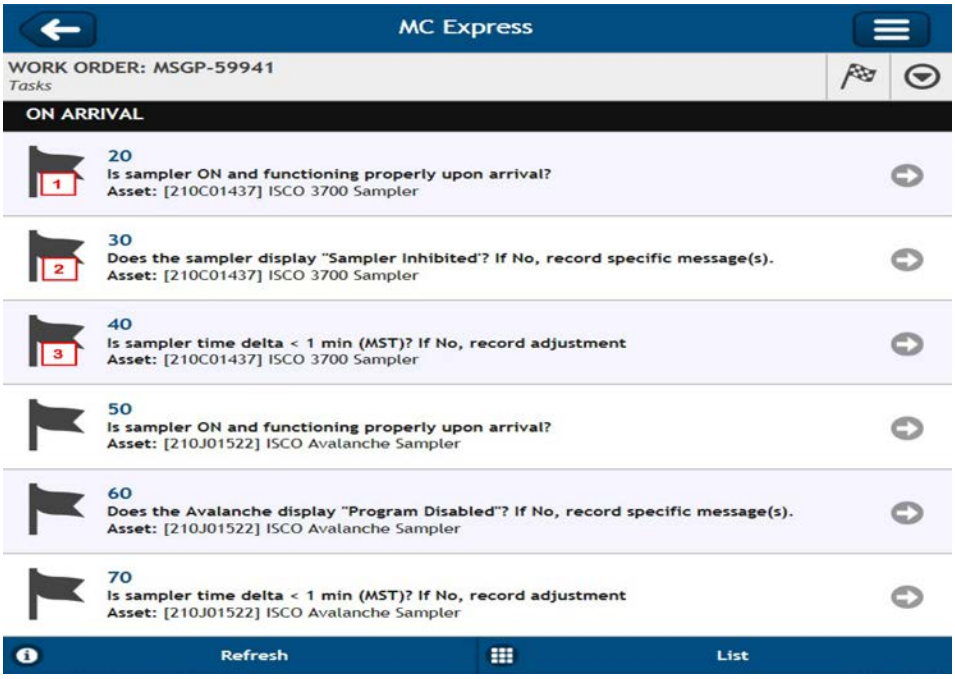

Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express (cont.)

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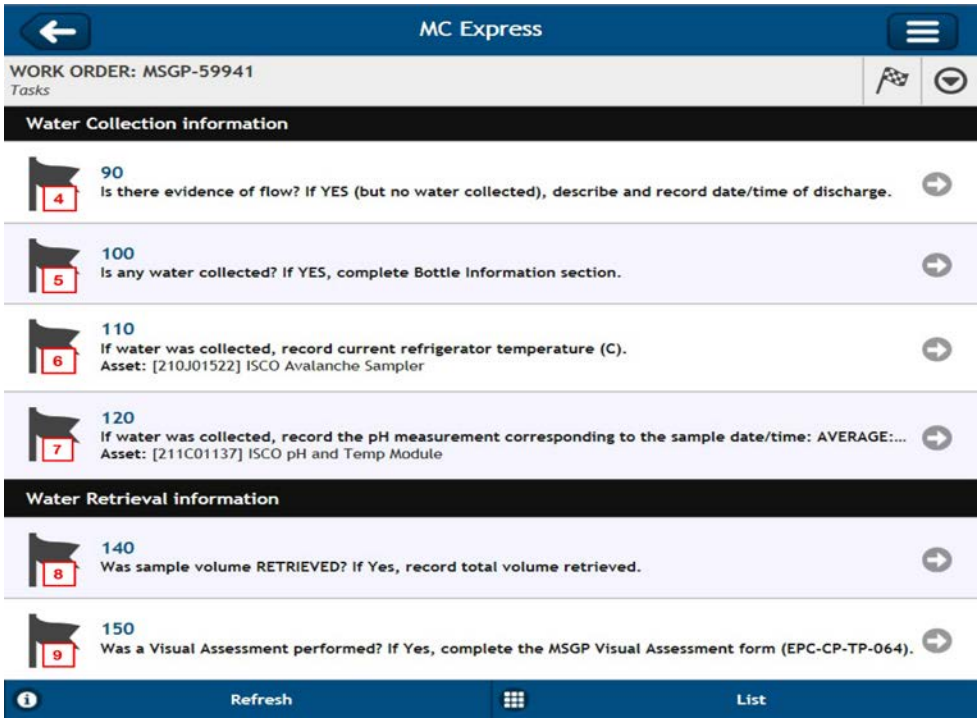

Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express (cont.)

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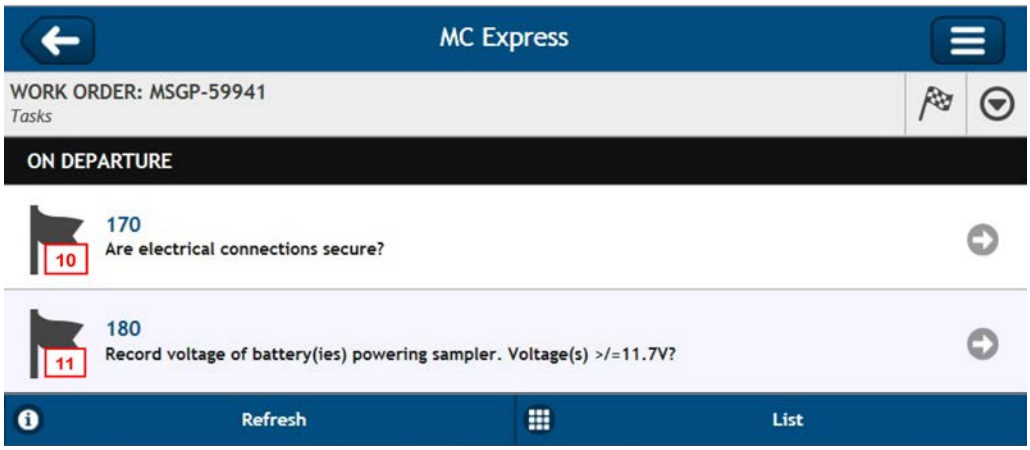

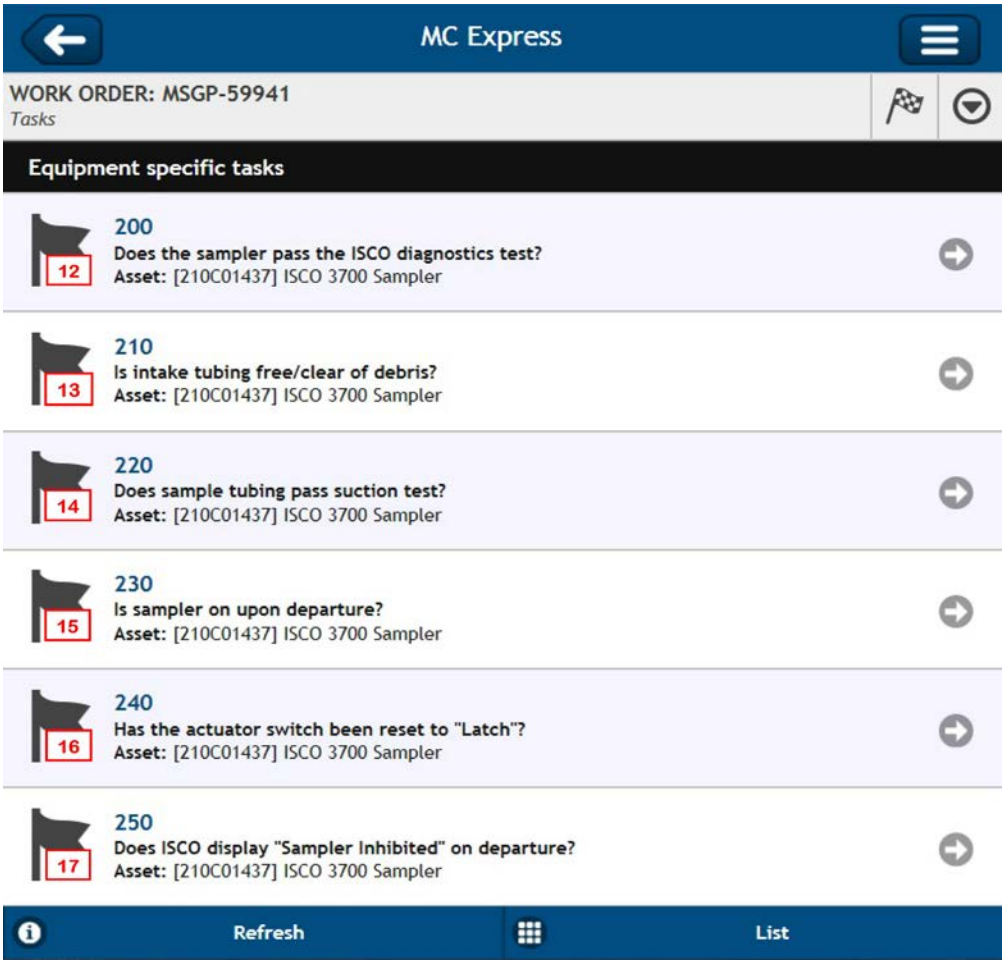

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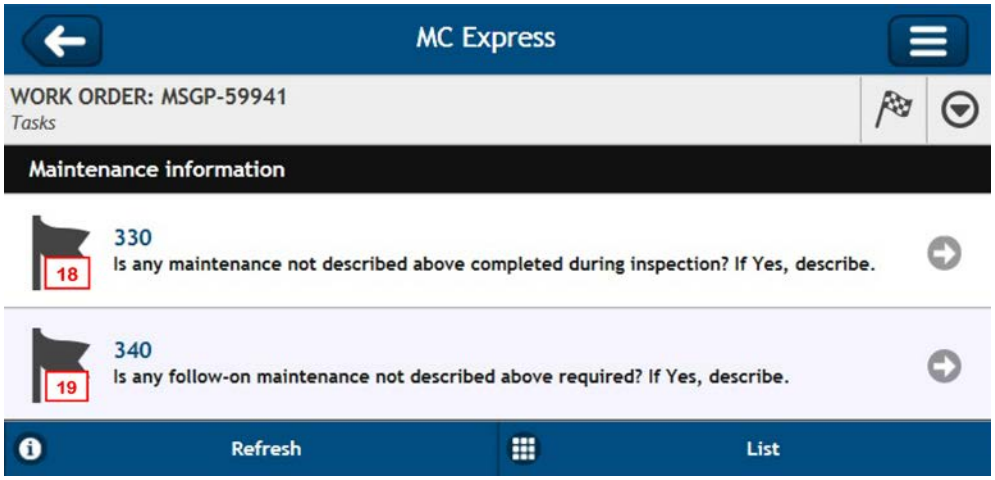

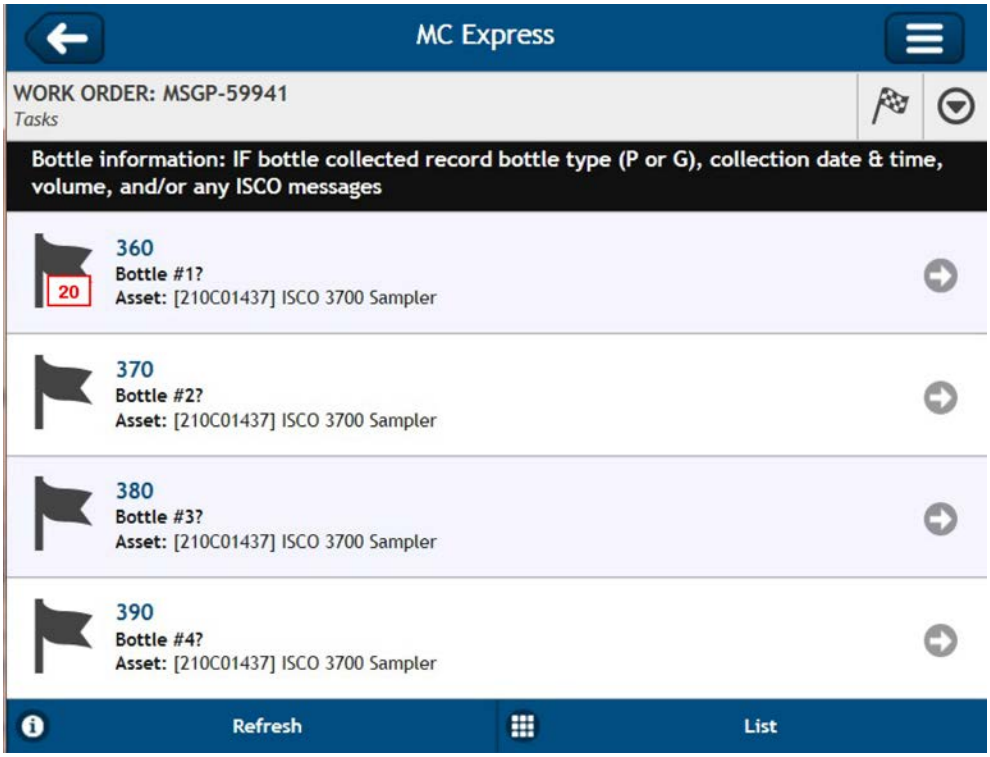

Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express (cont.)

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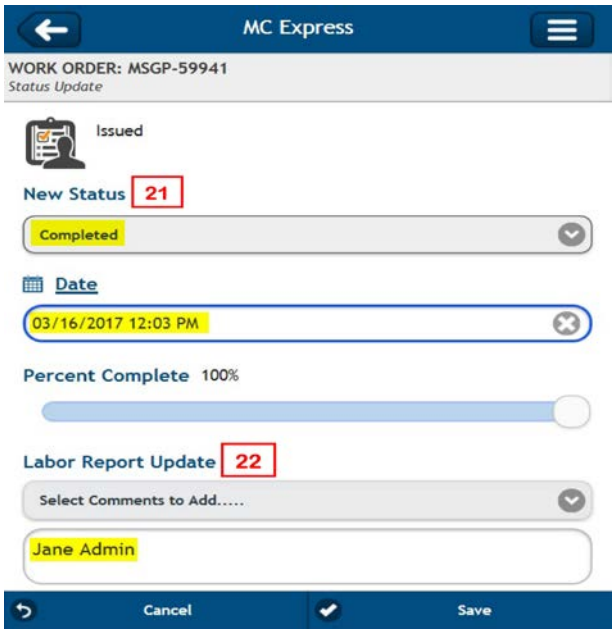


Attachment 1: Screenshot Examples of EPC-CP-Form-1010.02 in MC Express (cont.)

Attachment 2: Crosswalk of EPC-CP-Form-1010.02 Hard Copy Format to Electronic Format

Los Alamos National Lab - ADESH

Work Order MSGP-59941

MSGP Monitoring Stations
Printed 8/10/2017 - 11:25 AM (Duplicate Copy)

Maintenance Details

Requested By: Admin, Jane on 8/10/2017 11:23:00 AM
Procedure: MSGP ISCO Sampler Inspection and Sample Retrieval (EPC-CP-Form-1010.2 2)
Last PM: 7/20/2017
Project: ISCO Inspections wk 8/7/17 (P-MSGP-5212)

Target: 12/31/2017
Priority/Type: / Inspection
Department: Utilities and Infrastructure

MSGP Program
RG121.9
TA-3-38 Carpenter Shop
Monitored Outfall (073)
MSGP07302

Contact: Admin, Jane
Phone: 123-4567

Reason: Hard Copy ISCO Sampler Inspection and Sample Retrieval

Tasks

	#	Description	Meas.	No	N/A	Yes
		ON ARRIVAL				
1	20	**ISCO 3700 Sampler [210C01437]** Is sampler ON and functioning properly upon arrival?		☐	☐	☐
2	30	**ISCO 3700 Sampler [210C01437]** Does the sampler display "Sampler Inhibited"? If No, record specific message(s).		☐	☐	☐
3	40	**ISCO 3700 Sampler [210C01437]** Is sampler time delta < 1 min (MST)? If No, record adjustment		☐	☐	☐
	50	**ISCO Avalanche Sampler [210J01522]** Is sampler ON and functioning properly upon arrival?		☐	☐	☐
	60	**ISCO Avalanche Sampler [210J01522]** Does the Avalanche display "Program Disabled"? If No, record specific message(s).		☐	☐	☐
	70	**ISCO Avalanche Sampler [210J01522]** Is sampler time delta < 1 min (MST)? If No, record adjustment		☐	☐	☐
		Water Collection information				
4	90	Is there evidence of flow? If YES (but no water collected), describe and record date/time of discharge.		☐	☐	☐
5	100	Is any water collected? If YES, complete Bottle Information section.		☐	☐	☐
6	110	**ISCO Avalanche Sampler [210J01522]** If water was collected, record current refrigerator temperature (C).		☐	☐	☐
7	120	**ISCO pH and Temp Module [211C01137]** If water was collected, record the pH measurement corresponding to the sample date/time: AVERAGE: MINIMUM: MAXIMUM:		☐	☐	☐
		Water Retrieval information				
8	140	Was sample volume RETRIEVED? If Yes, record total volume retrieved.		☐	☐	☐
9	150	Was a Visual Assessment performed? If Yes, complete the MSGP Visual Assessment form (EPC-CP-TP-064).		☐	☐	☐
		ON DEPARTURE				
10	170	Are electrical connections secure?		☐	☐	☐
11	180	Record voltage of battery(ies) powering sampler. Voltage(s) >/=11.7V?		☐	☐	☐
		Equipment specific tasks				
12	200	**ISCO 3700 Sampler [210C01437]** Does the sampler pass the ISCO diagnostics test?		☐	☐	☐
13	210	**ISCO 3700 Sampler [210C01437]** Is intake tubing free/clear of debris?		☐	☐	☐
14	220	**ISCO 3700 Sampler [210C01437]** Does sample tubing pass suction test?		☐	☐	☐
15	230	**ISCO 3700 Sampler [210C01437]** Is sampler on upon departure?		☐	☐	☐
16	240	**ISCO 3700 Sampler [210C01437]** Has the actuator switch been reset to "Latch"?		☐	☐	☐
17	250	**ISCO 3700 Sampler [210C01437]** Does ISCO display "Sampler Inhibited" on departure?		☐	☐	☐

Attachment 2: Crosswalk of EPC-CP-Form-1010.02 Hard Copy Format to Electronic Format (cont.)

Page 2 of 2

260	**ISCO Avalanche Sampler [210J01522]** Does the sampler pass the ISCO diagnostics test?		☐	☐	☐
270	**ISCO Avalanche Sampler [210J01522]** Is intake tubing free/clear of debris?		☐	☐	☐
280	**ISCO Avalanche Sampler [210J01522]** Does sample tubing pass suction test?		☐	☐	☐
290	**ISCO Avalanche Sampler [210J01522]** Is sampler on upon departure?		☐	☐	☐
300	**ISCO Avalanche Sampler [210J01522]** Has the actuator switch been reset to "Latch"?		☐	☐	☐
310	**ISCO Avalanche Sampler [210J01522]** Does Avalanche display "Program Disabled" on departure?		☐	☐	☐
	Maintenance information				
18 330	Is any maintenance not described above completed during inspection? If Yes, describe.		☐	☐	☐
19 340	Is any follow-on maintenance not described above required? If Yes, describe.		☐	☐	☐
	Bottle information: IF bottle collected record bottle type (P or G), collection date & time, volume, and/or any ISCO messages				
20 360	**ISCO 3700 Sampler [210C01437]** Bottle #1?		☐	☐	☐
370	**ISCO 3700 Sampler [210C01437]** Bottle #2?		☐	☐	☐
380	**ISCO 3700 Sampler [210C01437]** Bottle #3?		☐	☐	☐
390	**ISCO 3700 Sampler [210C01437]** Bottle #4?		☐	☐	☐
400	**ISCO 3700 Sampler [210C01437]** Bottle #5?		☐	☐	☐
410	**ISCO 3700 Sampler [210C01437]** Bottle #6?		☐	☐	☐
420	**ISCO 3700 Sampler [210C01437]** Bottle #7?		☐	☐	☐
430	**ISCO 3700 Sampler [210C01437]** Bottle #8?		☐	☐	☐
440	**ISCO 3700 Sampler [210C01437]** Bottle #9?		☐	☐	☐
450	**ISCO 3700 Sampler [210C01437]** Bottle #10?		☐	☐	☐
460	**ISCO 3700 Sampler [210C01437]** Bottle #11?		☐	☐	☐
470	**ISCO 3700 Sampler [210C01437]** Bottle #12?		☐	☐	☐
480	**ISCO Avalanche Sampler [210J01522]** Bottle #1?		☐	☐	☐
490	**ISCO Avalanche Sampler [210J01522]** Bottle #2?		☐	☐	☐
500	**ISCO Avalanche Sampler [210J01522]** Bottle #3?		☐	☐	☐
510	**ISCO Avalanche Sampler [210J01522]** Bottle #4?		☐	☐	☐

Labor Report

Completed: 5/30/2017 4:44:00 PM

Report: Jane Admin

Signature / Name	Date	Signature / Name	Date
Jane Admin	5/30/2017		

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

WO ID:_____ Page ___of___

21 Date:_____ Time:_____

22 Name/Z#:_____

Name/Z#:_____

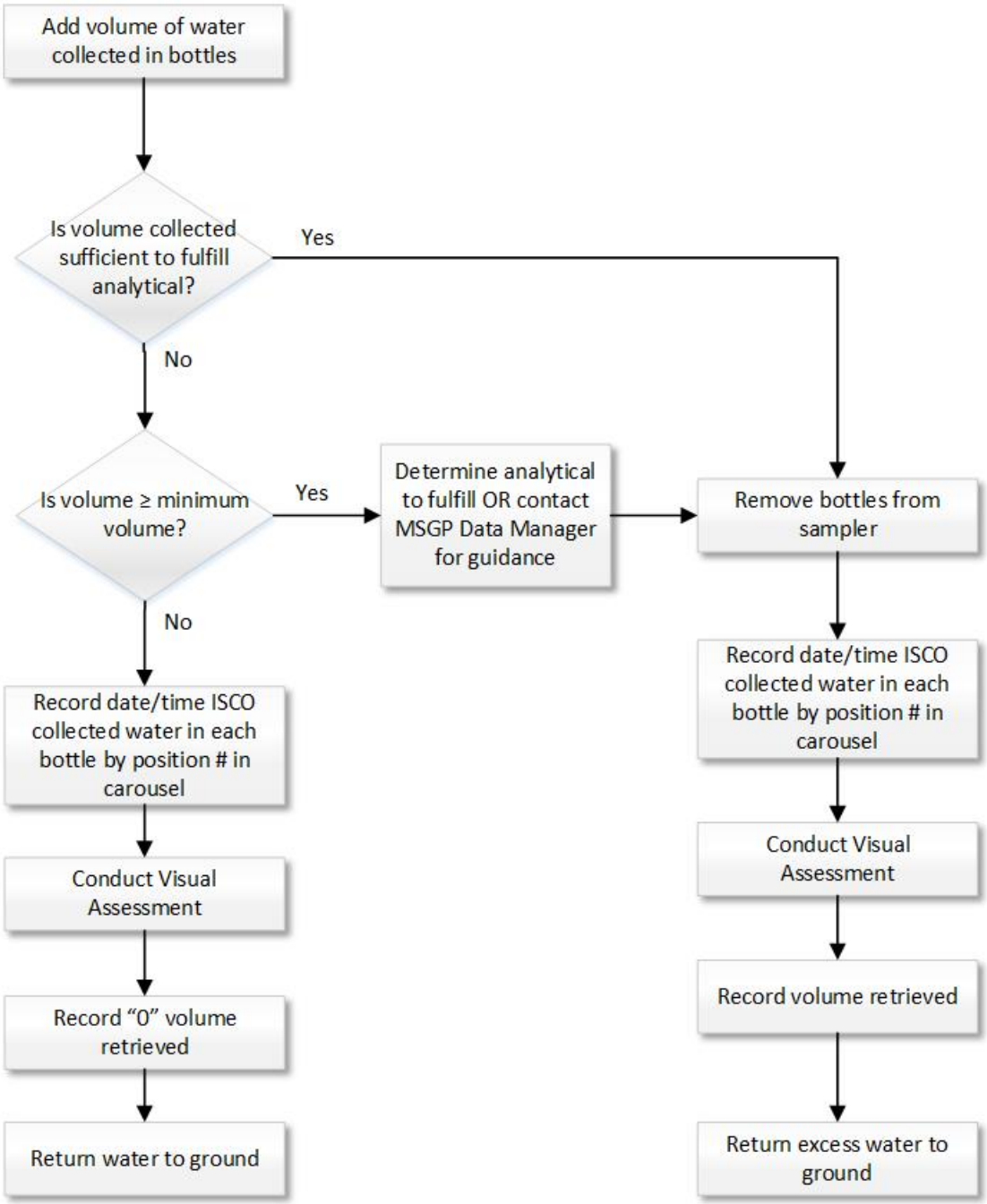
23 Lead Signature:_____

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

EPC-CP-Form-1010.02 08/2017

Attachment 3: Flow Chart for Sample Retrieval

Page 1 of 1



ATTACHMENT 20: ENV-CP-QP-048 PROCESSING MSGP STORMWATER SAMPLES

EPC-CP-QP-048	Revision: 3	
Effective Date: 10/05/2017	Next Review Date: 10/05/2020	

Environment, Safety, and Health Directorate

Environmental Protection and Compliance–Compliance Programs

Quality Procedure

Processing MSGP Stormwater Samples

Document Owner/Subject Matter Expert:

Name:	Organization:	Signature:	Date:
Holly L. Wheeler	EPC-CP	Signature on File	10-4-17

Derivative Classifier: ☐ **Unclassified or** ☒ **DUSA ENVPRO**

Name:	Organization:	Signature:	Date:
Ellena Martinez	EPC-CP	Signature on File	10-3-17

Approval Signatures:

Subject Matter Expert:	Organization:	Signature:	Date:
Holly L. Wheeler	EPC-CP	Signature on File	10-4-17
Responsible Line Manager:	Organization:	Signature:	Date:
Terrill W. Lemke	EPC-CP Team Leader	Signature on File	10-5-17
Responsible Line Manager:	Organization:	Signature:	Date:
Michael Saladen	EPC-CP Group Leader, Acting	Signature on File	10-5-17

REVISION HISTORY

Document Number and Revision *[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]*
ENV-RCRA-QP-048, Rev. 0	07/2011	New document
ENV-CP-QP-048, Rev. 1	09/2013	Annual Review and Revision, new format, process change, and new organization name.
EPC-CP-QP-048, Rev. 2	06/05/2017	Review and Revision, new format, and new organization name, clarified steps, updated attachments.
EPC-CP-QP-048 R3	10/05/2017	Updated Sample Collection Log instructions, added step describing evidence of flow, and added section for addressing excess stormwater material.

Table of Contents

1.0 INTRODUCTION

Los Alamos National Security, LLC (LANS) through Environmental Protection and Compliance-Compliance Programs (EPC-CP) conducts stormwater monitoring activities required pursuant to the National Pollutant Discharge Elimination System (NPDES), Multi-Sector General Permit (MSGP) at Los Alamos National Laboratory (LANL). The MSGP requires LANL to monitor stormwater runoff from industrial sites relative to potential pollutants.

1.1 Purpose

This procedure describes the process for filtering, preserving and preparing stormwater samples for shipment to an analytical laboratory from monitored outfall locations.

1.2 Scope

This procedure applies to the EPC-CP technical staff and subcontractor personnel (as applicable) who conduct processing and chemical preservation of stormwater samples either in the TA-59-1 Stormwater Laboratory or in the field.

The MSGP Program Lead is the primary person responsible for developing and updating this procedure. EPC-CP personnel will be appointed with responsibility for a subset of sampling stations.

1.3 Applicability

Stormwater samples are collected in the field either with a refrigerated Avalanche® or ISCO 3700 automated sampler, single stage sampler or grab sample. When in-line filtration is not possible, sample filtration along with chemical preservation will be conducted immediately following sample retrieval in the field or in the EPC-CP Stormwater Laboratory (TA-59-01).

Sample collection, submission, and analysis is conducted using EPA and New Mexico Water Quality Control Commission guidelines. Monitoring samples are collected and analyzed according to test procedures approved under Title 40 of the Code of Federal Regulations (40 CFR) Part 136 unless other test procedures have been specified in the MSGP permit. Quantitation limits associated with these test procedures are sufficiently sensitive to meet MSGP permit limits.

2.0 PRECAUTIONS AND LIMITATIONS

Hazards in the work described in this procedure are controlled through site specific Integrated Work Documents (IWDs). The hazard level for the activities in this procedure is **moderate**.

Use only sample containers that are documented to meet or exceed “US EPA Specification and Guidance for Contaminant-Free Sample Container” (Publication 9240.05A, EPA/540/R-93/051, December 1992). Never clean or re-use sample containers. Keep containers in a clean, dry place until a sample is ready for processing and transfer to the appropriate container(s).

3.0 PREREQUISITE ACTIONS

3.1 Planning and Coordination

Promptly schedule and complete all stormwater processing to meet the analytical holding time requirements identified in the MSGP Sampling and Analysis Plan or as requested by the MSGP Program Lead.

The MSGP Data Manager will generate Sample Collection Log/Field Chain of Custody (SCL) form(s) at the beginning of the MSGP monitoring season and/or the beginning of each MSGP monitoring quarter. The MSGP Data Manager will generate Chain of Custody/Analysis Request(s) from the Environmental Information Management (EIM) database as stormwater is collected. If the MSGP Data Manager is not available, forms may be obtained from the Sample Management Office (SMO).

3.2 Tools and Equipment

Ensure the following equipment is available:

- Safety glasses with side shields
- Nitrile gloves
- Lab coat
- Eyewash in Stormwater Lab (or portable eyewash in the field)
- Sample Collection Log/Field Chain of Custody Form
- Chain of Custody/Analysis Request
- Copy of the MSGP Sampling and Analysis Plan
- Sample containers (glass and poly bottles)
- Sample container lids
- Acid and base preservatives
- Clean silicon (e.g. Tygon) tubing
- Portable peristaltic pump (e.g. Geopump or equivalent)
- 0.45 micron and/or 0.10 micron cartridge filters (where applicable)
- Paper Towels
- Coolers with ice, Blue Ice®, or equivalent
- Ball point pen
- Permanent marker
- Chain-of-custody seals/tape
- Copy of this procedure
- Copy of the Integrated Work Documents (IWDs)
- Cell phone (only government cell phones with batteries removed are allowed in secure areas)

4.0 PROCESSING SAMPLES

In this procedure, sample collection bottles are the bottles in which the sample was collected in the field. Sample containers are containers into which the original sample may be transferred (as necessary) during processing and shipped to the analytical laboratory.

4.1 Preparation for Processing Samples

1. Don nitrile gloves, safety glasses with side shields, and lab coat. Long pants are required and no open toed shoes are allowed. Prior to processing samples, confirm eyewash is operational.
2. On the work bench arrange sample collection bottles in order from one MSGP sampling location according to the ISCO carousel number marked on the bottle.

CAUTION

Process only one sample set (i.e., samples listed on one Sample Collection Log/Field Chain of Custody form) at a time to ensure stormwater from different locations is not co-mingled.

3. Cross check the Location ID (e.g. MSGP00201) on the sample bottles with the requested analysis for that location on the SCL form (see example in Attachment 1).
4. Write the following information on the SCL:
   - Sampler Inspection and Sample Retrieval form (QP-047) identification number (e.g. Work Order: MSGP-xxxx)
   - Date and time the sample was collected in the field (e.g., date/time automated sampler filled sample bottles or a grab sample was taken)
   - pH measurement taken at the time the sample was collected in the field (as necessary)
   - Indicate if evidence of flow was recorded by writing “Y” for Yes or “N” for No
   - Indicate if a visual assessment was performed by writing “Y” for Yes or “N” for No
     – Visual Assessment form (QP-064) identification number (e.g., Visual WO#: MSGP-xxxx) if applicable
     – Date and time the visual assessment was performed if applicable
   - Printed name of person collecting the sample
   - Date and time the sample was RETRIEVED
5. Ensure the sample container type and chemical preservation type is correct for the analysis requested on the SCL (e.g., 500 ML POLY, HNO3). Note any deviation from the planned sample container volume or type on the SCL.
6. Indicate if each sample on the SCL was collected by writing Y for Yes or N for No under “Collected Y/N”.

7. Determine which samples require filtration and chemical preservation as requested on the SCL. Refer to Sections 4.2 and 4.3 as needed. Requirements are also identified in the most current revision of the MSGP Sampling and Analysis Plan.
8. Mark on each container lid the 3-digit outfall ID, required analysis, filtration requirement, and preservative requirement."
9. Document any other deviations from "As Planned" conditions in the "As Collected" column on the SCL (e.g., change the Field Matrix code from rain (WT) to snowmelt (WM)).

4.2 Filtering Samples

Filter samples if specified on the SCL or if an in-line filter was not used during sample collection.

1. Don nitrile gloves and safety glasses with side shields. Long pants are required and no open toed shoes are allowed. Prior to filtering samples, confirm eyewash is operational.
2. Ensure the sample container volume and container type (e.g., 1 L GLASS) is correct for the analysis requested on the SCL. Note any deviation from the planned sample container volume or type on the SCL.
3. Select the appropriate sized cartridge filter (e.g., 0.10µm or 0.45µm).
4. Attach an appropriate amount of silicone tubing to both ends of the cartridge filter. Place the filter upstream of the peristaltic pump to prevent over-pressurization. If the sample contains a significant amount of sediment, a pre-filter of the same size or larger micron capacity may be used.
5. For split samples(filtered and unfiltered), turn the sample collection bottle upside down multiple times to ensure all sediment is loose from the bottom of the bottle and move the intake tube up and down through the sample during filtration. A sample collected solely for filtration can be filtered without being homogenized by shaking.
6. Replace the filter if flow diminishes, the pump begins to make a grinding sound, or the tubing is forced off the filter by back pressure.
7. Add a check mark next to the filtered requirement previously marked on the lid to indicate that filtration has been completed.
8. Clean and dry the exterior of sample container and check sample container for leakage and breakage.
9. If no further processing is required (e.g., chemical preservation), apply a chain-of-custody seal/tape around the bottle and lid and sign and date the seal/tape.
10. Remove filter and tubing when filtration of one sample set (location) has been completed. A new filter must be used with each new sample ID.

4.3 Preserving Unfiltered and Filtered Samples

Preservation entails the addition of acid or base to a sample. Acids used include hydrochloric acid (HCl), nitric acid (HNO_3), and sulfuric acid (H_2SO_4). Bases used in preservation include sodium hydroxide (NaOH).

CAUTION

The preservatives are strong acids and bases that can cause severe burns. Extreme care should be taken when using these acids and bases. **Review the appropriate Material Safety Data Sheet or Safety Data Sheet for specific guidelines prior to preserving samples.**

1. Don nitrile gloves, safety glasses with side shields, and a lab coat. Long pants are required and no open toed shoes are allowed. Prior to chemically preserving samples, confirm eyewash is operational.
2. Ensure the sample container volume, type, and preservation type is correct for the analysis requested on the SCL or Sampling and Analysis Plan (e.g., 500 ML POLY, HNO_3). Note any deviation from the planned sample container volume or type on the SCL.
3. Select the pre-measured preservative size that matches the sample container size.

   Note: If you only have one size pre-measured preservative that does not match the sample container size you may need to use more than one. For example, if you have a 1 liter sample container and 500 ml pre-measured preservative vial, you would need to add two preservative vials to the sample container.

   Never "split" a larger volume pre-measured vial to preserve a smaller volume container (e.g., do not pipette from a 1 liter pre-measured preservative vial to preserve a 500 mL sample) as error in measurement precision may lead to a risk of violating Department of Transportation shipping requirements.
4. Add the preservative (acid or base) to the sample and securely affix the lid to the container.
5. Agitate the preserved sample by turning the container upside down two to three times.
6. Add a check mark next to the preservation type previously marked on the lid to indicate that preservation has been completed.
7. Clean and dry the exterior of sample container and check sample container for leakage and breakage.
8. Apply a chain-of-custody seal/tape around the bottle and lid and sign and date the seal/tape.

4.4 Handling Excess Stormwater

All efforts will be made to minimize the amount of stormwater sample brought into the TA-59-1 Stormwater Lab. Field personnel will attempt to retrieve only the volumes needed to fulfill the requested analyses from the current MSGP Sampling and Analysis Plan.

If any excess stormwater sample exists after processing has been completed:

- Ensure the container is labeled with the site of origin, date and time sample was collected, and "Return to Site".
- Place the container in the designated storage location in the MSGP Stormwater Lab,
- Return the sample to the site of origin as soon as possible and discharge at the sampler location.

If the excess stormwater has been altered (e.g. tap water or preservative added) contact the Waste Management Coordinator for TA-59-1 for further instruction.

4.5 Submit Samples for Shipping to Offsite Analytical Laboratory

1. Deliver completed SCL(s) to the MSGP Data Manager.
2. The MSGP Data Manager will process the sample information in the EIM system, capturing any documented deviations from planned conditions (as noted on the SCLs), and generate Chain of Custody/Analysis Request (COC) form(s) and sample container labels to reflect the "as collected" samples (see examples in Attachments 2 and 3).
3. In the "Received By" section of the SCL, enter the COC number (e.g., 2017-XXXX).
4. Don nitrile gloves and safety glasses.
5. Ensure the sample containers are securely sealed and wiped dry.
6. Cross check that the Sample ID on the SCL matches the Field Sample ID on the COC.
7. Carefully compare the information from the SCL and lid of each container to apply the correct labels to the sample containers.
8. Place the sample(s) in the cooler with sufficient Blue Ice® (or equivalent) to maintain the required preservation temperature (≤4° C). Cushioning material (e.g., bubble wrap) may be used to separate containers to avoid breakage during transport.
9. Place the SCL(s) and COC(s) in a zip lock type bag, seal, and place in the cooler with samples.
10. Transport samples to the Sample Management Office (SMO) using a government vehicle or approved subcontractor vehicle only. Samples may be delivered during SMO business hours, but must be delivered by 2pm for same day shipping. Coordinate with the SMO for delivery during other times or for delivery of samples that have limited holding times.

    Note: If submitting samples to the SMO will be delayed, place sample containers with SCL(s) in the Stormwater Laboratory refrigerator and ensure the refrigerator is locked.
11. On the COC, the person submitting the sample(s) will print and sign their name, date, and record the time under "Relinquished By." The SMO personnel accepts the sample(s) by printing and signing their name, dating, and recording the time under "Received By."
12. Retain a copy of the signed Chain of Custody/Analysis Request.

13. On the SCL, the person submitting the sample(s) will enter the data and time under "Relinquished By" that matches the data and time "Relinquished by" on the COC and write the COC/Lab Request# (e.g., 2017-xxxx) under “Received by.”
14. Ensure the SMO makes a copy of the SCL(s) to accompany the COC and samples. Retain the original SCL(s) for the MSGP program.
15. Deliver the copy of the signed COC and original SCL(s) to the MSGP Data Manager.

5.0 TRAINING

The training method for this procedure is “self-study” (reading). The following personnel require training before implementing this procedure:

- EPC-CP technical staff and subcontract or other personnel who process stormwater samples for the MSGP.

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

- EPC-CP MSGP Sampling and Analysis Plan for the current monitoring year
- EPC-CP-QP-047 Inspecting Stormwater Runoff Samplers and Retrieving Samples for the MSGP

6.0 RECORDS

Records generated by this document will be submitted to the ADESH Records Management designated point of contact or document manager in accordance with P1020-1, *Laboratory Records Management* and with ADESH-AP-006, *Records Management Plan*. Below is a list of records generated as a result of implementing this procedure.

- Sample Collection Log/Field Chain of Custody Form
- Copy of the Chain of Custody/Analysis Request
- Copy of log book entry(s) (if a log book is used)
- Other pertinent field or lab notes

7.0 DEFINITIONS AND ACRONYMS

7.1 Definitions

See LANL *Definition of Terms*.

7.2 Acronyms

See LANL *Acronym Master List*.

40 CFR	Title 40 of the Code of Federal Regulations
COC	Chain of Custody/Analysis Request
EIM	Environmental Information Management
EPC-CP	Environmental Protection and Compliance – Compliance Programs
IWD	Integrated Work Document
LANL	Los Alamos National Laboratory
LANS	Los Alamos National Security, LLC
MSGP	Multi-Sector General Permit
NPDES	National Pollutant Discharge Elimination System
SCL	Sample Collection Log/Field Chain of Custody
SMO	Sample Management Office

8.0 REFERENCES

None

9.0 ATTACHMENTS

Attachment 1: Sample Collection Log/Field Chain of Custody Example
Attachment 2: Sample Container Labels Example
Attachment 3: Chain of Custody/Analysis Request Example

ATTACHMENT 1: SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY EXAMPLE

Page 1 of 1

Los Alamos National Laboratory

MSGP Quarter 3

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 11198 **EVENT NAME:** MSGP 2017

SAMPLE ID: MSGP-17-131989 **WORK ORDER:** MSGP-59823

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYYY):		4/01/17	FIELD MATRIX:	WT	
TIME COLLECTED (HH:MM):		16:03	MEDIA:		
PRS ID:		1	SAMPLE TECH CODE:	APS	
LOCATION ID:	MSGP05301		FIELD PREP:	UF	
LOCATION TYPE:			FIELD QC TYPE:	REG	
TOP DEPTH:			SAMPLE USAGE:	COMP	
BOTTOM DEPTH:			EXCAVATED:		YES / NO / (NA)

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	MSGP-CN(TOTAL)	500 ML POLY	1	NAOH	Y	
	MSGP-COD+NH3	500 ML POLY	1	H2SO4 ICE	Y	
	MSGP-Mg+Se+Hg	500 ML POLY	1	HNO3 ICE	Y	

SAMPLE COMMENTS:

LOCATION COMMENTS:

FIELD PARAMETERS: Visual WO# MSGP-58866

pH 6.7 Flow (Evidence) Y Visual Inspection Y SU Visual performed Date/Time 4/3/17 14:36

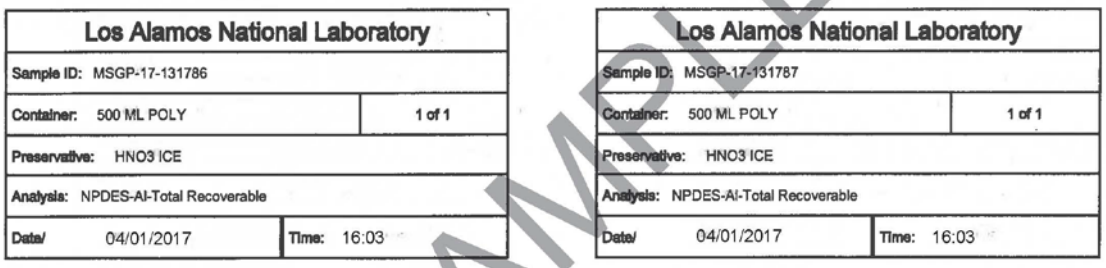
COLLECTED BY (PRINT): Jane Doe Retrieved 4/3/17 14:36

RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
		See COC 2017-1326	4/12/17 15:10
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 07/21/2017

ATTACHMENT 2: SAMPLE CONTAINER LABELS EXAMPLE

Page 1 of 1



Los Alamos National Laboratory	
Sample ID: MSGP-17-131786	
Container: 500 ML POLY	1 of 1
Preservative: HNO3 ICE	
Analysis: NPDES-Al-Total Recoverable	
Date/ 04/01/2017	Time: 16:03

Los Alamos National Laboratory	
Sample ID: MSGP-17-131787	
Container: 500 ML POLY	1 of 1
Preservative: HNO3 ICE	
Analysis: NPDES-Al-Total Recoverable	
Date/ 04/01/2017	Time: 16:03

ATTACHMENT 3: CHAIN OF CUSTODY/ANALYSIS REQUEST EXAMPLE

Page 1 of 1

LANL SMO
Los Alamos NM

Chain of Custody/Analysis Request

COC/Lab Request #: 2017-1326
Page 1 of 1

Client Contact:

Lab Agreement #:

Site Name: Los Alamos National Laboratory

Project Number:

Analysis Turnaround Time:
24 Hour - ☐ Other - ☐
7 Days - ☐
14 Days - ☐
21 Days - ☐
28 Days - ☒

Rad Screening Info:

Lab Reporting Limit Type: Method Detection Limit

Field Sample ID	Sample Date	Sample Time	Sample Matrix	MSGP-Zn
MSGP-17-131904	Apr 1 2017	16:03	W	1
MSGP-17-132187	Apr 1 2017	16:03	W	1

EXAMPLE

Special Instructions:

4/12/17

Relinquished by: Jane Doe	Print Name: Jane Doe	Date/Time: 4/12/17 15:00	Received by: RCHe	Print Name: B Green	Date/Time: 3:10
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
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ATTACHMENT 21: EPC-CP-QP-007 SPILL INVESTIGATION

ENV-CP-QP-007	Revision: 10	Los Alamos NATIONAL LABORATORY EST. 1943
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Environment, Safety, Health Directorate

Environmental Protection – Compliance Programs

Quality Procedure

Spill Investigations

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History of Revisions

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0	12/98	New Document.
1	06/00	Annual review, added Cerro Grande fire hazards
2	07/01	Annual review
3	06/03	Annual review
4	04/04	Annual review, changes to HCPs
5	02/07	Annual review, changes to reflect organizational restructure
6	07/08	Annual review
7	09/10	Biennial Review and revision
8	04/11	Removed prerequisites, added note re: on-call spill reporting.
9	07/13	Biennial review and revision, implemented new procedure format.
10	09/30/15	Biennial review and revision, implemented new procedure format. Controlled the updated LANL ENV-CP Unplanned Release Report.

Table of Contents

1.0 PURPOSE

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

2.0 SCOPE

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

2.1 HAZARD REVIEW

The work described in this procedure is field work and has a **LOW hazard** rating as documented by submittal of a completed *ENV Low Hazard Verification form*.

3.0 RESPONSIBILITIES

The following personnel require training before implementing this procedure:

- ENV-CP staff and contract personnel who perform spill response and investigation.

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

The training method for this procedure is required reading and on-the-job training (OJT). The OJT is to be conducted by a Team Leader or person designated as Subject Matter Expert (SME) by the ENV-CP Group Leader. This training will be documented in accordance with ENV-DO-QP-115, *Personnel Training*.

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

3.1 PREREQUISITES

None

4.0 WORK PROCESSES

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

Specific activities associated with Spill Response and Investigation:

- Respond to the spill or unplanned release site;
- Report to the On-Scene SEO Incident Commander and Site Safety Officer;
- Receive site safety requirements;
- Provide decision support;
- Investigate the nature and extent of the spill or unplanned release;

- Evaluate the potential environmental impact to water quality;
- Report the occurrence to the regulatory agencies, if necessary; and
- Provide support to mitigation plan and implementation.

4.1 FIELD ACTIVITY

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

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

For emergency response, perform the following steps:

Step	Action
1	Report to on-scene commander and await instructions.
2	Perform a site visit in coordination with SEO.
3	Adhere to access requirements as developed by the SEO Site Safety Officer and Incident Commander.
4	Identify and document the source and cause of the release.
5	Provide notification and written report if necessary.
6	Facilitate collection of samples if necessary and safe to do so.

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

- ENV-CP
  - NPDES outfall
  - Sanitary treatment solids
- WM-SVS
  - Wastes and chemical spills (liquid, solid, hazardous)
- ADEP Environmental Remediation Division
  - Surface water
  - Storm water runoff
  - Groundwater
  - Sediments

If WM-SVS will collect the required sample, complete a Request For Analysis (RFA), http://int.lanl.gov/environment/waste/sampling.shtml, to schedule sampling. Specify the analytical suite and turn-around time needed for the sample in the RFA.

4.2 COMMUNICATION

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

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

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

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

The Incident Commander can make special communication exceptions.

All photography at LANL must adhere to P217, *Controlled Articles*.

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

4.3 FACILITY MANAGEMENT WORK CONTROL REQUIREMENTS FOR FIELD ACTIVITIES

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

Should work be required to stop/pause, reference P101-18, *Procedure for Pause/Stop Work*, for guidance.

4.4 FACILITY MANAGEMENT-SPECIFIC ACCESS REQUIREMENTS

4.4.1 HIGH EXPLOSIVES AREAS

TA-16 and TA-11 high explosives areas have specific access requirements. Access inside the security gate requires annual site-specific training. Curricula #5243 must be assigned and all the training courses completed before arriving at TA-16. For access, (normal or after hours) contact the WFO FOD to ensure entry requirements are met and the activity is authorized for the Plan of the Day.

For access to WFO perimeter gates during normal working hours or after hours, contact TA-15 Access Control at 667-6742 and request permission to enter. A perimeter gate key must be picked up at the TA-15 Access Control office. Note that all outdoor firing will be suspended during entry.

For perimeter gates, prior notification for after-hours entry is also required by SOC. Perform the following steps:

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

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

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

For access to WX areas required during normal or after working hours, perform the following steps:

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

4.4.2 CHEMISTRY METALLURGY RESEARCH FACILITY ACCESS

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

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

4.4.3 TA-3-66 SIGMA FACILITY ACCESS

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

- For non-emergency responses, obtain prior site-specific training and authorization or contact the FOD for personnel escort and contact the FOD Deployed Environmental Professional.
- For emergency response with SEO, ENV-CP staff will be considered part of the SEO response team, met at the access gate, and escorted to the spill site. Contact the FOD to ensure they are aware of the incident.

4.5 REGULATORY SPILL REPORTING

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

If a spill impacts a Solid Waste Management Unit (SWMU) or Area of Concern (AOC), contact ENV-CP and Environmental Remediation (ER) for possible additional notification requirements.

If ENV Division or designated SME personnel determine after a site inspection or verbal notification that a spill is non-reportable to DOE or applicable regulatory agencies, a LANL ENV-CP Unplanned Release Report must be completed (Attachment 2) and submitted to the ENV-CP SME for required documentation.

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

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

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

5.0 DOCUMENT CONTROL/RECORDS MANAGEMENT

The following records generated as a result of this procedure are to be submitted in accordance with ADESH-AP-006 Records Management Plan.

- Field notebook documentation of the release including:
  - Time and date of the release
  - Time and date of ENV-CP notification
  - Location of the release
  - Source of the release(equipment, etc,)
  - Type of material released
  - Quantity of material released
  - If an impact to a watercourse or Potential Release Site occurred
  - Time release was stopped
  - Any immediate mitigating actions implemented to contain or control the release
- Any written report and verbal notification list generated should the release be deemed reportable.
- LANL ENV-CP Unplanned Release Report (Attachment 2) for non-reportable releases.

6.0 DEFINITIONS

AOC: Area of Concern

ER: Environmental Remediation

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

FOD: Facility Operations Division

NPDES: National Pollutant Discharge Elimination System

OJT : On the job training

PRS: Potential Release Site

SEO: Security and Emergency Operations

SOC Los Alamos: Security contractor for Los Alamos National Laboratory

SWMU: Solid Waste Management Unit

7.0 REFERENCES

None

8.0 ATTACHMENTS

Attachment 1- ENV-CP Release Notification Phone List

Attachment 2- LANL ENV-CP Unplanned Release Report

ATTACHMENT 1- ENV-CP RELEASE NOTIFICATION PHONE LIST

Los Alamos National Laboratory

ENV-CP

Release notification phone list

August 2015

Los Alamos National Laboratory

(1)	Security and Emergency Operations Emergency Management (SEO-EM)	667-6211
(2)	ENV-ES Group Office	665-8855
(3)	ENV-CP Group Office	667-0666
(4)	ENV-DO	667-2211
(5)	LANL Central Alarm Station (SOC-LA)	667-7080
	L.A. Fire Department	667-4055

New Mexico Environment Department

See Web address below

(1)	NMED Emergency Hotline (24 hours a day)	827-9329
(2)	NMED Non-Emergency Hotline (During business hours)	476-6000
	NMED Non-Emergency Hotline (Voicemail; 24 hours a day)	1(866) 428-6535
(3)	NMED Surface Water Quality Bureau	827-0187
	Erin Trujillo	827-0418
(4)	NMED Ground Water Quality Bureau	827-2900
	Greg Huey	827-6891
	Steven Huddleson	827-2936
	Gerald Knutson	827-2996
(5)	NMED Hazardous Waste Bureau	476-6000
	Ruth Horowitz	476-6025

U.S Environmental Protection Agency

(1)	US EPA Region 6 Spill Reporting (During business hours)	1(800) 887-6063
	Emergencies- Contact the NRC	1(800) 424-8802
(2)	Gladys Gooden-Jackson	1(214) 655-7494

U.S. Department of Energy

(1)	Gene Turner	667-5794

State Emergency Response Commission (SERC) Notification

New Mexico State Police	(505) 827-9300 (During business hours)
(Immediate Notification)	(505) 827-3476 (24 hours a day)
New Mexico Department of Homeland Security and Emergency Management (Follow-up Notification)	(505) 476-9600

National Response Center

U.S. Coast Guard National Response Center	1-800-424-8802

See NRC web address below for report form

New Mexico State Police

New Mexico State Police — (505)827-9300 (During business hours)
(505) 827-3476 (24 hours a day)

Local Emergency Planning Committee (LEPC) LAPD

Philmont Taylor — (505) 663-3511

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

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

Web addresses:
NMED home page http://www.nmenv.state.nm.us
National Response Center home page http://www.nrc.uscg.mil/Default.aspx
Reportable Quantities web page http://homer.ornl.gov/rq/

ATTACHMENT 2- LANL ENV-CP UNPLANNED RELEASE REPORT

Los Alamos National Laboratory
Environmental Compliance Programs (ENV-CP)
Unplanned Release Report

Form Completed By:	**Telephone:**	**Group:**

Spill Details — Spill Owner (Specify): ☐LANS, LLC ☐Subcontractor:

Date of Spill/Date Spill Discovered:

Location:

Material Spilled:
- ☐ Hydraulic Fluid
- ☐ Potable Water
- ☐ Diesel
- ☐ Anti-freeze/coolant
- ☐ Steam Condensate
- ☐ Lubricants/oils
- ☐ Refrigerant Oil
- ☐ Gasoline
- ☐ Other: _____

Volume Spilled: **Waste Volume Generated:**

Source of Spill:
Vehicle ID: _____
Equipment ID: _____
- ☐ Hydraulic Line
- ☐ Potable Water Line
- ☐ Fire Suppression System
- ☐ Fuel Tank
- ☐ Radiator
- ☐ Condensate Line
- ☐ Other: _____

Describe the spill response in chronological order. Include response personnel, steps taken to contain the spill, and steps/spill control equipment used to clean it up. Please indicate if corrective actions have been completed and describe actions taken to prevent spill recurrence:

Date Corrective Actions Completed: _____

Did the spill enter or impact any of the following? (Check as many as apply)
- ☐ RCRA Treatment Storage Disposal Facility
- ☐ RCRA Satellite Accumulation Area
- ☐ RCRA <90 Day Storage Area
- ☐ Floor Drain, if so please indicate affected facility _____
- ☐ Watercourse/drainage area, if so please indicate _____
- ☐ Solid Waste Management Unit/Area of Concern, if so please indicate _____
- ☐ None

Did the spill occur inside or outside a building? ☐ Inside ☐ Outside

Did the spill occur on: (Check as many as apply)
- ☐ Concrete
- ☐ Carpeted Floor
- ☐ Tile
- ☐ Wooden floor/deck
- ☐ Asphalt
- ☐ Graveled/Rocky Area
- ☐ Soil/Vegetated Area
- ☐ Other: _____

Samples Collected:
- ☐ None
- ☐ Water
- ☐ Soil
- ☐ Air
- ☐ Other: _____

If samples were collected, indicate analytical suite:

Certification

I certify that I am knowledgeable about the information on this form. The information, to my knowledge, is true, accurate, and complete.

Name of Certifying Official: **Organization:** **Date:**

Certification:

Completed by ENV-CP Personnel
Date Received: **Severity Index:** **Causal Analysis:**
☐ **Non-Reportable**
☐ **Reportable**

ENV-CP-Form 1009.0 06/2015

Return Completed Form to ENV-CP (jmeadows@lanl.gov)

ATTACHMENT 22: EPC-DO-QP 101.3 ENVIRONMENTAL REPORTING REQUIREMENTS FOR RELEASES OR EVENTS

EPC-DO-QP-101	Revision: **3**	Los Alamos NATIONAL LABORATORY EST.1943
Effective Date: 08/07/2017	Next Review Date: 08/07/2020	

Environment, Safety, and Health Directorate

Environmental Protection and Compliance Division – Compliance Programs

Quality Procedure

Environmental Reporting Requirements for Releases or Events

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Derivative Classifier: ☒ **Unclassified or** ☐ **DUSA ENVPRO**

Name:	Organization:	Signature:	Date:
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Approval Signatures:

Subject Matter Expert:	Organization:	Signature:	Date:
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Michael Saladen	EPC-CP, Team Leader	Signature on File	7-21-17
Responsible Line Manager:	Organization:	Signature:	Date:
Anthony Grieggs	EPC-CP, Group Leader	Signature on File	8-3-17
Responsible Line Manager	Organization	Signature:	Date:
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REVISION HISTORY

Document Number and Revision *[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	02/09	New document
1	4/10	Revision and update
ENV-DO-QP-101 R2	6/12	Biennial Review/Revision, new template implemented.
EPC-DO-QP-101 R3	08/07/17	Revision and update. This document replaces ENV-DO-QP-101 R2. New document number reflects organizational name change.

Table of Contents

1.0 INTRODUCTION

This Environmental Protection and Compliance Division (EPC-DO) procedure describes how to determine whether an unplanned release, spill, fire, or other event needs to be reported under environmental regulations and how to fulfill all immediate reporting requirements (within the first 24 hours). Emergency and abnormal event notification requirements for reporting to Laboratory and DOE management are specified in PD1200, *Emergency Management*, and *P322-4, Performance Improvement from Abnormal Events*. Environmental reporting requirements regarding releases or other events are included in this procedure.

1.1 Purpose

This procedure describes the actions that must be performed within the first 24 hours of the release. This procedure does **not** cover the response procedures for "continuous releases" under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Emergency Planning and Community Right-to-Know Act (EPCRA) (see definitions) nor the follow-up notifications and reports.

1.2 Applicability

This procedure applies to EPC-DO on-call representatives and subject matter experts (SMEs) who must respond to any release, spill, or event at the Laboratory that may require immediate notification to local, state or federal regulatory agencies. For notifications to Pueblo Environmental Departments refer to ENV-DO-QP-111, *Reporting Environmental Releases to Pueblo Governments*.

2.0 PRECAUTIONS AND LIMITATIONS

The work described in this procedure includes field work that does not require an Integrated Work Document (IWD) and is rated as having a **LOW hazard** level.

3.0 RESPONSIBILITIES

The following personnel require training before implementing this procedure:

- EPC managers, designated on-call representatives, and SMEs who may be asked to fulfill immediate reporting requirements during release-related exercises or during actual releases

Annual retraining to this procedure is required. This procedure will be reviewed biennially by all affected personnel and updated as necessary.

Training to this procedure will be by "self-study" (reading) and is documented in accordance with the trainee's organization's procedure for training.

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

4.0 WORK PROCESSES

Events covered by this procedure include detonation or burns of unstable material, leaking or compromised gas cylinders, puncturing of bulging containers, fires, explosions, chemical or radiological spills, wastewater spills, potable water discharges, and other unplanned releases at the Laboratory.

On a semi-annual basis, EPC-DO will prepare a list of individuals designated as on-call representatives and will designate the week each will be on-call. This list will be distributed to on-call representatives and Laboratory managers including Principal Associate Directorate for Operations (PADOPS), Associate Directorate for Environment, Safety, and Health (ADESH), Associate Directorate for Environmental Management (ADEM), Emergency Operations (SEO-DO), EPC-DO, Environmental Protection and Compliance Division Compliance Programs Group (EPC-CP), and Environmental Protection and Compliance Division Environmental Stewardship Group (EPC-ES). The on-call representative can be reached by pager at 505-664-7722.

4.1 Responsibility of On-Call Representative

The EPC on-call representative is the party primarily responsible for:

- determining if the incident will require immediate notification to external agencies in accordance with LANL, state, and federal regulatory reporting requirements
- notifying EPC Division management of immediate reporting requirements
- if needed, coordinating with other on-call SMEs and the Emergency Operations Center (EOC) to ensure the required notifications for environmental reporting and abnormal events are being addressed for the Laboratory

The EPC on-call representative is not responsible for the following and EOC will make these determinations:

- determining if the Resource Conservation Recovery Act (RCRA) Contingency Plan must be implemented
- if a shock-sensitive material or leaking or compromised gas cylinder constitutes an emergency

However, in order to ensure that the appropriate expertise is available for the affected media, the EPC on-call representative may immediately confer with an SME of the EPC group that has programmatic responsibility. If an SME from the responsible group is able to respond to the event, the remaining steps in this procedure may be passed to that person.

A list of contact numbers for on-call representatives and SMEs for EPC-CP and EPC-ES groups is available in the EPC-CP group office. The EPC-DO and SEO-DO may also be contacted to determine the on-call representative for each group.

4.2 Follow-Up Reporting

This procedure describes the initial external notifications (within the first 24 hours) to regulatory agencies. After completion of the steps in this procedure, the EPC group specifically responsible for compliance with the relevant regulations will complete the required notifications and reports, as applicable under the appropriate regulations, according to established procedures.

4.3 Summary of Policy Reporting

The EPC on-call representative and spill response SMEs have the authority and responsibility for deciding when to report an event and for making notifications to regulatory agencies within the applicable regulatory deadlines.

LANL management and Department of Energy Los Alamos Field Office (DOE LAFO) must be informed as soon as possible that a report was or will be made, but their approval is not required prior to the report being made to the regulatory agency. LANL management, with input from EPC SMEs, will determine if an ORPS (Occurrence Reporting Processing System) report or other type of Lessons Learned will be necessary.

NOTE: SEO-DO maintains a current list of on-call LANL managers.

4.4 Using this Procedure

This procedure has seven separate paths (and corresponding sections) to follow for determining if a release or event is reportable. Follow each of these paths to determine if one or more are applicable:

- Resource Conservation and Recovery Act (RCRA)
- Toxic Substances Control Act (TSCA)
- Clean Water Act (CWA),New Mexico Water Quality Act (NMWQA), and New Mexico Water Quality Control Commission (NMWQCC) Regulations
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Emergency Planning and Community Right-to-Know Act (EPCRA)
- Clean Air Act
- Endangered Species Act
- Bald and Golden Eagle Protection Act
- Migratory Bird Treaty Act
- New Mexico Wildlife Conservation Act
- National Environmental Policy Act
- National Historic Preservation Act
- Native American Graves Protection and Repatriation Act

- Archaeological Resources Protection Act

Each release needs to be evaluated for all potential reporting requirements. For example, a Reportable Quantity (RQ), defined under CERCLA or EPCRA may not be met, **but the release may be reportable** under RCRA, New Mexico Water Quality Control Commission (NMWQCC), and/or Clean Water Act (CWA) requirements.

NOTE: The 24-hour deadline (immediate in some cases) applies regardless of whether it occurs during business hours, after business hours or on non-business days.

4.5 Determining if a Release is Reportable under RCRA

Follow the flow chart in Attachment 1 to determine if an event is reportable under RCRA regulations.

Under the RCRA permit requirements, the SEO-DO manager determines if the "RCRA Contingency Plan" provisions should be implemented. The EPC on-call representative or an EPC-CP SME performs notifications that may be required.

The SEO-DO Manager will normally attempt to contact the EPC-CP SME for guidance in making this decision. If the EPC-CP SME is successfully contacted, the completion of the remainder of this procedure may be passed on to this individual.

The EPC on-call representative makes the determination that one or more of these conditions occurred through consultation with EPC-CP and appropriate SMEs. 24-hour notification can be made by the EPC on-call representative or by an EPC SME.

The Emergency Operations Center (EOC) manager makes the determination that unstable chemicals, leaking or compromised gas cylinders represent an emergency situation and, typically with EPC-CP, how best to respond. 24-hour notification can be made by the on-call representative or EPC-CP SME.

If a release/event is reportable under RCRA rules, determine if the release/event is reportable under other rules and proceed to the Section 4.10 *Reporting a Release or Event.*

4.6 Determining if a Release is Reportable under TSCA

In practice, only spills of Polychlorinated Biphenyls (PCBs) or PCB-suspect untested mineral oil to the environment (generally outdoors or with the potential to reach the outdoors) are reportable. Spills that are contained indoors are generally not reported.

A discharge of PCBs is reportable to the Environmental Protection Agency (EPA) under TSCA if 1 pound of PCBs by weight is released [40 Code of Federal Regulations (CFR) 761.125(a)(1)]. Notify the EPA regional office and proceed with the immediate clean up requirements noted in 40 CFR 761.125(a)(1) in the shortest possible time after discovery, but in no case later than 24 hours after discovery. Additionally, reporting requirements are triggered if over 270 gallons of untested mineral oil suspected of containing PCBs has been spilled.

Follow the steps in *Determining if a Release is Reportable under CERCLA, EPCRA, or Other Regulations* to determine if the RQ for PCBs has also been exceeded.

There are six items containing PCBs that are out of service at the Chemistry and Metallurgy Research (CMR) Building. All other known PCB equipment at the Laboratory has been taken out of service and disposed of in accordance with TSCA regulations.

If a release is reportable under TSCA, continue through the next sections to determine if the release/event is reportable under other rules and proceed to *Reporting a Release or Event* and determine if additional reporting is necessary.

If the spill is ...	**Then...**
equal to or over 1 pound by weight of PCBs (TSCA) or greater than 270 gallons of untested mineral oil suspected of containing PCBs	Report to the National Response Center (1-800-242-8802) immediately (within 15 minutes of discovery). Additionally, contact EPA Region 6 (Office of Prevention, Pesticides and Toxic Substances Branch) through EPA's 24-hour spill response number 866-372-7745 as soon as possible after discovery but no later than 24 hours after discovery.

4.7 Determining if a Release is Reportable under the NM Water Quality Act or the CWA

20.6.2.1203 New Mexico Administrative Code (NMAC) Reporting

The NM Water Quality Act (NMWQA) does not use Reportable Quantities (as described in the next section). Instead the NM Water Quality Control Commission (NMWQCC) regulations state: *"With respect to any discharge from any facility of oil or other water contaminant, in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property, notifications (to the New Mexico Environment Department (NMED)) and corrective actions are required."*

The above rule requires the use of professional judgment to determine if reporting is required. No quantifiable metric is available to assist in making this determination. The EPC on-call representative or SME has the authority and responsibility to make this determination.

Additionally, unplanned releases of potable water or steam condensate require reporting pursuant to 20.6.2.1203 NMAC if the release is greater than 5,000 gallons, reaches a watercourse, or if the release adversely impacts a Solid Waste Management Unit (SWMU) or Area of Concern (AOC) as directed in the LANL Liquid Discharge Reporting Guidance (Decision Tree), dated March 10, 2009. Contact ADEM to confirm the location and potential impacts to SWMUs or AOCs from any releases that may occur.

Groundwater Discharge Permit Reporting

The Laboratory has four current Groundwater Discharge Permits (DPs) that include notification and reporting requirements in the event of an unpermitted discharge. Spills of **any volume** associated with any of the Groundwater DPs require reporting to NMED pursuant to 20.6.2.1203 NMAC.

1. **DP-857: Sanitary Waste Water System (SWWS) Plant, Sanitary Effluent Reclamation Facility (SERF), and Sigma Mesa Evaporation Basins. Permit Condition No. 44.**

   The unauthorized release of untreated and treated sanitary wastewater, reuse wastewater, blended wastewater, and reject wastewater would be subject to reporting under Condition No. 44.

2. **DP-1589: Septic Tank/Disposal Systems. Permit Condition No. 23.**

   The unauthorized release of untreated wastewater, septage, treated wastewater surfacing from failing disposal systems (leach fields), and treated wastewater surfacing from overflowing septic tanks would be subject to reporting under Condition No. 23.

3. **DP-1793: Land Application of Treated Groundwater. Permit Condition No. 17.**

   The unauthorized release of untreated or treated groundwater that does not constitute land application, as defined in EPC-CP-QP-010: Land Application of Groundwater, would be subject to reporting under Condition No. 17.

4. **DP-1835: Injection of Treated Groundwater to Class V Underground Injection Control (UIC) Wells. Permit Condition No. 22.**

   The unauthorized release of treated or untreated groundwater that does not constitute injection into a Class V UIC well, as defined in Discharge Permit DP-1835, would be subject to reporting under Condition No. 22.

Clean Water Act Reporting

Oil discharges (film/sheen/discoloration) to water in stream channels must also be reported to the National Response Center (NRC) immediately (within 15 minutes of discovery) pursuant to 40 CFR §110.6.

National Pollutant Discharge Elimination System (NPDES) Outfall Reporting

The EPC-DO on-call SME must provide notification to the NPDES Outfall Permit Program Lead and/or the EPC-CP Water Quality Team Leader in the event of a leak or unplanned release from an NPDES permitted outfall upon discovery in order to meet applicable reporting requirements.

4.7.1 Reporting Requirement for Petroleum Storage Tanks

As defined in 20.5.7 NMAC, the NMED requires verbal reporting within 24 hours of a petroleum product release from regulated tanks to the NMED Petroleum Storage Tank Bureau (PSTB) when there is:

- any suspected or confirmed release of regulated substances
- evidence of release of regulated substances
- unusual operational conditions (that would cause concern about a release)
- monitoring results that show loss from the system

Regulated tanks include those with a capacity between 1,320 gallons and 55,000 gallons. Regulated substances for Aboveground Storage Tanks includes, but is not limited to petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading and finishing, such as motor fuels (including ethanol-based motor fuels), jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

Notice of any suspected or confirmed release from a storage tank system needs to be completed within 24 hours. Contact the EPC-CP Aboveground Storage Tank (AST) Program Lead and/or the EPC-CP Water Quality Team Leader prior to completing any external notifications. The PSTB can be reached at 476-4397 during business hours and 827-9329 (NMED Emergency Spill Hotline) during non-business hours. A written report describing the spill, release or suspected release and any investigation or follow-up action needs to be submitted to the PSTB within 14 days of the incident.

4.7.2 Additional Reporting Requirements under the NPDES Pesticide General Permit

Adverse incidents require reporting to the EPA under the NPDES Pesticide General Permit (PGP). An adverse incident is defined as an unusual or unexpected incident resulting from pesticide applications that an Operator has observed upon inspection or of which the Operator otherwise becomes aware, in which:

1. There is evidence that a person or non-target organism has likely been exposed to a pesticide residue, and
2. The person or non-target organism suffered a toxic or adverse effect.

The phrase toxic or adverse effect includes effects that occur within Waters of the United States on non-target plants, fish, or wildlife that are unusual or unexpected (e.g., effects are to organisms not otherwise described on the pesticide product label or otherwise not expected to be present) as a result of exposure to a pesticide residue, and may include:

- Distressed or dead juvenile and small fishes
- Washed up or floating fish
- Fish swimming abnormally or erratically
- Fish lying lethargically at water surface or in shallow water
- Fish that are listless or nonresponsive to disturbance
- Stunting, wilting, or desiccation of non-target submerged or emergent aquatic plants
- Other dead or visibly distressed non-target aquatic organisms (amphibians, turtles, invertebrates, etc.)

The phrase toxic or adverse effects also includes any adverse effects to humans (e.g. skin rashes) or domesticated animals that occur either from direct contact with or as a secondary effect from a discharge (e.g., sickness from consumption of plants or animals containing pesticides) to Waters of the United States that are temporally and spatially related to exposure to a pesticide residue (e.g. vomiting, lethargy).

If an Operator observes or otherwise becomes aware of an adverse incident due to pesticide application, the Operator must notify the EPA Incident Reporting contact within 24 hours of the Operator becoming aware of the adverse incident. EPA Incident Reporting Contacts are listed at https://www.epa.gov/npdes/pesticide-permitting.

If an Operator becomes aware of an adverse incident affecting a federally listed threatened or endangered species or its federally designated critical habitat, which may have resulted from a discharge from the Operator's pesticide application, the Operator must immediately (within 15 minutes of discovery) notify the U. S Fish and Wildlife Service. This notification must be made by phone to the contact listed on the EPA's website (https://www.epa.gov/npdes/pesticide-permitting).

4.8 Determining if a Release is Reportable under CERCLA or EPCRA

Under CERCLA or EPCRA, an RQ is the threshold which requires regulatory notification of a release. An RQ is based on the quantity of chemical released within any 24-hour period. CERCLA RQs of hazardous substances are listed in 40 CFR § 302.4. If an RQ is met or exceeded, an immediate (within 15 minutes of discovery) notification must be made to the NRC (1-800-424-8802) pursuant to 40 CFR §302.6. If a release of an airborne radioactive material exceeds an RQ, the EPA Region 6 Health Physicist (Office-(214) 665-8541; Mobile-(214) 755-1530; Home-(972) 937-1900) must also be verbally notified after the NRC notifications have been completed.

A release is reportable under EPCRA if a release of a hazardous or extremely hazardous substance listed in 40 CFR Part 355 Appendices A and B occurs. The chemicals that have not been assigned RQs by the EPA have been given statutory RQs of one pound by Congress. If an RQ established under EPCRA is met or exceeded, an immediate (within 15 minutes of discovery) notification must be made to the Local Emergency Planning Committee (LEPC) community emergency coordinator and to the State Emergency Response Commission (SERC) (see Attachment 2).

The lists of CERCLA hazardous substances and EPCRA extremely hazardous substances are two separate lists that include a number of common substances. However, not all extremely hazardous substances are listed hazardous substances. In some instances, a release of an extremely hazardous substance may be reportable under EPCRA but not reportable under CERCLA.

Releases that occur within a closed space with no emissions to the ambient environment are exempt from EPCRA and CERCLA reporting requirements.

NOTE: Response procedures for "Continuous Releases" are not covered in this procedure.

4.8.1 Regulatory Classification of the Released Material

The on-call EPC SME will determine the regulatory classification of the substance released with respect to the hazard classifications:

- Extremely Hazardous Substance (EHS) and/or Hazardous Substance (HS)

Often during the course of an emergency, complete information will not be available regarding type and amount of material released. In this case, best professional judgment must be used to establish the level of confidence associated with the estimates. If the uncertainty is high enough that future

estimates may require reporting, it is best to be conservative and report the release following the reporting requirements detailed in Section 4.10 *Reporting a Release or Event*.

After determining the RQ of a released material, the EPC on-call representative or SME will perform the following steps to determine if an RQ has been released.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Obtain an estimate of the quantity and type of material released (e.g. 4 pounds of chlorine gas or 150 curies of tritium).</td></tr>
<tr><td>2</td><td>Compare this quantity against the RQs provided in 40 CFR Table 302.4 and 40 CFR §355, Appendices A and B.</td></tr>
<tr><td>3</td><td>If this is an airborne release of radioactive materials, immediate (within 15 minutes of discovery) reporting to the NRC and the EPA Region 6, Regional Health Physicist is required if the RQ has been exceeded. Note that for radioactive materials, the RQ is provided in activity units (curies or becquerels). Also note that some materials have an RQ value for both chemical exposure (Table 302.4) and for radiological exposure (Appendix B to §302.4). In these cases, the RQ applying to the smallest quantity of material will apply.

For all radioactive material releases, a radiological dose assessment must also be performed within 24 hours of the release. This dose assessment should be made by an environmental health physicist in EPC-CP or EPC-ES. The on-call individual should contact an EPC health physicist for this evaluation.

Immediate evaluation – RQ comparison (of a radioactive material release)

If the release… — Then…
Is equal to or greater than the RQ — Proceed to section 4.10 Reporting a Release or Event.
Is less than the RQ — No immediate reporting is required; contact EPC environmental health physicist to complete follow-up dose assessment.</td></tr>
<tr><td>4</td><td>If this is a release of non-rad material, it is reportable if the RQ is exceeded.

If the amount released is.., — Then…
Equal to or greater than the RQ — Proceed to Section 4.10 Reporting a Release or Event.
Less than the RQ — Proceed to Step 5</td></tr>
<tr><td>5</td><td>Continue to re-evaluate the release as new data becomes available. Perform Steps 1 through 4 as necessary.</td></tr>
</table>

4.9 Determining Release Impacts to Biological or Cultural Resources

There are laws and regulations related to protection of biological and cultural resources which are applicable to the Laboratory. These laws and regulations include:

- National Environmental Policy Act
- Endangered Species Act
- Bald and Golden Eagle Protection Act
- Migratory Bird Treaty Act
- New Mexico Wildlife Conservation Act
- New Mexico Endangered Species Act
- National Historic Preservation Act
- Native American Graves Protection and Repatriation Act
- Archaeological Resources Protection Act

Reporting of impacts to biological or cultural resources under the preceding federal laws is not specifically defined. However, the EPC on-call SME should utilize the Decision Support Application (DSA) to determine if the release impacted a Biological or Cultural Site. The DSA layer 'Federally Listed Species Habitat' contains Endangered Species habitat boundaries. The DSA 'Cultural Resources-Buffered Sites' layer contains the boundaries of the Cultural Sites (Please note-information contained in these layers is Official Use Only). Notify the respective Biological or Cultural SME within one business day if the release impacted either of these areas. The Biological or Cultural SMEs will handle any additional reporting requirements.

Additionally, if there is a release of contaminants to a wetland or destruction of a wetland, OR if the event could result in the "take" of a threatened or endangered species (i.e., a wildfire), the EPC on-call representative or SME will notify the Biological SME within one business day of the event. The Biological SME will complete any additional reporting requirements.

4.10 Reporting a Release or Event

If a release or event is reportable (as determined by one or more of the previous sections), the Laboratory is required to meet certain reporting requirements. The emergency notification requirements must be followed upon determination that a release or event is reportable.

For informational purposes, a Summary of Emergency Release or Event Reporting Requirements is provided in Attachment 2. This document summarizes the primary statutes and the associated reporting requirements.

Maintain a notebook to record pertinent information about the release and to document the actions taken (see Section 5.0 *Records*).

Any release to the environment that has been determined to be reportable by the EPC on-call representative or SME shall be reported through the LANL management chain in accordance with PD1200, *Emergency Management* and *P322-4, Performance Improvement from Abnormal Events*.

Los Alamos National Security (LANS) management and DOE shall be notified if a release notification to state or federal regulatory agencies is required. Management approval is not required prior to completing environmental notifications to the regulatory agencies in order to assure that the deadline for reporting is not exceeded.

Perform the following steps immediately after establishing that reporting is required:

Step	Action
1	Compile release information including : • The source, cause, type and quantity of the release • Time and duration of the release • Extent of any protective and corrective actions taken • Name, address, and telephone number of the person to contact for further information • Whether the substance is an HS or EHS • Associated health risks and medical attention necessary for exposed individuals • If available, information concerning the release of any hazardous and/or mixed waste which may endanger public or private drinking water supplies • Assessment of actual or potential hazards to human health or the environment outside the facility • If available, estimated quantity and disposition of recovered material that resulted from the incident • Precautions to take due to the release/event, including, in the case of fire, those associated with special hazards due to hazardous and/or mixed waste • Any other information which may help emergency personnel responding to the incident • Environmental media impacted from the release
2	Notify LANL management, DOE, and the respective Facilities Operations Division (FOD). Note: Management approval is not required prior to completing environmental notifications to the regulatory agencies in order to assure that the deadline for reporting is not exceeded.
3	Provide notification to the regulatory agency as required by the applicable regulation(s) detailed in Sections 4.5 - 4.9. Reference Attachment 2 for a summary of the applicable reporting requirements.
4	Notify programmatic SMEs that may be impacted or required to complete follow up reporting.

4.10.1 Steps to Notify LANL Management and DOE

The EPC on-call representative will complete the following steps to provide notification to LANL Management and DOE.

Step	Action
1	Determine that a release to the environment is reportable to state or federal entities as

	required under applicable regulations. **NOTE:** Occurrence Reporting and Procession System (ORPS) reporting is a FOD and Responsible Associate Director (RAD) responsibility and commonly they will seek advisement from EPC SMEs.
2	Provide notification to the EPC-CP Water Quality Team Leader, the EPC-CP Group Leader, the EPC-DO Division Leader, and DOE LAFO program contact of the release and the required external notifications.
3	Complete environmental reporting to state and federal agencies in accordance with all applicable regulations.
4	Notify the appropriate program SME that may be impacted or be required to complete following up release reporting.

After all the above notifications have been made, or when requested, the EPC on-call representative or SME will hand off responsibility for additional actions and follow-up to the affected environmental group. (The group that will be responsible will depend on the type and location of the release and the governing regulations or statutes.)

In order to communicate events at LANL which may impact the public and or the environment, EPC staff may provide a courtesy notification to New Mexico Environment Department of events that may not require formal regulatory notification. Examples of such events in the past have been small wild land fires.

5.0 RECORDS

The following records are generated as a result of this procedure and are maintained in accordance with ADESH-AP-006 Records Management Plan and P1020-1, *Laboratory Records Management*:

- Field documentation of the release, including:
    - Time and date of the release
    - Time, date, and description of notifications
    - Location and source of the release
    - Type of material released
    - Quantity of material released
    - Impacted media
    - Time release was stopped
    - Any immediate mitigation actions taken to contain or control the release
    - Documentation of any verbal notifications
    - Samples taken
- Copies of any written notifications generated

- Documentation of any analytical results, and quality assurance of results
- Contingency and / or emergency plan documentation
- Documentation of any RCRA permit non-compliance that threatens human health and environment
- Documentation of treatment of any RCRA unstable chemicals, leaking or compromised gas cylinders

6.0 DEFINITIONS AND ACRONYMS

6.1 Definitions

ADESH – Associate Directorate for Environment, Safety, and Health

ADEM – Associate Directorate for Environmental Management

AOC – Area of Concern

AST – Aboveground Storage Tank

CAA – Clean Air Act

CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act

CMR – Chemistry and Metallurgy Research

CFR – Code of Federal Regulations

Continuous Release – A release is continuous if it "occurs without interruption or abatement or if it is routine, anticipated, intermittent, and incidental to normal operations or treatment processes." The release must also be "stable in quantity and rate," which means that it must be predictable and regular in the amount and rate of emission. The response procedures for continuous releases are not covered by this document. See guidance in Reporting Continuous Releases of Hazardous and Extremely Hazardous Substances under CERCLA and EPCRA.

CWA – Clean Water Act

DOE LAFO – Department of Energy Los Alamos Field Office

DSA – Decision Support Application

Environment – Includes "water, air, land, and the interrelationship which exists among and between water, air, land, and all living things." (40 CFR 355.20)

EOC – Emergency Operations Center

EPA – Environmental Protection Agency

EPC-DO – Environmental Protection and Compliance Division

EPCRA – Emergency Planning and Community Right-to-Know Act

EPC-CP – Environmental Protection and Compliance Division Compliance Programs Group

EPC-ES – Environmental Protection and Compliance Division Environmental Stewardship Group

Extremely Hazardous Substance (EHS) – EPCRA establishes emergency reporting requirements for extremely hazardous substances in 40 CFR 355, Appendix A. All of these substances are also CWA and CERCLA "hazardous" substances.

FOD – Facility Operations Director

GWDP-Ground Water Discharge Permit

Hazardous Substance (HS) – These substances are summarized in 40 CFR Part 302. As used in this context, refers to: (1) any elements, compounds, mixtures, solutions, or substances specially designated by EPA under Section 311 of the Clean Water Act (CWA) (40 CFR 116.4); (2) any toxic pollutants listed under Section 307(a) of the CWA; (3) any hazardous substances regulated under Section 311 (b)(2)(A) of the CWA; (4) any listed or characteristic RCRA hazardous waste (40 CFR 261), (5) any hazardous air pollutants listed under Section 112 of the Clean Air Act (CAA); or (6) any imminently hazardous chemical substances or mixtures regulated under Section 7 of the Toxic Substances Control Act (TSCA).

IWD – Integrated Work Document

LANL – Los Alamos National Laboratory

LANS – Los Alamos National Security

LEPC – Local Emergency Planning Committee

NMAC – New Mexico Administrative Code

NMED – New Mexico Environment Department

NMWQA – New Mexico Water Quality Act

NMWQCC – New Mexico Water Quality Control Commission

NPDES – National Pollutant Discharge Elimination System

NRC – National Response Center

ORPS – Occurrence Reporting and Processing System

OSC – On-Scene Commander

PADOPS – Principal Associate Directorate Operations

PCBs – Polychlorinated Biphenyls

PGP – Pesticide General Permit

PST – Petroleum Storage Tank

PSTB – Petroleum Storage Tank Bureau

RAD – Responsible Associate Director

RCRA – Resource Conservation and Recovery Act

Release – Any unpermitted spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of contaminants into the environment, excluding: (1) emissions from the engine exhaust of any vehicle, (2) certain releases of source, byproduct, or special nuclear material from a nuclear incident, or (3) normal application of fertilizer.

RQ – Reportable Quantity

SARA – Superfund Amendments and Reauthorization Act

SDS – Safety Data Sheet

SERC – State Emergency Response Commission

SERF – Sanitary Effluent Reclamation Facility

SEO-DO –Security and Emergency Operations Division

SME – Subject Matter Expert

SWMU – Solid Waste Management Unit

SWWS - Sanitary Waste Water System

TSCA – Toxic Substances Control Act

UIC – Underground Injection Control

7.0 REFERENCES

The following documents are referenced in this procedure:

- 40 CFR 302, Designation, Reportable Quantities, and Notification
- 40 CFR 261, 264 Subpart D 270.30
- DOE guidance document PCB Spill Response and Notification Requirements
- (EH-231-059/1294), available on the EPC-CP web page
- DOE – Office of Environmental Guidance, CERCLA Information Brief, EH-231-001-0490 (April 1990)
- EPA Web Site: http://www.epa.gov/
- EPCRA Information Web Site: http://www.chemicalspill.org/EPCRA-facilities/spill.html
- Federal Register, Volume 67, No. 47, Notices FRL-7172-4, Guidance on the CERCLA Section 101(10)H, Federally Permitted Release Definition for Certain Air Emissions
- PD1200, Emergency Management
- P322-3, Performance Improvement from Abnormal Events
- LANL RCRA Permit No. NM0890010515-1
- LANL NPDES Permit No. NM0028355

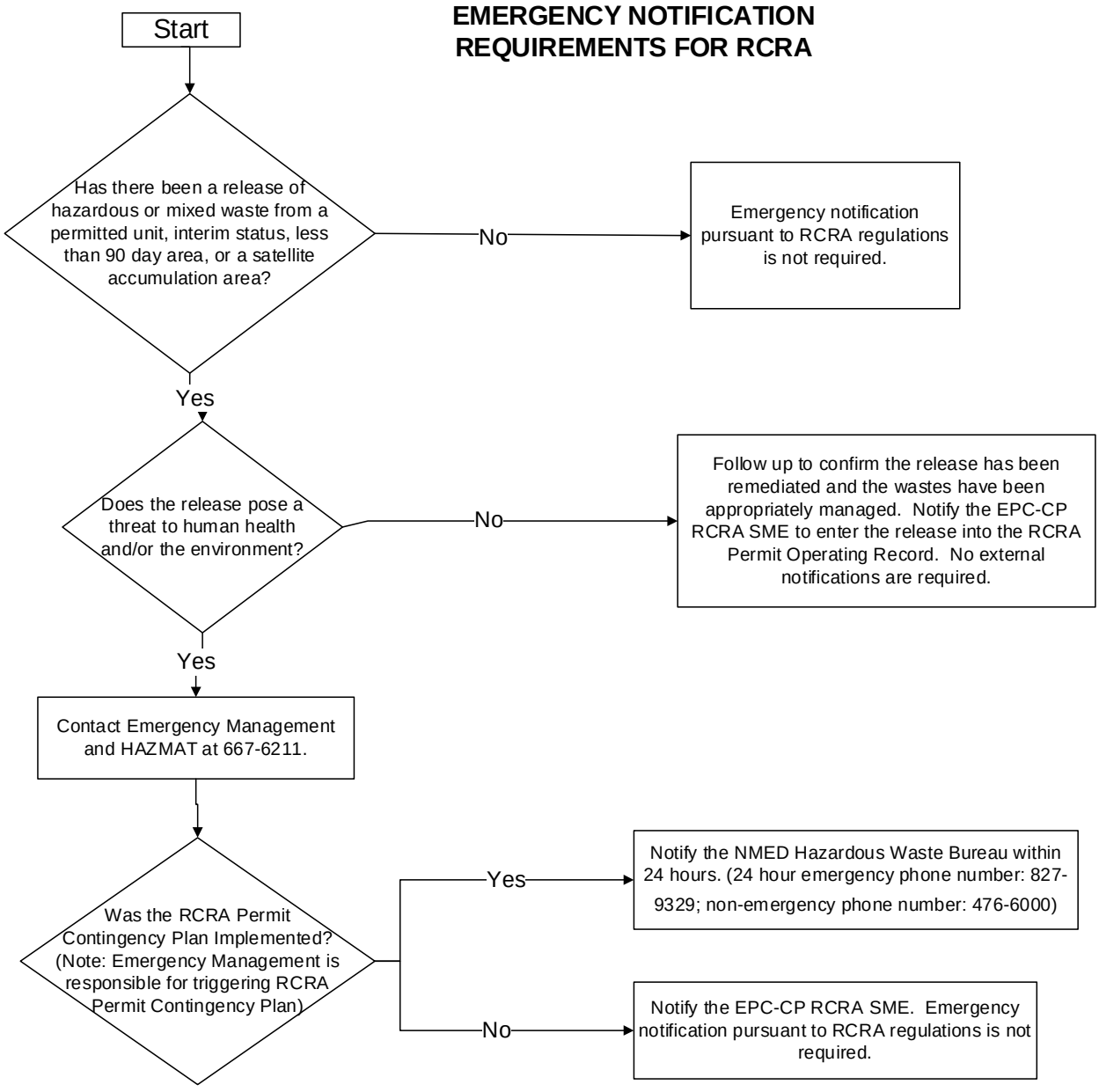
- National Response Center (NRC) Web Site: http://www.nrc.uscg.mil/
- NMWQCC Regulations, 20.6.2 NMAC, dated December 1, 2001
- P407, Water Quality
- P1020-1, Laboratory Records Management
- ADESH-AP-006, Records Management Plan

8.0 ATTACHMENTS OR APPENDICES

Attachment 1: Emergency Notification Requirements for RCRA

Attachment 2: Summary of Emergency Release or Event Reporting Requirements

Attachment 1: Emergency Notification Requirements for RCRA



Attachment 2: Summary of Emergency Release or Event Reporting Requirements

NOTE: This is only a guide and does not cover all federal, state, or permit reporting requirements. Refer to the Code of Federal Regulations and the RCRA Permit for more details regarding these regulations.

STATUTE	REGULATIONS	INCIDENT	Immediate Reporting Requirements	Follow Up Reporting Requirements
Clean Water Act	40 CFR §110.6	Oil discharge (film/sheen/discoloration) to water surface or shoreline, or violation of water quality standards.	Immediately (within 15 minutes of discovery) notify the National Response Center.	Follow-up not required.
Clean Water Act	Part III of NPDES Permit No. NM0028355	Leak or unplanned release from an NPDES permitted outfall.	Notify the NPDES Outfall Permit Program Lead and EPC-CP Water Quality Team Leader upon discovery. The program lead or the EPC-CP Water Quality Team Leader will complete initial reporting requirements as required.	Required follow up reporting will be completed by the NPDES Outfall Permit Program Lead and EPC-CP Water Quality Team Leader.
Clean Water Act (CWA)-NPDES Pesticide General Permit	40 CFR §122.28	Adverse incident which includes evidence that a person or non-target organism has been exposed to a pesticide residue or the person or non-target organism suffered a toxic or adverse effect.	Notify the EPA Region 6 Pesticide Permitting contact (214)665-7500 within 24 hours.	Submit a 30 Day Adverse Incident Written Report to the EPA Regional Office.
New Mexico Water Quality Control Commission Regulations (NMWQCC Regulations)	20.6.2.1203 NMAC	Discharge from any facility of oil or other water contaminant, in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or use of the property.	Notify the New Mexico Environment Department 505-827-9329 within 24 hours.	Submit 7 and 15 Day written follow up Corrective Action Reports (Copy EPA Region 6 on the 7 and 15 Day Reports).

STATUTE	REGULATIONS	INCIDENT	Immediate Reporting Requirements	Follow Up Reporting Requirements
New Mexico Water Quality Control Commission Regulations (NMWQCC Regulations)	20.6.2.3104 NMAC	Unplanned release of any volume from an activity or facility covered under an active Groundwater DP: DP-857: SWWS Plant, SERF, and Sigma Mesa Evaporation Basins DP-1589: Septic Tank/Disposal Systems DP-1793: Land Application of Treated Groundwater DP-1835: Injection of Treated Groundwater to Class V UIC Wells	Notify the New Mexico Environment Department 505-827-9329 within 24 hours.	Submit 7 and 15 Day written follow up Corrective Action Reports (Copy EPA Region 6 on the 7 and 15 Day Reports)
New Mexico Environmental Improvement Board Regulation	20.5.7 NMAC	A release of a petroleum product from regulated aboveground storage tank.	Contact the EPC-CP AST Program Lead and/or the EPC-CP Water Quality Team Leader prior to completing any external notifications. If required, the Petroleum Storage Tank Bureau (476-4397) or NMED Emergency Spill Hotline (827-9329) must be contacted within 24 hours.	A written report describing the spill, release or suspected release and any investigation or follow-up action needs to be submitted to the PSTB within 14 days of the incident.
Comprehensive Environmental, Response, Compensation, and Liability Act (CERCLA)	40 CFR §302.6(a)	Hazardous substance (listed in 40 CFR Table 302.4) release (Equal to or greater than an RQ).	Immediately (within 15 minutes of discovery) notify the National Response Center 1-800-424-8802.	Follow-up not required.
Emergency Planning and Community Right- to-Know Act (EPCRA)	40 CFR§ 355.40	Release of an extremely hazardous substance (listed in 40 CFR Part 355 Appendices A and B) or CERCLA hazardous substance (listed in 40 CFR Table 302.4) equal to or greater than RQ.	Immediately (within 15 minutes of discovery) notify the LEPC (505-662-8283) the SERC (505-476-9635). Immediately notify the 911 operator for a release that occurs during transportation or from storage incident to transportation.	A written follow-up emergency notice must be submitted to the LEPC and SERC as soon as practicable after the release.

STATUTE	REGULATIONS	INCIDENT	Immediate Reporting Requirements	Follow Up Reporting Requirements
Resource Conservation and Recovery Act (RCRA)	40 CFR 262.34, 263.30, 264.51, 264.56 & .196, 265.51, .56 & .196, 270.14, & .30, 273.17, .37 & .54, 279.43 & .53, 280.50, .52, .53, .60, &.61	Release of hazardous or mixed waste from a permitted unit, interim status, less than 90 day area or a satellite accumulation area which the RCRA Permit Contingency Plan was triggered.	Notify NMED Hazardous Waste Bureau within 24 hours (24 hour emergency phone number: 827-9329; Non-emergency phone number: 476-6000) See Attachment 1 for additional details.	Submit written report to NMED HWB within 5 days.
Clean Air Act/ Radionuclide NESHAP	40 CFR 61, Subpart H	Airborne release of radioactive material in excess of an RQ.	Notify the EPA Region 6 Health Physicist (Office- (214) 665-8541; Mobile- (214) 755-1530; Home – (972) 937-1900) immediately after providing notification to the NRC.	Follow-up not required.
Toxic Substance Control Act (TSCA)	40 CFR 761.120, 761.125	Over 1 pound by weight of PCBs (TSCA) or greater than 270 gallons of untested mineral oil suspected of containing PCBs.	Contact the National Response Center (1-800-242-8802) and the EPA Region 6 Office of Prevention, Pesticides, and Toxic Substances Branch (1-866-372-7745) as soon as possible after discovery, but no later than 24 hours after discovery.	Within 24 hours. Follow-up: as required by agency.

ATTACHMENT 23: SITE SPECIFIC PROCEDURES AND 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.

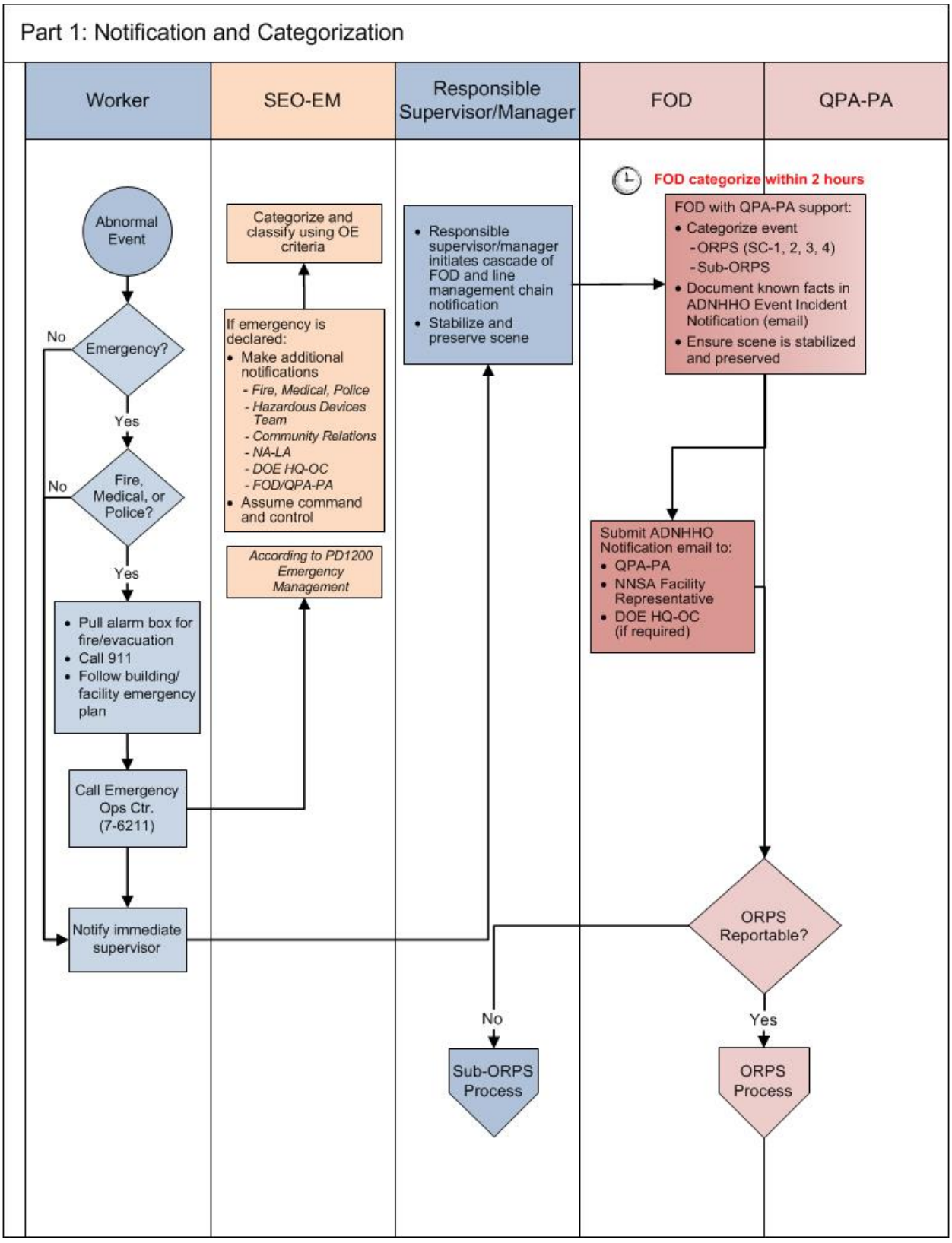
13.0 ATTACHMENTS

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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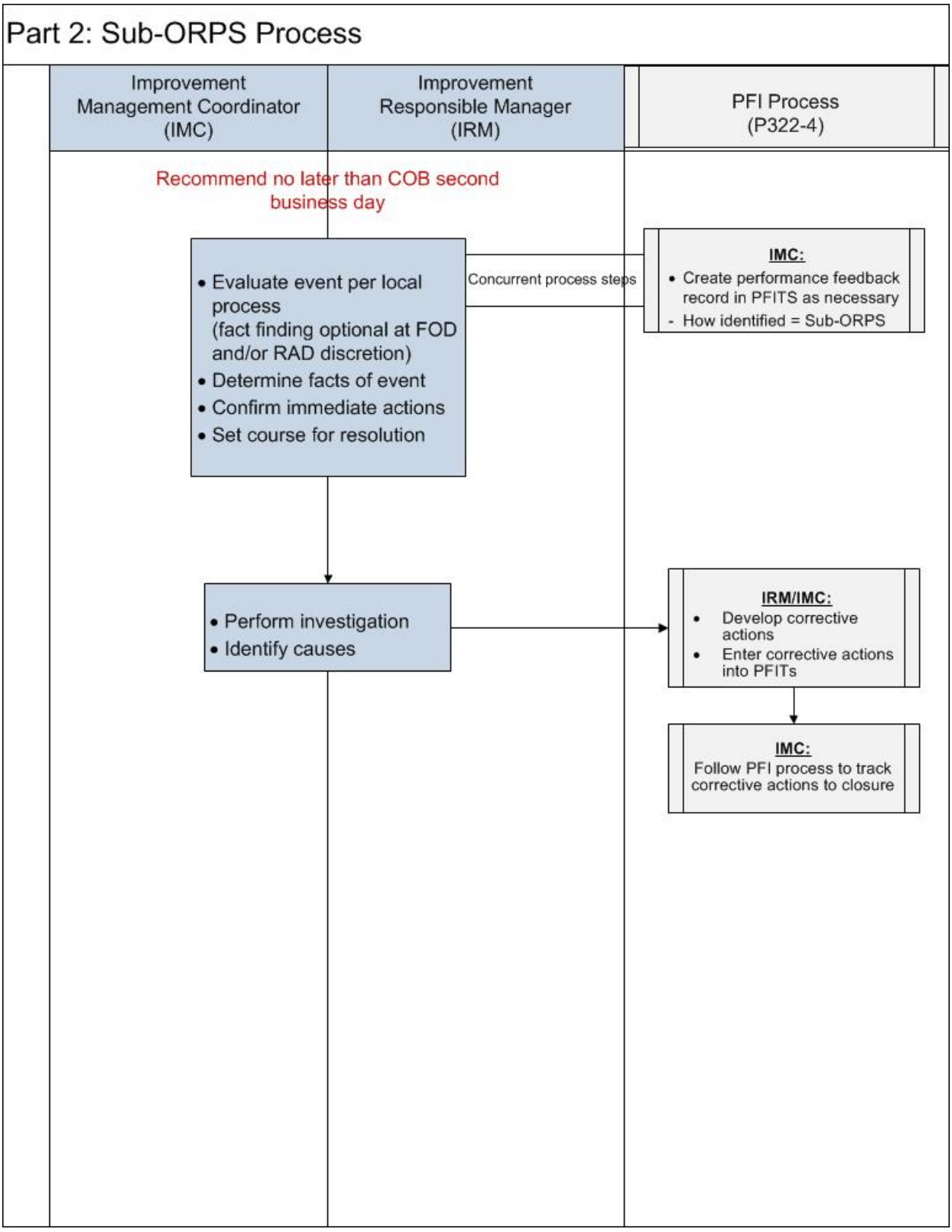

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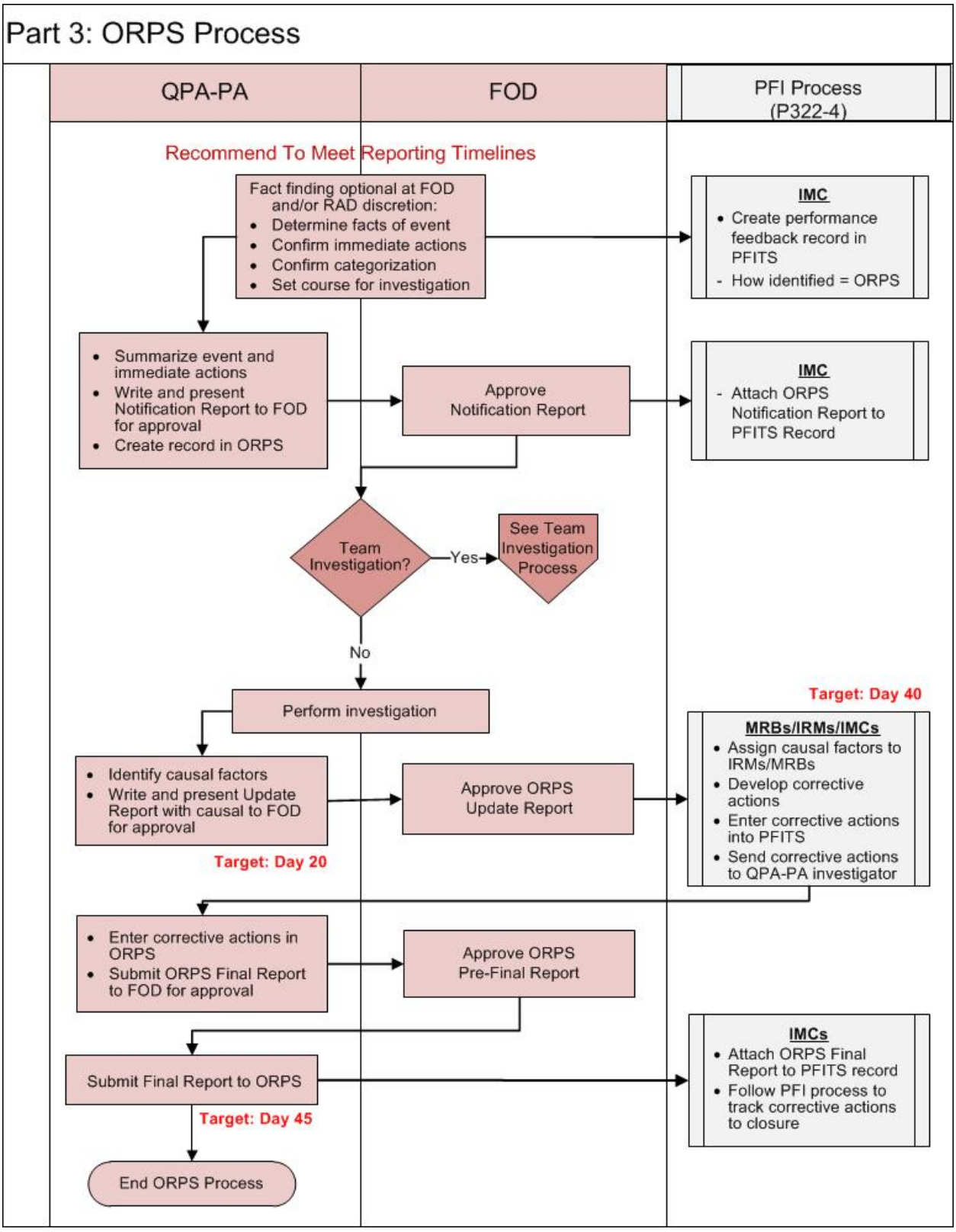

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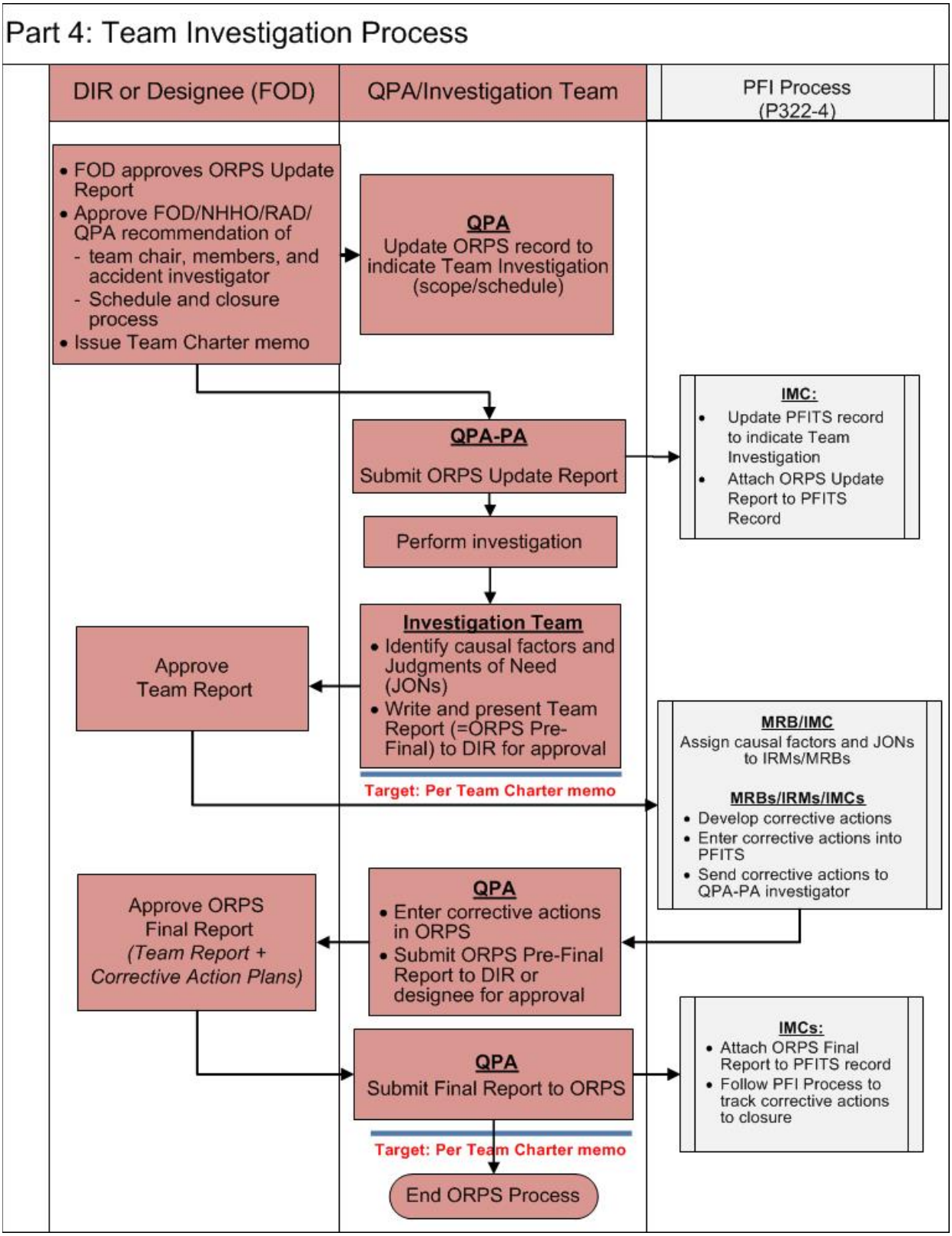

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