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MSGP Stormwater Pollution Prevention Plan

TA-16 Stockpile Area

Triad National Security, LLC
Los Alamos National laboratory

March 2020
Revision 0

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TA-16 Stockpile Area
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. The SWPPP uses the industry specific permit requirements for Sector P: Land Transportation and Warehousing 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-16 Stockpile Area within Weapons Facility Operations (WFO) Facility Operations Directorate (FOD) 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 "facilities" refers to the TA-16 Stockpile Area. The current MSGP expires at midnight on June 4, 2020.

1.0 FACILITY DESCRIPTION

1.1 Facility Information

Name of Facility: TA-16 Stockpile Area		
Street: PO Box 1663		
City: Los Alamos	State: NM	ZIP Code: 87545
County: Los Alamos		
NPDES ID (i.e., permit tracking number): NMR050013		
Primary Industrial Activity Sector and Subsector (2015 MSGP, Appendix D and Part 8): Sector P, Subsector P1		
Estimated area of industrial activity at site exposed to stormwater: 1.2 acres		
Discharge Information		
Name(s) of surface water(s)/segment that receives stormwater from your facility: Cañon De Valle (within LANL) Below LANL Gage E256		
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: Adjusted Gross Alpha		

Pollutants causing the impairment (see above) that may be present in industrial stormwater discharges from this Facility: Adjusted Gross Alpha
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 (PPT)

The TA-16 Stockpile Area is part of the Weapons Facility Operation (WFO) Facility Operations Division (FOD) 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 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
Group Leader Robert Stokes, Group Leader, Deployed Environment, Safety and Health (DESH)-WFO	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 also ensures adequate resources are obtained to ensure compliance requirements of the MSGP and this SWPPP are met.
Deployed Environmental Professional (DEP) Kelkenny Bileen, DESH-WFO	Responsible for the support and oversight of all environmental programs and issues for the TA-16 Stockpile Area. The DEP is responsible for training, recordkeeping, and SWPPP revision. The DEP ensures that all PPT, operations site workers (as appropriate), and applicable supervisors receive annual MSGP and SWPPP training. The DEP ensures documentation of inspections 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 and regularly communicates with facility and operations personnel and the PPT regarding implementation of the MSGP and this SWPPP. Lastly, the DEP conducts routine facility inspections and if necessary, visual assessments, in accordance with the Permit. Identified conditions requiring corrective actions from routine facility inspections are entered into the Environmental Protection and Compliance-Compliance Programs (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. The DEP is also responsible for immediate and timely communication to appropriate facility and

	operations management personnel to ensure that they are aware of non-compliant issues within the MSGP facility boundary and that they understand immediate action is required to correct the non-compliance.
FOD Manager/Representative John Branch, Operations Manager, WFO-HE	Responsible for managing the operation and maintenance of all aspects of the TA-16 Stockpile Area 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 WFO FOD propose a new process or a new site or operation that may be subject to the MSGP. The FOD Manager/Representative is key to ensuring adequate communication and coordination of issues regarding implementation of the MSGP and this SWPPP.
EPC Core Holly Wheeler, MSGP Program Lead, EPC-CP	The MSGP Program Lead is responsible for managing and administering the MSGP Program for all industrial facilities operated by Triad within Los Alamos National Laboratory. The MSGP Program Lead advises and provides guidance to facility and operations personnel on NPDES MSGP regulations/requirements. The MSGP Program Lead also acts as the institutional point of contact for all interactions with the regulatory authority (EPA) and supervises personnel implementing stormwater monitoring requirements for the facility.
Facility Staff Randy Archuleta, Logistics Superintendent Field Work Execution (LOG-SUP)	Responsible for day-to-day operations at the facility. Assisting DEPs and EPC with inspections; spill reporting; implementing, installing and maintaining stormwater controls (also known as Best management Practices) (BMPs); and providing documentation as requested by other team members. The Superintendent is key to ensuring adequate communication and coordination of issues regarding implementation of the MSGP and this Plan. The Superintendent also assists the DEP/EPC with SWPPP training and/or briefings, as requested.

1.3 Site Description

Activities associated with the TA-16 Stockpile Area fall under Industrial Sector P, Land Transportation and Warehousing, of the 2015 MSGP.

The TA-16 Stockpile Area includes two industrial activity areas: 1) the material storage area where construction materials (sand, gravel, rock, base course, soil and clean fill) are staged, and 2) the pothole washout area where two containment basins are located to manage pothole washout water and associated sediment. The 1.2 acre TA-16 Stockpile Area is 0.9 miles east of TA-16-0969 WFO-Division Office, on the east side of K-Site Road. Activities include the following:

- Storage of trucks and heavy equipment used to transport/haul material.
- Staging of soil or clean fill prior to reuse.
- Potholing washout and culvert cleanout area.
- Storage of sand, gravel, rock, base course, and other landscaping materials related to grounds keeping, road maintenance and construction.

The area surrounding the TA-16 Stockpile Area (formerly, TA-16-280) is primarily undeveloped except for the paved K-Site Road located west of the site. Areas within the TA-16 Stockpile Area are stabilized with base course, pavement and native vegetation. The boundary of industrial activity is approximately 1.2 acres with 10 percent impervious cover. Earthern berms serve as perimeter controls to prevent offsite sediment migration from the material storage area. Bermed catchment basins serve as containment controls for the potholing staging area. Monitored outfall 078 is located on the northwest corner of the site on the spillway for the earthen berm perimeter control. There are no substantially identical outfalls for this facility.

1.4 General Location Map

The general location map for the facility can be found in Figure A. Figure B-1 contains the site map and identifies the receiving water associated with stormwater discharges from the facility. 100% percent of the site flows to Canon de Valle. The canyon at this location is an ephemeral stream and eventually flows to the Rio Grande approximately nine and a half miles southeast of the site.

1.5 Site Map

The site map provided as Figure B-1 illustrates the facility's activities including the facility boundary, structures, impervious surfaces, industrial activity areas, spills, operational areas, and drainage patterns, stormwater controls, monitoring locations, outfalls and direction of the receiving stream.

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

- **Site boundary and acreage.** The site covers approximately 1.2 acres.
- **Significant structures and impervious surfaces.** The site is 10 percent impervious (pavement).
- **Direction of stormwater flow and site drainage.** Direction of flow is indicated with arrows. Areas have been regraded to ensure stormwater flows are directed from the stockpile area toward monitored outfall 078 and the perimeter berm located along the northwest perimeter of the site. The containment basins in the pothole washout area promotes infiltration and prevent discharge of sediments to the surrounding area. The earthen berm located southeast of the stockpile area acts to manage run-on from the slope to the south and manage sediments along the southern boundary of the stockpile area, next to former outfall and associated drainline [AOC 16-030(d)]. Run-on from K-Site Road is managed by a vegetated swale that directs flows to the north, along the western boundary of the site.
- **Locations of stormwater control measures.** The earthen berm located along the northwestern perimeter of the stockpile area manages runoff and acts to prevent offsite sediment migration. The earthen berm located southeast of the stockpile area acts to manage run-on from the slope to the south and manage sediments along the southern boundary of the stockpile area. The containment basins located in the pothole washout area along the southern boundary of industrial activity, manage sediments and pothole washout water. Run-on from K-Site Road is managed by a vegetated swale that directs flows to the north, along the western boundary of the site.
- **Locations of all receiving waters.** The site discharges to a tributary of Canon de Valle which is impaired for Adjusted Gross Alpha. TMDLs for the receiving waters are not established and wetlands are not present. A map of nearby receiving waters is provided as Figure 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** Monitoring is conducted via automated sampler MSGP07801 at monitored outfall 078 (northwest corner of the boundary of industrial activity, north of earthen berm #1600103010001). There are no substantially identical outfalls associated with this site.
- This facility is currently not associated with a municipal separate storm sewer system (MS4).
- **Areas of designated critical habitat for endangered or threatened species.** There are no areas in the direct vicinity of the facility. However, a map for threatened and endangered species within LANL property is included as Figure B-3.
- Locations of the following activities where such activities are exposed to precipitation:
    - Material Storage Area (storage and loading/unloading of sand, gravel, rock, base course, related to road maintenance and construction and storage of trucks and heavy equipment used to transport/haul material);
    - Pothole Staging Area (loading/unloading of pothole washout water and culvert cleanout water into the containment basins); and
    - Immediate access roads (used or traveled by carriers of raw materials and pothole washout culvert cleanout water).

2.0 POTENTIAL POLLUTANT SOURCES

Industrial activities that could potentially result in releases to the environment are summarized in Section 2.1 below. The site map for the facility is provided in Figure B-1.

2.1 Potential Pollutants Associated with Industrial Activity

Storage of Trucks and Heavy Equipment for Material Loading and Unloading

Potential pollutants for this activity include spills of fuel, oil, grease, fluids (transmission and hydraulic), and anti-freeze and associated heavy metals. Perimeter berms are installed in strategic locations to contain spills in the event a leak involving a potential pollutant occurs.

Material Loading/Unloading Operations

Front-end loaders are used to load and unload sand, soil, clean fill, base course and rock in the material storage area. Dust is a potential pollutant of concern from this operation and is controlled, as needed, by wetting the materials with a water truck. Other potential pollutants of concern from this equipment include leaks and spills (i.e. hydraulic fluids or diesel fuel) from loading and unloading trucks. On site containment berms and spill response protocol ensure all spills are managed appropriately.

Raw Material Storage Area

The potential pollutant associated with this activity is offsite migration of sediment. Perimeter berms are installed in strategic locations to manage stormwater runoff and prevent sediment migration.

Pothole Staging Area

Potholing washout and culvert cleanout water is screened to verify it is from area free from contamination. The potential pollutant is offsite migration of sediment. One primary containment basin and a reserve containment basin function to contain, infiltrate, and evaporate pothole washout and

culvert cleanout water. Sediments are removed as needed to ensure the catchments have adequate capacity to manage pothole washout and culvert cleanout water. Other potential pollutants include leaks or spills of fuel, oil, grease, fluids (transmission and hydraulic), anti-freeze and associated heavy metals from heavy equipment performing work in the area. In the event a leak is identified, LANL spill response protocol is followed (i.e., on-site spill response kit and notifications) as specified in Section 3.1.4.

Clean Fill Material

Clean fill is defined in the LANL policy "Excavation/Fill/Soil Disturbance," Policy Number P-101-17, as uncontaminated, non-water-soluble, non-decomposable inert solid material. Fill material (concrete and/or asphalt from LANL decontamination and decommissioning efforts or other projects) or soil used as fill material at LANL must be demonstrated to be free of contamination, must not be placed in a watercourse, and must not create a public nuisance or impact the environment.

Clean fill used in accordance with P101-17 is not managed as waste and therefore, not subject to waste management regulations. The use of clean fill includes the transportation, processing, storage, management and reuse.

Environmental due diligence is performed to determine whether material can be managed as clean fill, or will be managed as waste in accordance with applicable waste management regulations. If any of the following indicators are present, the material may contain potential pollutants.

- Operations conducted at the location of origin that may have resulted in contamination of the fill material or soil [e.g., operations within the High Explosives corridor, within an open detonation blast radius, beryllium contamination area, area potentially contaminated with depleted uranium, or soil taken from outside of Phermex, or potential release sites (also known as Consent Order Site)];
- Visual examination identifies signs of staining;
- Material removed from potentially radioactively-contaminated areas; or
- Unusual odors or other indicators of contamination are detected.

If there is a possibility that the material may contain potential pollutants, contact the Sample Management Office (SMO) at Sample_Managment@lanl.gov and request assistance with sampling and analysis of the material.

If the following occurs, the material is appropriate for acceptance at the TA-16 Stockpile Area and may be reused within WFO-FOD as clean fill.

- Evaluation of the material is approved per Attachment 26.
- If potential pollutants may be present in the material, representative samples will be collected and analyzed for all potential pollutants. If none are present in the material or are present at or below background concentrations.

If it is determined that the material is contaminated, it will be managed as waste in accordance with applicable waste management regulations and P-409. Contact the assigned Waste Management Coordinator for assistance.

NOTE: Clean fill does not include decomposable material such as land clearing wood and other materials.

If a project requires fill or material transfer, and the original Excavation Permit (EXID) does not include it in the scope of work, a separated EXID must be requested. Prior to transfer of material to the TA-16 Stockpile Area, obtain concurrence from the FOD/designee (at the receiving location) in the form of written approval on an EXID. Material moving from any TA within WFO FOD other than TA-16 will require approval on the EXID. Prior to releasing fill material or soil for use outside of the LANL facility boundary, the Project Coordinator, PIC, or FOD/designee will submit to Environmental Protection Division, Waste Management Programs Group (667-6259) documentation establishing that the material or soil is not contaminated and obtain approval or submit a Waste Steam Profile for approval prior to off-site disposition of this material.

Do not abandon excavated material, debris or equipment onsite at LANL because doing so is considered mismanagement and abandonment of waste.

Other Potential Pollutant Sources

The following two areas Solid Waste Management Unit (SWMU) or Consent Order Site 16-003(h) and Area of Concern (AOC) 16-030(d) are located within the boundary of industrial activity for the TA-16 Stockpile Area. Earthen berm (#1600103010002) located south of the stockpile area manages sediment and runoff from the southern portion of the site. Therefore, it is unlikely that SWMU 16-003(h) and AOC 16-030(d) would be impacted by stormwater runoff generated from the site.

- 16-030(d) – Former NPDES-permitted outfall [Environmental Protection Agency (EPA) 05A061] and associated drain line formerly connected to (HE) sump 16-003(h). Decision-level data for SWMU 16-030(d) consists of results from 11 samples collected at 7 locations in 1995 at and down gradient of the AOC 16-030(d) outfall. The 2006 investigation work plan concluded the nature and extent of contamination have not been defined and additional sampling is recommended. Human health and ecological risk assessments have not been conducted since the nature and extent of contamination have not been defined. All detected inorganic chemical concentrations are below residential soil screening levels (SSLs) except chromium, which was detected above the residential SSL in one sample. Numerous organic chemicals were detected in the 1995 samples; nine SVOCs [(polyaromatic hydrocarbons (PAHs)] were detected at concentrations above residential and construction worker SSLs.
- 16-003(h) – Inactive high explosive (HE) sump. Decision-level data for SWMU 16-003(h) consists of results from 11 samples collected at 7 locations in 1995 at the site and downgradient of the AOC 16-030(d) outfall. The 2006 investigation work plan concluded the nature and extent of contamination have not been defined and additional sampling is recommended. Human health and ecological risk assessments have not been conducted since the nature and extent of contamination have not been defined. All detected inorganic chemical concentrations are below residential SSLs except chromium, which was detected above the residential SSL in one sample. Numerous organic chemicals were detected in the 1995 samples; nine SVOCs (PAHs) were detected at concentrations above residential and construction worker SSLs.

2.2 Spill and Leaks

The TA-16 Stockpile Area facility is new. As such, no spills or leaks have occurred. Therefore, there is no information contained in Table 1A below.

Table 1A: Spill and Leak History

Date	Description	Outfall(s) Affected

Table 1B: – Areas Where Spills/Leaks Could Occur

Specific Equipment/Industrial Activity Areas and Location	Outfall Affected
Material Storage Area	078
Pothole Washout Area	N/A

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 (see Table 1A above). In addition, spills within MSGP facility boundaries will be entered as conditions requiring corrective action in the MSGP CAR database and will be updated as corrective action occurs, in accordance with EPC-CP-QP-022, *MSGP Corrective Actions*.

The probability of spills or releases at the facility is minimized by the application of good housekeeping procedures and appropriate operational methods. Appropriate response measures for a spill or release of hazardous materials are applied when addressing spills. The specific spill response and cleanup process depends on the nature of the spilled material. Specific spill response and reporting procedures for LANL are listed in Section 3.1.4.

2.3 Unauthorized Non-Stormwater Discharges

NPDES non-stormwater discharges, unpermitted outfalls, or unauthorized discharges associated with the facility are not anticipated. There are no potential sources of non-stormwater discharges (e.g., testing of fire hydrants) identified at the site. The “Non-Stormwater Discharge Assessment and Certification” is located in Attachment 3. This form certifies that the facility and stormwater outfall has been evaluated for the presence of non-stormwater discharges. This form is updated whenever a change in possible non-stormwater discharges is determined**.**

2.4 Salt Storage

No salt storage or piles that contain salt are present at the facility.

2.5 Historical Data Summary

CY 2020

The TA-16 Stockpile Area is a new facility. Thus, there is no historical data. Monitoring will start at this facility in April, 2020.

3.0 STORMWATER CONTROL MEASURES

Control measures at the facility are designed to minimize the potential release of pollutants that could adversely affect water quality. Perimeter sediment controls for material storage consist of earthen berms installed along the northwest and southern portions of the industrial activity area. These berms are strategically located to intercept runoff from the stockpiles and manage sediment and other potential pollutants from potential spills generated from heavy equipment or trucks used to transport, load and unload material. The run-on control at the material storage area consists of a vegetated swale located east of K-Site Road which functions to intercept sheet flow from the paved surface and convey flow to the north, away from the material storage area. Erosion controls for the material storage area include existing vegetation, base course, and pavement that function as stabilization for all surfaces impacted by the TA-16 Stockpile Area activities. Two catchment basins located in the pothole washout area located on the southern perimeter of the industrial activity boundary function to contain, infiltrate and promote evaporation for pothole washout and culvert cleanout water.

3.1 Non-Numeric Technology-Based Effluent Limits

Specific non-numeric technology-based effluent limits for Sector P are identified below.

Good Housekeeping

Refer to Section 3.1.2 below. None of the following occur at this facility.

- Fueling;
- Vehicle and equipment cleaning; or
- Vehicle or equipment maintenance.

Vehicle and Equipment Storage Area

- Only well maintained vehicles and heavy equipment are stored at the TA-60 Stockpile Area. Drip pans are placed under any vehicle/heavy equipment found to be leaking and it is then sent off for maintenance. Any identified spills or leaks are managed in accordance with Section 3.1.4.

Material Storage Area

- Gravel, rock, base course, sand, soil and clean fill are transported, unloaded, staged and loaded in this area. Heavy equipment and trucks are used to facilitate this operation.

Potholing Staging Area

- This area consists of two catchments used to place pothole washout materials. These catchments function to infiltrate and facilitate the evaporation of the pothole washout water. Sediments are removed once the catchments are filled to seventy-five percent capacity. Heavy equipment and trucks are used to facilitate this operation. Sections 3.1.5 and 3.1.6 describe how non-numeric limits area met.

Non-numeric technology-based effluent limits for all industrial sectors are identified in the following subsections.

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. Section 3.0 “Stormwater Control Measures” identifies the structural controls specific to the two industrial activity areas at the facility. Spill response to leaks from heavy equipment or vehicles used to transport and load/unload material is described in Section 3.1.4, *Spill Prevention and Response*.

3.1.2 Good Housekeeping

Good housekeeping practices specifically applicable to the prevention of stormwater contamination include the following measures:

- All site areas are walked down during daily operations and quarterly routine facility inspections to ensure that the grounds are kept in an orderly condition. The entire site, including loading/unloading areas, the potholing staging area, and the outfall, are inspected for floatable debris, garbage, waste and all other potential pollutants.
- During loading and unloading operations at the material storage area, all vehicles and equipment are confined to the designated boundary of industrial activity to prevent impact to existing vegetation at the site. Stockpiles are managed by the perimeter earthen berms in order to minimize the potential for off-site sediment migration. Base course stabilization is maintained at all times to minimize the potential for tracking onto K-Site Road. If tracking is observed, sweeping will be performed by close of business that day.
- The potholing staging area catchments are inspected during daily operations and quarterly routine facility inspections to determine whether adequate capacity is available to prevent overflow conditions in the event of a precipitation event. Twenty-five percent of the total catchment capacity will be available at all times to accommodate precipitation and prevent inadvertent discharge of pothole or culvert cleanout water. Inspections are conducted when the catchments are dry to assess sediment accumulation and to determine if sediment removal is required. Base course stabilization along the surfaces of the access road to the catchments is maintained at all times to minimize the potential for tracking onto K-Site Road. If tracking is observed, sweeping will be performed by close of business that day.
- Trucks and heavy equipment used to transport, load, and unload material staged at the material storage area are properly maintained to minimize the potential for leaks. During daily operations and quarterly, inspections are conducted to check for spills or leaks and the facility procedure (WFO-IWD-0016, *Spill Response and Clean Up in Weapons Facilities Operations (WFO) Areas)* is followed if a leak is discovered. Heavy equipment repair and maintenance is never performed at this site.
- Garbage and floatables are routinely picked up by facility personnel. Garbage containers are not staged at this site.

3.1.3 Maintenance

Control measures at the facility are kept in effective operating condition by the implementation of scheduled preventive maintenance, standard operating procedures (SOPs), and engineering guidance. If control measures need to be replaced or repaired to maintain compliance with the 2015 MSGP, corrective action is taken in accordance with the timelines specified in the *Corrective Action and Deadlines* requirements in Section 6.0 of this SWPPP.

Deficient items identified during routine facility inspections, walk-downs, or by any other means of identification, are documented on the routine facility inspection forms and entered into the MSGP CAR database. The condition requiring corrective action will remain open until proper maintenance or corrective action has been completed. CAR information, along with documentation of maintenance/repair of control measures, is in Attachment 9 of the SWPPP.

Trucks and heavy equipment used to transport, load, and unload material staged at the material storage area are properly maintained to minimize the potential for leaks. During daily operations and quarterly, inspections are conducted to check for leaks and the facility procedure is followed if a leak is discovered.

The pothole washout area catchments are inspected during daily operations and quarterly routine facility inspections to check for adequate capacity to prevent overflow conditions in the event of a precipitation event. Twenty-five percent of the total catchment capacity will be available at times to accommodate precipitation and prevent inadvertent discharge of pothole or culvert cleanout water. Routine facility inspections are conducted when the catchments are dry to assess sediment accumulation and to determine if sediment removal is required. If sediments/solids/ are removed they are managed, characterized, and disposed of in accordance with the applicable LANL waste management policies and procedures, unless the material can be demonstrated to be free of contamination. If the sediments/solids are free of contamination and other trash, the material may be used as clean fill at WFO FOD (see Section 2.1 and Attachment 26 for additional information regarding the management of clean fill material.

Earthen berms located around the perimeter of the material storage area are inspected during daily operations and quarterly routine facility inspections.

3.1.4 Spill Prevention and Response

Spills, leaks, or other releases are minimized and/or prevented by maintaining heavy equipment and trucks, staged at the material storage area, on a regular basis and inspecting for leaks daily during operations and quarterly during routine facility inspections. The approach to spill cleanup within WFO is provided in Attachment 24. This procedure is for cleanup of spills deemed a non-emergency (or identified as simple spills) by Emergency Management Division-Emergency Response (EMD-ER) and EPC-CP. Spills are categorized as either simple spills or complex spills. Simple spills are defined as ones that do not spread rapidly, do not endanger people or property (except by direct contact), do not endanger the environment, and do not involve fire or an explosive condition or the potential for such. All other spills are identified as complex spills and require assistance from the Emergency Operations Support Center (EOSC). Simple spills are cleaned up by knowledgeable chemical workers (workers with knowledge of the chemical, appropriate training, material and PPE needed to clean the spill). For incidental releases, Micro-Blaze® or dry absorbents can be used and spill clean-up materials are containerized and managed as waste.

All complex/emergency spills or releases are reported to the EOSC by calling 667-2400 and the Facility Duty Officer by dialing pager number 664-2926 and 664-4100 for RCT support (if needed). All spills or releases are reported to EPC-CP by using the spills pager (505) 664-7722. If fire or explosion is present, or if the potential for such exists, the situation is reported by dialing 911 from a non-cellular phone or by activating a fire pull box. In the event of a spill, EMD-ER will coordinate appropriate cleanup procedures and EPC-CP will notify the individuals or organizations responsible for completing spill reports and providing information needed to fulfill regulatory reporting requirements.

Unauthorized releases or discharges within industrial facility boundaries are entered into the MSGP CAR database in accordance with EPC-CP-QP-022, *MSGP Corrective Actions*. In addition, the completion of an Unplanned Release Report is required in the event of a spill. The report is 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 and/or written notification to the National Response Center, Environmental Protection Agency Region VI, or the New Mexico Environment Department (NMED). EMD-ER, the FOD and EPC-CP, in accordance with Laboratory and DOE policies and federal and state regulatory reporting requirements, will make the determination for the type of reporting required. EPC-DO-QP-101, *Environmental Reporting Requirements for Releases or Events* is used for this purpose (see Attachment 21).

Copies of internal spill reports are maintained by the responsible organization and in the EPC-CP database. The EPC-CP procedure for spill reporting and response, ENV-CP-QP-007*, Spill Investigations,* can be found in Attachment 22 of this SWPPP.

3.1.5 Erosion and Sediment Control

Erosion at the site will be controlled through the preservation of existing native vegetation and the installation and maintenance of base course stabilization along access areas and material storage areas where stockpiles are staged. Sediment control perimeter berms and pothole washout and culvert cleanout catchments function to retain sediments and prevent offsite sediment migration.

3.1.6 Management of Runoff

Runoff from the site is minimized through preservation of existing vegetation and stabilization measures involving impervious material such as base course. Run-on is minimal at the site as all flows generated from K-Site Road are captured by the vegetated swale located along the western perimeter of the industrial activity boundary. Runoff is managed by perimeter berms located on the southern and northwestern perimeters of the site.

3.1.7 Salt Storage Piles or Piles Containing Salt

No salt storage or piles containing salt are present at the facility.

3.1.8 Dust Generation and Vehicle Tracking of industrial Materials

Dust generation and vehicle tracking are controlled with pavement/base course stabilization, street sweeping and or dust suppression with potable water.

3.2 Numeric Effluent Limitations Based on Effluent Limitations Guidelines

This facility does not meet the industrial category requirements for effluent monitoring as listed in Part 2.1.3 (*Table 2-1 Applicable Effluent Limitation Guidelines*) of the 2015 MSGP. Benchmark monitoring not required.

Part 8 of the 2015 MSGP identifies sector-specific requirements for Sector P – Land Transportation and Warehousing, in addition to the numeric limits outlined in this section. The facility must comply with requirements associated with the primary industrial activities described in Section 1.3 and any co-located industrial activities as defined in Appendix A of the 2015 MSGP. Sector-specific requirements apply only to areas where sector-specific activities occur.

3.3 Water Quality-Based Effluent Limitations and Water Quality Standards

Impaired Receiving Waters/No TMDLs

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

Stormwater from the TA-16 Stockpile Area discharges to Assessment Unit NM-126.A_01, Canon de Valle (within LANL) Below LANL Gage E256. This reach of Canon de Valle has been identified as an impaired water for Adjusted Gross Alpha by the NMED Surface Water Quality Bureau (SWQB) per the 2018-2020 State of NM Clean Water Act 303b/305b Integrated Report and Final List. EPA has not yet approved or established TMDLs for Canon de Valle. Sections 3.1.5 and 3.1.6 describe controls measures used to ensure discharges from industrial activities meet the water quality standards. Refer to Section 4.7 for specific actions that will be taken when a water quality standard is exceeded.

4.0 SCHEDULES AND PROCEDURES

Preventative maintenance of control measures used to comply with non-numeric effluent limits can avoid situations that result in discharges to the environment. Part 5.2.5 of the 2015 MSGP specifies control measures will have a schedule or frequency for maintenance and procedures specifying how maintenance is conducted. Part 5.5 requires documentation of maintenance and repairs including the date(s) of regular maintenance. See Attachment 10 for the Scheduled Maintenance Log.

4.1 Good Housekeeping

See Section 3.1.2 of this SWPPP.

4.2 Maintenance

See Section 3.1.3 of this SWPPP.

4.3 Spill Prevention and Response

See Section 3.1.4 of this SWPPP. All referenced procedures are provided in Attachments 21 and 22 of this SWPPP.

4.4 Erosion and Sediment Control

See Section 3.1.5 of this SWPPP.

4.5 Employee Training

Employee training is essential for effective implementation of the SWPPP and MSGP requirements. The goals for the training program are to ensure that employees: (1) are aware of what happens when pollutants come in contact with stormwater; (2) are familiar with and will implement the requirements of this SWPPP; (3) are capable of preventing spills; (4) respond safely and effectively to an accident when one occurs; (5) recognize when there is an issue with a control measure; (6) recognize when additional control measures are necessary; and (7) identify situations that could lead to stormwater contamination.

Per Part 2.1.2.8 of the 2015 MSGP, training relevant to the SWPPP and MSGP is required for all workers at the facility that work in areas where industrial materials or activities are exposed to stormwater (MSGP sites); workers, 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 is designed to ensure these personnel understand the MSGP and SWPPP requirements, as well as their specific responsibilities regarding these requirements.

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 will be conducted at least annually. The DEP, Deployed Environment Safety and Health (DESH) Group Leader and PPT members are responsible for ensuring all appropriate personnel receive this training.

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 are kept on file in Attachment 11 of this SWPPP.

The topics in this SWPPP that are covered in the latest version of the facility-specific annual MSGP training (see Attachment 11) include the following:

- Overview of the SWPPP contents;
- 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 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

Routine inspections at this facility are conducted and documented quarterly in accordance with EPC-CP-QP-023*, MSGP Routine Facility Inspections* (Attachment 16).
Visual assessments are conducted in accordance with EPC-CP-QP-064*, MSGP Stormwater Visual Assessments* (Attachment 18).

4.6.1 Routine Facility Inspections

At least once each calendar year, the routine facility inspection is conducted during a period when a stormwater discharge is occurring. A qualified member of the PPT (typically the DEP, a representative from the EPC-CP Storm Water Permitting/Compliance Team or EPC-CP Program Lead) performs the inspection. 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 facility inspection per year.
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/Substantially Identical 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 Section 2.1.
During routine inspections, the following must be evaluated:

- 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 needing maintenance, repairs or replacement.

Inspections performed by the PPT member are documented by completing the routine facility inspection form, which identifies all conditions requiring corrective action and other potential stormwater pollution issues that were encountered. All conditions requiring corrective actions identified during the inspection are 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 (walk downs) between quarterly routine facility inspections to ensure compliance with the SWPPP and MSGP. Completed routine facility inspection forms are provided in Attachment 7 of this SWPPP and meet the requirements listed in the 2015 MSGP (Part 3.1.2.).

4.6.2 Quarterly Visual Assessments

Once each quarter, (April 1-May 31, June 1-July 31, August 1-September 30, October 1-November 30) a stormwater sample is obtained and visual assessment performed at each outfall, if a measureable storm event occurred. A qualified member of the PPT (DEP, EPC-CP field team member or MSGP Program Lead) conducts the visual assessment. The visual assessment will 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 practicable thereafter. Alternatively, document why it was not possible to collect the sample within the first 30 minutes (i.e. adverse conditions, not enough flow, etc.); and
- Conducted at least 72 hours since the last storm event; or document that the 72-hour period is representative of local storm events during the sampling period.

NOTE: Snowmelt samples need only be collected during a period of measurable discharge.

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.); and
- Perform one quarterly assessment during snowmelt discharge (taken during a measurable discharge from the site).

For facilities with substantially 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 substantially identical outfall.

The PPT member performing the visual assessment documents potential stormwater pollution problems that were observed during the assessment on the quarterly visual assessment form. Any required corrective action identified during the assessment is addressed in accordance with Section 6.0 *Corrective Actions and Deadlines* of this plan. Completed quarterly visual assessments are provided in Attachment 8 of this SWPPP and meet the requirements listed in the 2015 MSGP (Part 3.2.2).

4.7 Monitoring

Analytical monitoring comprised of Impaired Waters monitoring is performed annually on stormwater discharges from the site. Monitoring occurs when storm events result in an actual discharge from the site and follow the preceding measurable storm event by at least 72 hours (3 days), unless documented that the storm event is representative of local storm events during the sampling period. For runoff from snowmelt, the monitoring is performed at a time when a measurable discharge from the site occurs.

Monitoring is conducted according to test procedures approved under 40 CFR Part 136. Runoff samples are collected by taking a minimum of one grab sample from a discharge, collected within the first 30 minutes of a measurable storm event. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample is collected as soon as practicable after the first 30 minutes and documentation is kept with the SWPPP explaining why it was not possible.

LANL is located in a high elevation, semi-arid climate where the majority of rainfall occurs during a period between July and September. Freezing conditions that would prevent runoff from occurring for extended periods may also occur during the winter months. If adverse weather conditions prevent the collection of a sample according to the relevant monitoring schedule, a sample will be collected during the next qualifying storm event or as soon as practicable.

Monitoring occurs at automated sampling station **MSGP07801** as identified in Section 1.4. Discharge from the facility is east to Canon de Valle (impaired waters), which is a tributary of the Rio Grande located approximately two miles east of the facility.

Monitoring will continue annually for constituents associated with impaired waters until a constituent is no longer detected in stormwater samples.

If the impaired water constituent value exceeds the New Mexico Water Quality criterion, the Pollution Prevention Team will:

- Review the selection, design, installation, and implementation of control measures to determine if modifications are necessary to meet the effluent limits;
- Implement the necessary modifications within the timeframe specified for corrective action; and
- Continue annual monitoring of the constituent (as required by Part 6.2.4.1 of the 2015 MSGP).

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

- The date, exact place, and time of sampling or measurements;
- The date and duration (in hours) of the rainfall event;

- Rainfall total (in inches) for that rainfall event;
- The individual(s) who performed the sampling or measurements;
- The date(s) analyses were performed;
- The individual(s) who performed the analyses;
- The analytical techniques or methods used; and
- The results of such analyses.

All records of monitoring information, including all calibration and maintenance records are maintained for a minimum period of at least three years from the date the permit expires.
LANL's applicable stormwater monitoring procedures can be found in the following Attachments:

- EPC-CP-QP-2103, *Inspecting ISCO Stormwater Runoff Samplers and Retrieving Samples* (Attachment 19)
- EPC-CP-QP-048, *Processing MSGP Stormwater Samples* (Attachment 20).

The table on the following page lists the current Summary of Monitoring Requirements. The monitoring values have been modified to reflect New Mexico water quality standards and are based on the most protective water quality standards from the Standards for Interstate and Intrastate Surface Waters (effective on February 28, 2018), 20.6.4.900 NMAC; and as set forth in Part 9.6.2.1 of the 2015 MSGP.

Outfall: 078

Monitoring Requirement	Industrial Sector	Assessment Unit	Analyte	Filtered/ Unfiltered	Regulatory Standard	Units	Regulatory Standard Type	Regulatory Standard Reference
Impaired Waters	-	NM-128.A_01	Adjusted Gross Alpha	UF	15	pCi/L	NM 2010 Livestock Watering	20.6.4.900 NMAC Subpart J
Quarterly Benchmark	P	No Benchmark Monitoring Required						

NM=New Mexico
UF=Unfiltered
pCi=Picocurie
L=Liter
NMAC=New Mexico Administrative Code

5.0 DOCUMENTATION FOR ELIGIBILITY CONSIDERATIONS UNDER OTHER FEDERAL LAWS

5.1 Endangered Species

The Final Site-Wide Environmental Impact Statement (EIS) 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 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.

Part 5.2.2 of the 2015 MSGP requires areas of designated critical habitat for endangered or threatened species, as applicable, be included in the SWPPP. The *Threatened and Endangered Species Habitat Management Plan for Los Alamos National Laboratory* (LA-UR-17-29454) was last updated in October 2017 (see Attachment 13). This document provides a management strategy for the protection of threatened and endangered species and their habitats on LANL property. The MSGP IPaC Trust Resource Report (see Attachment 14) is also attached for informational purposes.

5.2 Historic Properties

In August, 2015 and December 2008, the Cultural Resources Team (using Global Positioning System 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
- TA-16 Stockpile Area

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) is reviewed and revised (as appropriate). The purpose is to ensure 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-stormwater 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.

When any of the following conditions occur, a review of the selection, design, installation, and implementation of control measures is performed to determine if modifications are necessary to meet the effluent limits in this permit:

- Construction or a change in design, operation, or maintenance at the facility significantly changes the nature of pollutants discharged in stormwater from the facility, or significantly increases the quantity of pollutants discharged; or
- If an impaired water constituent exceeds the NM Water Quality criterion (see Section 4.7).

When the review identifies the need to modify the SWPPP, it will be revised within 14 calendar days of completion of the associated condition requiring corrective action.

6.1 Immediate Actions

When a condition requiring corrective action is identified, all reasonable steps necessary to minimize or prevent the discharge of pollutants are immediately taken (i.e. spill clean-up, scheduling repairs) until a permanent solution (if needed) can be implemented. Immediate action means all reasonable steps are taken the same workday or no later than the following workday (when it is too late in the day to take corrective action).

6.2 Subsequent Actions

When a condition requiring corrective action is identified, all reasonable steps necessary to minimize or prevent the discharge of pollutants are immediately taken (i.e. spill clean-up, scheduling repairs) until a permanent solution (if needed) can be implemented. Immediate action means all reasonable steps are taken the same workday or no later than the following workday (when it is too late in the day to take corrective action).

6.3 Corrective Action Documentation

Upon discovery, conditions requiring corrective action are documented by the DEP or EPC-CP on a Routine Facility Inspection Form and/or entered into the CAR database. The action will be kept open in the database until the issue has been resolved. Documentation of maintenance or repair of stormwater control measures is kept in Attachment 9 of this SWPPP. Where corrective actions result in changes to procedures or controls documented in this SWPPP, modifications to the SWPPP are made accordingly within 14 calendar days of completing the corrective action(s). LANL procedure EPC-CP-QP-022, *MSGP Corrective Actions* can be found in Attachment 17.

7.0 ACRONYMS

BMP	Best Management Practice
CAR	Corrective Action Report
DEP	Deployed Environmental Professional
DESH	Deployed Environmental Safety and Health
DOE	Department of Energy
EIS	Environmental Impact Statement
ELG	Effluent Limitation Guidelines
EMD-ER	Emergency Management Division-Emergency Response
EOSC	Emergency Operations Support Center
EPA	Environmental Protection Agency
EPC-CP	Environmental Protection and Compliance – Compliance Programs
FOD	Facility Operations Division
IPaC	Information for Planning and Consultation
LANL or the Laboratory	Los Alamos National Laboratory
MSGP or Permit	Multi-Sector General Permit
LOG-HERG	Logistics-Heavy Equipment Roads and Grounds
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
PAH	Polyaromatic Hydrocarbons
PPT	Pollution Prevention Team
SWPPP	Stormwater Pollution Prevention Plan
URL	Uniform Resource Locator
WFO	Weapons Facilities Operations

8.0 SWPPP CERTIFICATION

STORMWATER POLLUTION PREVENTION PLAN
TA-16 Stockpile Area
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 JOHN BRANCH (Affiliate) Digitally signed by JOHN BRANCH (Affiliate) Date: 2020.03.19 08:31:58 -06'00' Date 3/19/2020

John Branch
Operations Manager, High Explosives/Weapons Facilities (WFO-HE)
Weapons Facilities Operations

FIGURE A: GENERAL LOCATION MAP

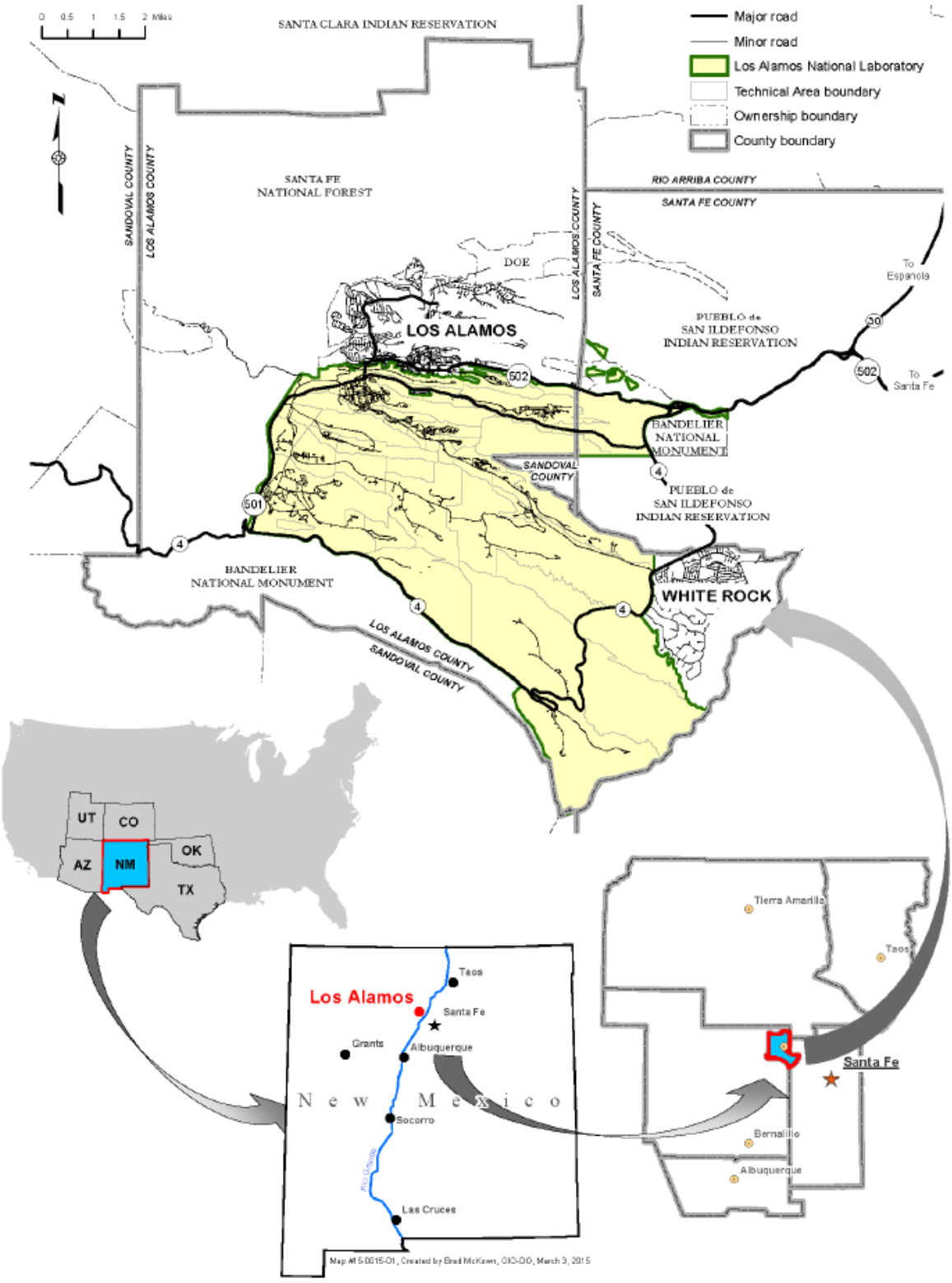


FIGURE B-1: FACILITY SITE MAP

TA-16 STOCKPILE AREA SITE MAP

1600103010001

Monitored Outfall 078

Automated Sampler MSGP07801

Material Storage Area

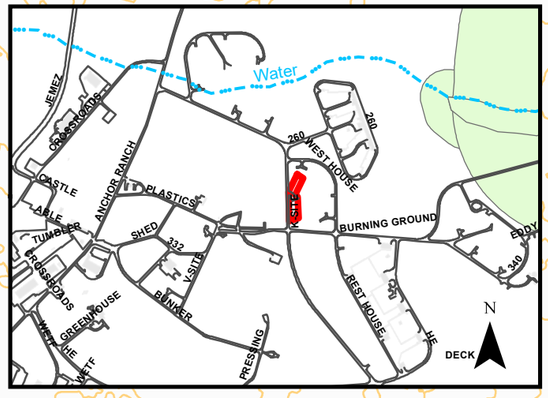
K-SITE

1600103010002

1600103010003

Potholing Staging Area

Canon de Valle Impaired Receiving Water (No TMDL).
No discharge to Tier 2, 2.5, or 3 waters.



Automated Sampler
Monitored Outfall
Earthen Berm
Drainage
Paved Roads
1 ft Contour
Boundary of Industrial Activity
Industrial Activity Areas
Flow Direction

1.2 Acres.
10% Impervious Surface.
Note - No Critical Habitat Areas.

Map number: 16-0015-TA-16 Stockpile Area
Map created by: Ben Sutter, IFPROG
Date: June 4, 2019
Version 1

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

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

N

0 50 100 Feet

FIGURE B-2: NEARBY RECEIVING WATERS MAP



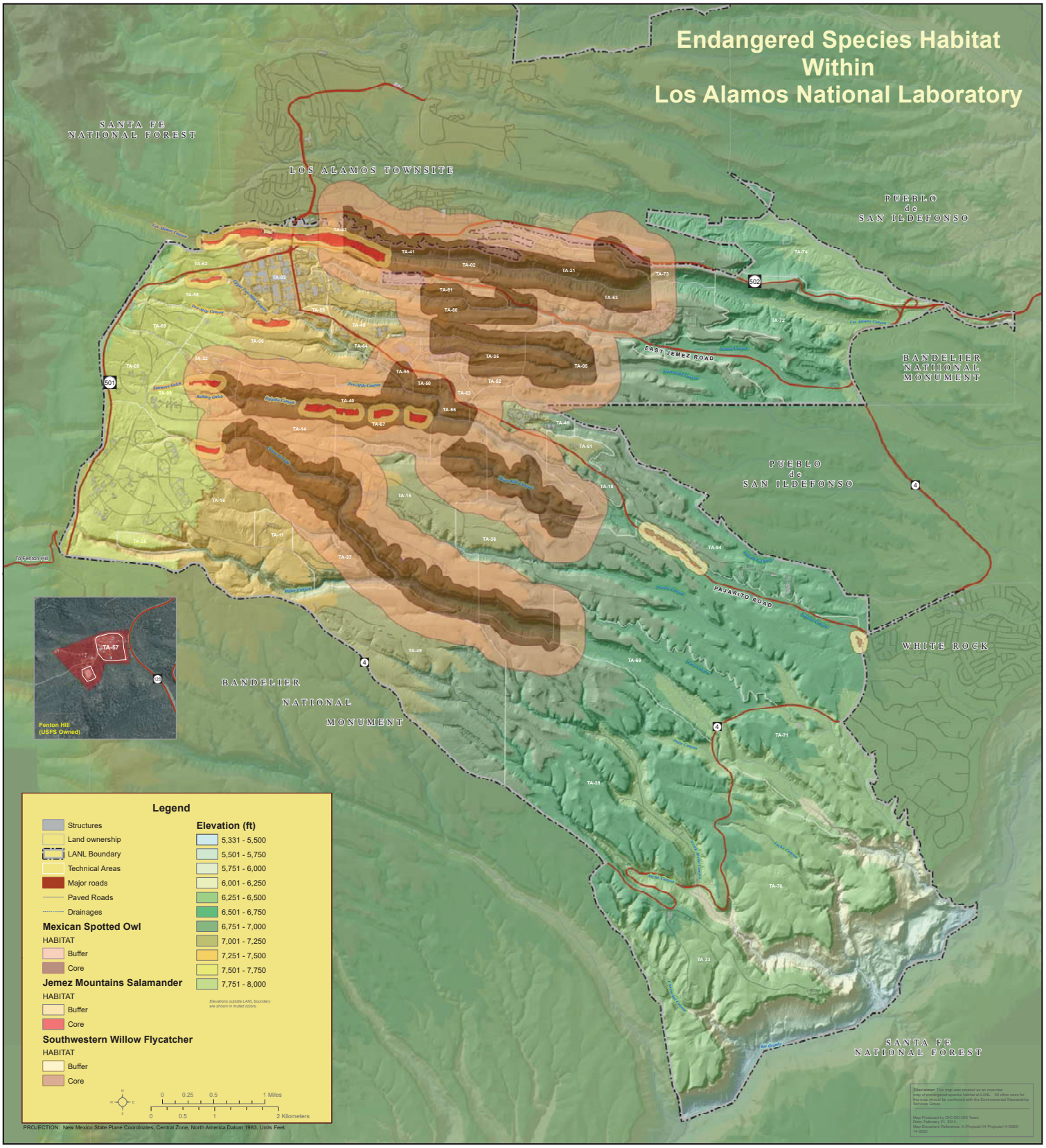
Buildings
Watercourse with Buffer
TA Boundary
Wetlands
Contours, 20 ft
Contours, 100 ft

1:4,000

0 0.03 0.07 0.13 mi

0 0.05 0.1 0.2 km

FIGURE B-3: LANL ENDANGERED SPECIES MAP


Endangered Species Habitat
Within
Los Alamos National Laboratory
SANTA FE
NATIONAL FOREST
LOS ALAMOS TOWNSITE
PUEBLO
de
SAN ILDEFONSO
BANDELIER
NATIONAL
MONUMENT
EAST JEMEZ ROAD
PAJARITO ROAD
WHITE ROCK
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.
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.

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

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
EPA's NPDES EREPORTING HELP DESK

10/26/2018

Triad National Security LLC
ATTN: Michael W. Hazen
PO Box 1663 MS K490
Los Alamos, NM 87545

Facility: Los Alamos National Laboratory
PO Box 1663
Los Alamos, NM 87545

NPDES ID: **NMR050013**

Dear Michael W. Hazen:

This letter acknowledges that you have submitted a complete Notice of Intent form to be covered under the NPDES Multi-Sector General Permit (MSGP) for stormwater discharges associated with industrial activity. Coverage under this permit begins at the conclusion of your 30-day waiting period, on **11/01/2018**, unless EPA notifies you that your authorization has been denied or delayed.

For tracking purposes, the following NPDES ID has been assigned to your Notice of Intent: **NMR050013**

As stated above, this letter acknowledges receipt of a complete Notice of Intent. However, it is not an EPA determination of the validity of the information you provided. Your eligibility for coverage under the Permit is based on the validity of the certification you provided. Your signature on the Notice of Intent certifies that you have read, understood, and are implementing all of the applicable requirements. An important aspect of this certification requires that you correctly determine whether you are eligible for coverage under this permit.

As you know, the MSGP requires you to have developed a Stormwater Pollution Prevention Plan (SWPPP) prior to submitting your NOI. The MSGP also includes specific requirements for implementing control measures (e.g., minimize exposure, good housekeeping, maintenance, spill prevention and response), conducting self-inspections and visual assessments of your discharges, taking corrective actions, and conducting staff training. You must comply with any specific requirements applicable to your industrial sector(s) in Part 8 and any state/tribal-specific requirements in Part 9 (see https://www.epa.gov/npdes/stormwater-discharges-industrial-activities). You are also required to submit an Annual Report in accordance with Part 7.5 of the MSGP that will contain the results from your past year's routine facility inspections, quarterly visual assessments, and corrective actions.

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

- Quarterly benchmark monitoring (see Part 6.2.1 and Part 8);
- Annual effluent limitations guidelines monitoring (see Part 6.2.2 and Part 8);
- State- or tribal-specific monitoring (see Part 6.2.3 and Part 9);
- Impaired waters monitoring (see Part 6.2.4); and

- Other monitoring as required by EPA (see Part 6.2.5).

Monitoring requirements in the MSGP (i.e., parameters required to be monitored and sample frequency) will be prepopulated on your electronic Discharge Monitoring Report (DMR) in EPA's NetDMR system, which is accessed at https://netdmr.epa.gov. Where you have determined that no monitoring requirements apply to your discharge, there is no need to access the NetDMR system. In order to obtain access to this system, you must complete the electronic signature process. Please refer to the following guidance for information about submitting monitoring reports through NetDMR: https://www.epa.gov/npdes/stormwater-discharges-industrial-activities#ereporting.

If you have general questions regarding the stormwater program or your responsibilities under the Multi-Sector General Permit, please contact:

EPA Region **06**
Name: **Nasim Jahan**
Phone: **(214) 665-7522**
Email: **jahan.nasim@epa.gov**

If you have questions about your Notice of Intent form, please call the EPA NPDES eReporting Help Desk at 1-877-227-8965 (toll free) or send an email to NPDESeReporting@epa.gov.

EPA NPDES eReporting Help Desk
Operated by Avanti Corporation
1200 Pennsylvania Ave., NW
Mail Code: 4203M
Washington, DC 20460
1-877-227-8965

TRIAD
National Security, LLC

Date: OCT 0 1 2018
Symbol: EPC-DO: 18-358
LA-UR: 18-29182
Locates Action No.: *N/A*

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

Subject: National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP) Notice of Intent (NOI) Reporting Pursuant to Part B.12.C

To Whom It May Concern:

This letter serves to document the transmittal of a NOI for Stormwater Discharges Associated with Industrial Activity under the NPDES MSGP for Triad National Security, LLC (Triad) as a new operator for Los Alamos National Laboratory (LANL) pursuant to Part B.12.C of the 2015 MSGP. Triad is replacing Los Alamos National Security, LLC (LANS) as operator of LANL effective November 1, 2018.

EPA's Electronic Reporting Rule requires that NOIs be submitted using the NeT-MSGP program service on the EPA Central Data Exchange system. However, due to the following system limitations previously identified by LANS and coordinated with EPA Region 6 personnel, a complete and accurate NOI cannot be submitted using NeT-MSGP.

1. Part 9.6.2 of the 2015 MSGP, Permit Conditions for the State of New Mexico, requires that benchmark values be modified to reflect New Mexico water quality standards for facilities in New Mexico, based on benchmark values from the Standards for Interstate and Intrastate Surface Waters (20.6.4.900 New Mexico Administrative Code [NMAC]). These modified benchmark values are not recognized by NeT-MSGP and populated in NetDMR.
2. The 2018-2020 State of New Mexico Clean Water Act §303(d)/§305(b) Integrated Report requires monitoring of impaired waters pollutants not available for selection in NeT-MSGP (e.g., Adjusted Gross Alpha and Total Recoverable Aluminum).
3. 20.6.4.900 NMAC requires monitoring of certain modified benchmark and impaired waters metals pollutants as dissolved species, which are not available for selection in NeT-MSGP. Currently, only total metals species may be assigned in NeT-MSGP.
4. Due to extended frozen conditions during the winter and a semi-arid climate, Triad will implement an alternative monitoring period of four (4) two-month monitoring quarters for benchmark values as identified below, in accordance with Part 6.1.6 of the 2015 MSGP. This alternate monitoring schedule

does not coincide with the default four (4) three-month quarters listed in Part 6.1.7 of the 2015 MSGP and NeT-MSGP does not allow input of an alternate monitoring schedule. Accordingly, annual impaired waters and Effluent Limitation Guideline monitoring will be conducted between April 1 and November 30 of each year.

April 1 through May 31
June 1 through July 31
August 1 through September 30
October 1 through November 30

These system limitations directly result in inaccurate pollutants, limits, monitoring periods and DMR due dates being populated in NetDMR.

Additionally, Part 6.1.7 of the 2015 MSGP states that monitoring requirements in the permit begin in the first full quarter following the date of discharge authorization. Per the alternative monitoring schedule above, Triad interprets monitoring requirements to begin April 1, 2019.

EPA Region 6 has recognized the challenges that the outgoing operator (LANS) has identified with NeT-MSGP related to compliance with Part 9.6.2 of the 2015 MSGP, Permit Conditions for the State of New Mexico, and has been instrumental in helping LANS to resolve these issues. Thus, Triad was granted a waiver to submit a paper NOI from Nasim Jahan (EPA Region 6) on 9/26/2018 (Enclosure 1). To facilitate complete and accurate information in Net-MSGP and NetDMR, Triad is submitting a paper NOI on EPA Form 3510-6 (Enclosure 2), and an additional table defining monitored outfall-specific Sector and impaired waters limit sets, monitoring periods and DMR due dates (Enclosure 3) for population in the NetDMR system. EPA previously implemented similar monitoring requirements for LANL's 2015 MSGP coverage as operated by LANS under NPDES ID NMR053195.

Your assistance is greatly appreciated as Triad 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,

Michael W. Hazen
Associate Laboratory Director
Triad National Security, LLC

MWH:TWL:LJD:jdm

Enclosure(s): 1) EPA Region 6 Approval for Triad National Security, LLC to Submit a Paper NOI
2) NOI for Stormwater Discharges Associated with Industrial Activity under the NPDES Multi-Sector General Permit

3) NetDMR Monitoring Requirements for Los Alamos National Laboratory, Operated by Triad National Security, LLC
4) Threatened and Endangered Species Protection Concurrence Letters from the United States Department of Interior, Fish and Wildlife Service

Copy: Nasim Jahan, EPA Region 6, (E-File),
Helen Nguyen, EPA Region 6, (E-File),
Sarah Holcomb, NMED/SWQB, (E-File),
Karen E. Armijo, NA-LA, (E-File),
Thomas E. Mason, Triad, (E-File),
Kelly Beierschmitt, Triad, (E-File),
Kevin T. Amery, Triad, (E-File),
J. Barton Lounsbury, Triad, (E-File),
G. Drew Fuller, Triad, (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),
Terrill W. Lemke, EPC-CP (E-File),
Holly L. Wheeler, EPC-CP (E-File),
Leslie J. Dale, EPC-CP (E-File),
locatestream@lanl.gov (E-File),
adesh-records@lanl.gov (E-File),
epc-correspondence@lanl.gov (E-File)

ENCLOSURE 1

EPA Region 6 Approval for Triad National Security, LLC
to Submit a Paper NOI

EPC-DO: 18-358

LA-UR-18-29182

Date: OCT 0 1 2018

Dale, Leslie J

From: Lemke, Terrill W
Sent: Wednesday, September 26, 2018 4:16 PM
To: Dolan, Timothy Aloysius; Dale, Leslie J; Wheeler, Holly Lynn
Subject: FW: Request for LANL Paper MSGP NOI Waiver

Follow Up Flag: Follow up
Flag Status: Flagged

FYI

Terrill Lemke, PE, CPESC, CISEC
Environmental Compliance Programs
Los Alamos National Laboratory
Los Alamos, NM
Office: 505-665-2397
Cell: 505-699-0725

From: Jahan, Nasim <Jahan.Nasim@epa.gov>
Sent: Wednesday, September 26, 2018 2:43 PM
To: Lemke, Terrill W <tlemke@lanl.gov>
Cc: Emily Gorman <emily@avanticorporation.com>
Subject: RE: Request for LANL Paper MSGP NOI Waiver

Dear Mr. Terrill:

EPA, Region 6 is approving your request for paper submission as the facility is unable to submit the NOI online.. Please mail the hardcopies to the following address:

For Regular U.S. Mail Delivery:
Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2015 MSGP Signature Agreement
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

- **For Overnight/Express U.S. Mail Delivery:**
  Stormwater Notice Processing Center
  William Jefferson Clinton East Building – Room 7420
  ATTN: 2015 MSGP Signature Agreement
  U.S. EPA
  1201 Constitution Avenue, NW
  Washington, DC 20004

Thank you,

Nasim Jahan

October 1 through November 30

These system limitations directly result in inaccurate pollutants, limits, monitoring periods and DMR due dates being populated in NetDMR.

EPA Region 6 has recognized the challenges that the outgoing operator (LANS) has identified with NeT-MSGP related to compliance with Part 9.6.2 of the 2015 MSGP, Permit Conditions for the State of New Mexico, and has been instrumental in helping LANS to resolve these issues. Therefore, per your verbal direction, we are requesting a waiver for Triad to submit a paper NOI in lieu of submitting an inaccurate and incomplete NOI in NeT-MSGP. Please advise at your earliest convenience if you concur with our submittal of a paper NOI, as we must submit by Oct 2.

We appreciate your assistance in helping us maintain compliance. If you have any questions, please contact me at (505) 665-2397.

Terrill

Terrill Lemke, PE, CPESC, CISEC
Environmental Compliance Programs
Los Alamos National Laboratory
Los Alamos, NM
Office: 505-665-2397
Cell: 505-699-0725

ENCLOSURE 2

NOI for Stormwater Discharges Associated with Industrial Activity under the NPDES Multi-Sector General Permit

EPC-DO: 18-358

LA-UR-18-29182

Date: OCT 0 1 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: 09/26/2018

* **Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper NOI form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (NeT) at http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm**

B. Permit Information

NPDES ID (EPA Use Only):

1. Master Permit Number: NMR050000 (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: ***Note: Facility had 2015 MSGP coverage under Permit ID NMR053195 with Los Alamos National Security, LLC as operator.*** NMR05GB21

C. Facility Operator Information

1. Operator Information:

Operator Name: Triad National Security LLC

Mailing Address:

Street: PO Box 1663 MS K490

City: Los Alamos State: NM ZIP Code: 87545-

County or Similar Government Subdivision: Los Alamos

Phone: 505-665-2397 Ext.

E-mail: tlemke@lanl.gov

2. Operator Point of Contact Information:

First Name, Middle Initial, Last Name: Terrill W Lemke

Title: Environmental Manager

3. NOI Preparer Information (Complete if NOI was prepared by someone other than the certifier):

First Name, Middle Initial, Last Name: Holly L Wheeler

Organization: Triad National Security LLC

Phone: 505-667-1312 Ext.

E-mail: hbenson@lanl.gov

D. Facility Information

1. Facility Name: Los Alamos National Laboratory

2. Facility Address:

Street/Location: PO Box 1663

City: Los Alamos State: NM ZIP Code: 87545 -

County or Similar Government Subdivision: Los Alamos

3. Latitude/Longitude for the facility:

Latitude: 35.8728 ° N (decimal degrees) Longitude: 106.3211 ° 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 ***NOTE: Sectors do not apply to every outfall. Refer to Section E.3 for Outfall-specific Sector associations.***

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: 4212 OR **Primary Activity Code:**

Sector: P **Subsector:** P1

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

Sector: A **Subsector:** A4 **Sector:** D **Subsector:** D1 **Sector:** F **Subsector:** F4

Sector: N **Subsector:** N2 (Not N1) **Sector:** O **Subsector:** O1 **Sector:** AA **Subsector:** AA1

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) ***Note: Refer to Enclosure 3 for NetDMR Outfall-specific Sector and Impaired Waters Limit Sets.***

List all of the stormwater outfalls from your facility. Each outfall must be identified by a unique 3-digit ID (e.g., 001, 002). Also provide the latitude and longitude in degrees decimal for each outfall.		**For each outfall, provide the following receiving water information:**		
		Provide the name of the first water of the U.S. that receives stormwater directly from the outfall and/or from the MS4 that the outfall discharges to:	**If the receiving water is impaired (on the CWA 303(d) list), list the pollutants that are causing the impairment:**	**If a TMDL been completed for this receiving waterbody, providing the following information:**
Outfall ID	002 (Sector AA, Subsector AA1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.875797			
Longitude	-106.327580			
Outfall ID	005 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.873919			
Longitude	-106.320746			

If substantially identical to other outfall, list identical outfall ID: _____

Outfall ID	006 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.874011			
Longitude	-106.319858			
If substantially identical to other outfall, list identical outfall ID: 005				
Outfall ID	009 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.874843			
Longitude	-106.319412			
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	007 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.874014			
Longitude	-106.319203			
If substantially identical to other outfall, list identical outfall ID: 009				
Outfall ID	008 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	TMDL Name and ID: N/A Pollutant(s) for which there is a TMDL: N/A
Latitude	35.874617			
Longitude	-106.318925			
If substantially identical to other outfall, list identical outfall ID: 009				

Outfall ID	010 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A
Latitude	35.875402			**Pollutant(s) for which there is a TMDL:** N/A
Longitude	-106.320301			
If substantially identical to other outfall, list identical outfall ID: 009				
Outfall ID	012 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A
Latitude	35.875532			**Pollutant(s) for which there is a TMDL:** N/A
Longitude	-106.320884			
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	011 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A
Latitude	35.875563			**Pollutant(s) for which there is a TMDL:** N/A
Longitude	-106.320744			
If substantially identical to other outfall, list identical outfall ID: 012				
Outfall ID	017 (Sectors AA, F Subsectors AA1, F4)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A
Latitude	35.872599			**Pollutant(s) for which there is a TMDL:** N/A
Longitude	-106.317066			
If substantially identical to other outfall, list identical outfall ID:				

Outfall ID	013 (Sectors AA, F Subsectors AA1, F4)	Mortandad Canyon (Within LANL)	51931 Adjusted Gross Alpha; 01040 Copper, dissolved [as Cu]; 71900 Mercury, total [as Hg]; 39516 Polychlorinated biphenyls [PCBs]	**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 (Sectors AA, F Subsectors AA1, F4)	Mortandad Canyon (Within LANL)	51931 Adjusted Gross Alpha; 01040 Copper, dissolved [as Cu]; 71900 Mercury, total [as Hg]; 39516 Polychlorinated biphenyls [PCBs]	**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 (Sectors AA, F Subsectors AA1, F4)	Mortandad Canyon (Within LANL)	51931 Adjusted Gross Alpha; 01040 Copper, dissolved [as Cu]; 71900 Mercury, total [as Hg]; 39516 Polychlorinated biphenyls [PCBs]	**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 (Sectors AA, F Subsectors AA1, F4)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**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 (Sectors AA, F Subsectors AA1, F4)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**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	020 (Sectors AA, F Subsectors AA1, F4)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.872240			
Longitude	-106.316340			
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	022 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.872661			
Longitude	-106.313691			
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	021 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.872514			
Longitude	-106.313562			
If substantially identical to other outfall, list identical outfall ID: 022				

Outfall ID	023 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.873193			
Longitude	-106.313116			
If substantially identical to other outfall, list identical outfall ID: 022				
Outfall ID	024 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.873046			
Longitude	-106.315069			
If substantially identical to other outfall, list identical outfall ID: 022				
Outfall ID	025 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.872928			
Longitude	-106.315400			
If substantially identical to other outfall, list identical outfall ID: 022				
Outfall ID	026 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.872114			
Longitude	-106.313105			
If substantially identical to other outfall, list identical outfall ID:				

Outfall ID	027 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.872401			
Longitude	-106.313391			
If substantially identical to other outfall, list identical outfall ID: 026				
Outfall ID	028 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.872505			
Longitude	-106.313542			
If substantially identical to other outfall, list identical outfall ID: 026				
Outfall ID	029 (Sector N, Subsector N2)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.873969			
Longitude	-106.313281			
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	031 (Sector P, Subsector P1)	Mortandad Canyon (within LANL)	51931 Adjusted Gross Alpha; 01040 Copper, dissolved [as Cu]; 71900 Mercury, total [as Hg]; 39516 Polychlorinated biphenyls [PCBs]	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.869227			
Longitude	-106.305685			
If substantially identical to other outfall, list identical outfall ID:				

Outfall ID	030 (Sector P, Subsector P1)	Mortandad Canyon (within LANL)	51931 Adjusted Gross Alpha; 01040 Copper, dissolved [as Cu]; 71900 Mercury, total [as Hg]; 39516 Polychlorinated biphenyls [PCBs]	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.869325			
Longitude	-106.306926			
If substantially identical to other outfall, list identical outfall ID: 031				
Outfall ID	032 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.870741			
Longitude	-106.306812			
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	033 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.870712			
Longitude	-106.306443			
If substantially identical to other outfall, list identical outfall ID: 032				
Outfall ID	034 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.870603			
Longitude	-106.306055			
If substantially identical to other outfall, list identical outfall ID: 032				

Outfall ID	035 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.870474			
Longitude	-106.305432			
If substantially identical to other outfall, list identical outfall ID: 032				
Outfall ID	036 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.867825			
Longitude	-106.293388			
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	037 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.867859			
Longitude	-106.292992			
If substantially identical to other outfall, list identical outfall ID: 036				
Outfall ID	039 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.867826			
Longitude	-106.291726			
If substantially identical to other outfall, list identical outfall ID:				

Outfall ID	038 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.867855			
Longitude	-106.292211			
If substantially identical to other outfall, list identical outfall ID: 039				
Outfall ID	040 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.867839			
Longitude	-106.291955			
If substantially identical to other outfall, list identical outfall ID: 039				
Outfall ID	042 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.867047			
Longitude	-106.289163			
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	041 (Sector P, Subsector P1)	Mortandad Canyon (within LANL)	51931 Adjusted Gross Alpha; 01040 Copper, dissolved [as Cu]; 71900 Mercury, total [as Hg]; 39516 Polychlorinated biphenyls [PCBs]	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.866377			
Longitude	-106.291397			
If substantially identical to other outfall, list identical outfall ID: 042				

Outfall ID	043 (Sector P, Subsector P1)	Mortandad Canyon (within LANL)	51931 Adjusted Gross Alpha; 01040 Copper, dissolved [as Cu]; 71900 Mercury, total [as Hg]; 39516 Polychlorinated biphenyls [PCBs]	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.866084			
Longitude	-106.290165			
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID	074 (Sector A, Subsector A4)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.875034			
Longitude	-106.327328			
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID	073 (Sector A, Subsector A4)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.874819			
Longitude	-106.324283			
If substantially identical to other outfall, list identical outfall ID: 074				
Outfall ID	075 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]; 00010 Temperature, water deg. centigrade	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude	35.871154			
Longitude	-106.312940			
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: N/A

6. Check if you discharge to any of the waters of the U.S. that are designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water) or as a Tier 3 water (Outstanding National Resource Water)? (See Appendix L).

☐ Tier 2/2.5. Provide the name(s) of receiving water(s): _____

☐ Tier 3 (Outstanding National Resource Waters)*

* **Note: You are ineligible for coverage if you are a new discharger or new source to waters designated as Tier 3 (outstanding national resource waters) for antidegradation purposes under 40 CFR 131.13(a)(3).**

7. If you are subject to benchmark monitoring requirements for a hardness-dependent metal, what is the hardness of your receiving water(s) (see Appendix J)?
82 (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: Holly L Wheeler

Professional Title: Environmental Professional

Phone: 505 - 667 - 1312 Ext.

E-mail: hbenson@lanl.gov

3. SWPPP Availability:

Your current SWPPP or certain information from your SWPPP must be made available through one of the following two options. Select one of the options and provide the required information*:

*** Note: You are not required to post any confidential business information (CBI) or restricted information (as defined in Appendix A) (such information may be redacted), but you must clearly identify those portions of the SWPPP that are being withheld from public access.**

■ **Option 1**: Maintain a current copy of your SWPPP on an Internet page (Universal Resource Locator or URL).

Provide the web address URL: eprr.lanl.gov

☐ **Option 2**: Provide the following information from your SWPPP:

A. Describe your onsite industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams), and potential spill and leak areas:

B. List the pollutant(s) or pollutant constituent(s) associated with each industrial activity exposed to stormwater that could be discharged in stormwater and any authorized non-stormwater discharges listed in Part 1.1.3:

C. Describe the control measures you will employ to comply with the non-numeric technology-based effluent limits required in Part 2.1.2 and Part 8, and any other measures taken to comply with the requirements in Part 2.2 Water Quality-Based Effluent Limitations (see Part 5.2.4):

D. Provide a schedule for good housekeeping and maintenance (see Part 5.2.5.1) and a schedule for all inspections required in Part 4 (see Part 5.2.5.2):

G. Endangered Species Protection

1. Using the instructions in Appendix E of the MSGP, under which endangered species criterion listed in Part 1.1.4.5 are you eligible for coverage under this permit (only check 1 box)?*

☐ A ☐ B ☐ C ■ D ☐ E

* **Note: After you submit your NOI and before your NOI is authorized, EPA may notify you if any additional controls are necessary to ensure your discharges have no likely adverse 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):
Direct consultation with the U.S. Fish and Wildlife Service and corresponding development and implementation of a facility-specific Habitat Management Plan.

3. If you select criterion B, provide the NPDES ID from the other operator's NOI authorized under this permit: ☐☐☐☐☐☐☐☐

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: San Ildefonso Pueblo

2. Using the instructions in Appendix F of the MSGP, under which historic properties preservation criterion listed in Part 1.1.4.6 are you eligible for coverage under this permit (only check 1 box)?

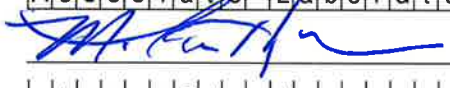
   ☐ A ■ B ☐ C ☐ D

I. Certification Information

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

First Name, Middle Initial, Last Name: Michael W Hazen

Title: Associate Laboratory Director

Signature: 

Date: 10/01/2018

E-mail: mhazen@lanl.gov

ENCLOSURE 3

NetDMR Monitoring Requirements for Los Alamos National Laboratory, Operated by Triad National Security, LLC

EPC-DO: 18-358

LA-UR-18-29182

Date: OCT 0 1 2018

							ELG, Modified Benchmark, and Impaired Waters Limits per MSGP Section 9.6.2 and the NM Water Quality Standards (20.6.4.900 NMAC [New Mexico Administrative Code])										
Permit ID	Facility	Permitted Feature	Sector(s)	Subsector	Proposed Consolidated Discharge # (Limit Set)	Discharge Description	Parameter Code	Parameter Name	Symbol	Quality Value	Limit Type	Units	Freq. of Analysis	Smpl. Type	Monitoring Period Start Date	Monitoring Period End Date	DMR Due Date
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	002	AA	AA1	002-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	002	AA	AA1	002-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	002	AA	AA1	002-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	002	AA	AA1	002-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	002	AA	AA1	002-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	005	O	O1	005-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	005	O	O1	005-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	005	O	O1	005-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	005	O	O1	005-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	005	O	O1	005-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	005	O	O1	005-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	005	O	O1	005-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	005	O	O1	005-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	009	O	O1	009-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	009	O	O1	009-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	009	O	O1	009-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	009	O	O1	009-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	009	O	O1	009-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	009	O	O1	009-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	009	O	O1	009-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	009	O	O1	009-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	012	O	O1	012-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	012	O	O1	012-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	012	O	O1	012-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	012	O	O1	012-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	012	O	O1	012-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	012	O	O1	012-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	012	O	O1	012-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	012	O	O1	012-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019

							ELG, Modified Benchmark, and Impaired Waters Limits per MSGP Section 9.6.2 and the NM Water Quality Standards (20.6.4.900 NMAC [New Mexico Administrative Code])									
Permit ID	Facility	Permitted Feature	Sector(s)	Subsector	Proposed Consolidated Discharge # (Limit Set)	Discharge Description	Parameter Code	Parameter Name	Symbol	Quality Value	Limit Type	Units	Freq. of Analysis	Smpl. Type	Monitoring Period Start Date	Monitoring Period End Date	DMR Due Date
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	022	P	P1	022-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	022	P	P1	022-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	022	P	P1	022-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	022	P	P1	022-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	026	P	P1	026-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	026	P	P1	026-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	026	P	P1	026-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020

							ELG, Modified Benchmark, and Impaired Waters Limits per MSGP Section 9.6.2 and the NM Water Quality Standards (20.6.4.900 NMAC [New Mexico Administrative Code])									
Permit ID	Facility	Permitted Feature	Sector(s)	Subsector	Proposed Consolidated Discharge # (Limit Set)	Discharge Description	Parameter Code	Parameter Name	Symbol	Quality Value	Limit Type	Units	Freq. of Analysis	Smpl. Type	Monitoring Period Start Date	Monitoring Period End Date	DMR Due Date
TBD	Los Alamos National Laboratory	026	P	P1	026-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	029	N	N2	029-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	029	N	N2	029-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	029	N	N2	029-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	029	N	N2	029-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	031	P	P1	031-IW	IW - Impaired Water	51931 1 0	Adjusted Gross Alpha	<=	15	Maximum	pCi/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	031	P	P1	031-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	11	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	031	P	P1	031-IW	IW - Impaired Water	71900 1 0	Mercury, total [as Hg]	<=	0.77	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	031	P	P1	031-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	032	P	P1	032-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	032	P	P1	032-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	032	P	P1	032-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	032	P	P1	032-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	036	P	P1	036-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	036	P	P1	036-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	036	P	P1	036-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	036	P	P1	036-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	039	P	P1	039-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	039	P	P1	039-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	039	P	P1	039-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	039	P	P1	039-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	042	P	P1	042-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	042	P	P1	042-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	042	P	P1	042-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	042	P	P1	042-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	043	D	D1	043-D1	D1 - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	043	D	D1	043-D1	D1 - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	043	D	D1	043-D1	D1 - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	043	D	D1	043-D1	D1 - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	043	D	D1	043-1D	1D - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00556 1 0	Oil & Grease	<=	10	30-Day Average	mg/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	043	D	D1	043-1D	1D - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00556 1 0	Oil & Grease	<=	15	Daily Maximum	mg/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	043	D	D1	043-1D	1D - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00400 1 0	pH	>=	6	Minimum	SU	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	043	D	D1	043-1D	1D - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00400 1 0	pH	<=	9	Maximum	SU	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	043	D	D1	043-1D	1D - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00530 1 0	Solids, total suspended	<=	15	30-Day Average	mg/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	043	D	D1	043-1D	1D - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00530 1 0	Solids, total suspended	<=	23	Daily Maximum	mg/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	043	D	D1	043-IW	IW - Impaired Water	51931 1 0	Adjusted Gross Alpha	<=	15	Maximum	pCi/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020

							ELG, Modified Benchmark, and Impaired Waters Limits per MSGP Section 9.6.2 and the NM Water Quality Standards (20.6.4.900 NMAC [New Mexico Administrative Code])									
Permit ID	Facility	Permitted Feature	Sector(s)	Subsector	Proposed Consolidated Discharge # (Limit Set)	Discharge Description	Parameter Code	Parameter Name	Symbol	Quality Value	Limit Type	Units	Freq. of Analysis	Smpl. Type	Monitoring Period Start Date	Monitoring Period End Date	DMR Due Date
TBD	Los Alamos National Laboratory	043	D	D1	043-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	11	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	043	D	D1	043-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	043	D	D1	043-IW	IW - Impaired Water	71900 1 0	Mercury, total [as Hg]	<=	0.77	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	81017 1 0	Chemical Oxygen Demand [COD]	<=	120	Maximum	mg/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
TBD	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	81017 1 0	Chemical Oxygen Demand [COD]	<=	120	Maximum	mg/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
TBD	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	81017 1 0	Chemical Oxygen Demand [COD]	<=	120	Maximum	mg/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
TBD	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	81017 1 0	Chemical Oxygen Demand [COD]	<=	120	Maximum	mg/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	074	A	A4	074-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	074	A	A4	074-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	074	A	A4	074-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	074	A	A4	074-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	075	P	P1	075-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	075	P	P1	075-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	075	P	P1	075-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
TBD	Los Alamos National Laboratory	075	P	P1	075-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020

ENCLOSURE 4

Threatened and Endangered Species Protection Concurrence Letters from the United States Department of Interior, Fish and Wildlife Service

EPC-DO: 18-358

LA-UR-18-29182

Date: OCT 0 1 2018

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

February 12, 1999

Cons. #2-22-98-I-336
Cons. #2-22-95-I-108

David A. Gurule, Acting Area Manager
Department of Energy
Albuquerque Operations Office
Los Alamos Area Office
Los Alamos, New Mexico 87545

Dear Mr. Gurule:

This responds to your letter dated August 6, 1998, requesting our review and concurrence with the Threatened and Endangered Species Habitat Management Plan (HMP) for Los Alamos National Laboratory (LANL). The HMP was prepared by the LANL Ecology Group for the Department of Energy (DOE) as part of the Dual-Axis Radiographic Hydrodynamics Test Facility (DAHRT) Mitigation Action Plan. The U.S. Fish and Wildlife Service (Service) has worked closely with LANL in the development of the HMP. As a result of discussions and meetings following the August 6, 1998, submittal, additional information/clarification was provided via letters, updated Biological Evaluations/HMPs, and e-mail messages, dated September 8, October 20, November 25, and December 9, 1998, and January 4, January 22, and January 29, 1999. The purpose of the HMP is to provide for the protection of threatened and endangered species and their habitats on LANL. The HMP consists of three components that must be used together to assure proper management of the threatened and endangered species: an Overview Document, Site Plans, and Monitoring Plans. It was determined that if all the restrictions and protective measures outlined in the HMP are strictly followed, the implementation of this HMP may affect, but is not likely to adversely affect the Mexican spotted owl (owl), peregrine falcon (falcon), bald eagle (eagle), and southwestern willow flycatcher (flycatcher). The Biological Evaluation (BE) also considered potential impacts on the black-footed ferret, arctic peregrine falcon, and whooping crane. It was determined that there would be no effect on these species because of a lack of habitat.

Property at LANL varies from remote isolation to heavily developed and/or industrialized. The Service agrees, as stated in the Overview document, that a number of activities at LANL have the potential to adversely impact threatened and endangered species. Many of the industrial processes used at LANL have involved hazardous and radioactive materials. These materials as well as remediation of potential release sites may disturb

or reduce population viability of threatened and endangered species. In addition, other potential sources of disturbance or habitat alterations are possible as a result of the residential and commercial development in the LANL area. While the HMP identifies potential sources of adverse effects, this consultation does not necessarily cover all of those impacts. The Service does not anticipate that DOE will be able to plan all of its operations at LANL in accordance with this plan. The direct effects of most actions can be minimized through implementation of the HMP; however, a more thorough assessment is necessary to adequately evaluate the indirect and cumulative impacts of all actions that are funded, authorized, and permitted by DOE, as well as potential impacts from interrelated and interdependent actions. It was agreed (by Service, DOE, and LANL personnel) that consultation concerning ongoing LANL operations would be handled separately from the HMP, under the consultation on the Site-Wide EIS.

The Site Plans identify the particular areas of LANL where operations might impact known occupied or potential habitat for the flycatcher, eagle, falcon, and owl. Suitable habitat for these species, along with protective buffer areas surrounding their habitat, have been designated as Areas of Environmental Interest (AEIs). For the flycatcher, one AEI was established based on an observation of a migrant male flycatcher in 1997. The AEI is located in the Pajarito wetland area and includes the best available riparian habitat. For eagles, one AEI has been identified for wintering habitat that exists along the Rio Grande on the eastern edge of LANL. It is based on the locations of known and potential roost sites. For the falcon, four AEIs have been identified. They consist of the habitat previously identified under the 1985 interagency agreement. These areas are centered on deep canyons on the eastern side of LANL or on adjacent lands. LANL has agreed to implement the recommended management guidelines, which utilize four management zones (A through D) to protect nesting peregrine falcons from disturbance. For the owl, six AEIs have been identified, but only one of these sites is known to be occupied. These AEIs are based on and located in canyons that have been defined as suitable nest/roost habitat.

The AEI management section of each Site Plan provides guidelines for LANL operations to reduce or eliminate threats to each species. The primary threats on LANL property are (1) impacts on habitat quality from LANL operations and (2) disturbance of nesting or roosting birds. The site plans provide information on their location and guidelines for their management. The AEI Site Plans consist of a species description, descriptions of the AEIs for the species, descriptions of current impacts in the AEIs, management plans that describe allowable activities within core and buffer areas under the guidelines of the sites plan and protective measures. Activities discussed in the site plans include day to day activities, such as access into an AEI, as well as long-term projects, such as levels of habitat alteration in the buffer area of an AEI. Restrictions will be implemented on activities that could cause disturbance (people, vehicles and machinery, aircraft, light production, and noise) within occupied AEIs. The location of a potential disturbance activity within the AEI, the occupancy status of the AEI, and the type of activity all affect whether or not an activity is allowable. Habitat alterations are always restricted in core areas, but a limited amount of future development is allowed in currently undeveloped DOE-controlled buffer areas under the guidelines of this site plan as long

as it does not alter habitat in the undeveloped AEI (including light and noise guidelines). The purpose of buffer areas is to protect core areas from undue disturbance or habitat alteration or habitat degradation. Each AEI is specific to the situation or circumstances of the site it covers. According to the HMP, development beyond the cap established for each AEI, or greater than 2 hectares in size, including the developed-area border, requires independent review for ESA compliance.

Varying amounts of development and/or ongoing activities exist in the cores and buffers of each AEI. These developments may include residential, commercial, and light industrial areas, as well as roads and utility corridors. Existing/ongoing activities may include periodic scientific surveys, power line maintenance, recreational use, residential development, ER Program activities, and possible use of a firing site. Potential disturbance may be associated with automobile and truck traffic, construction activities, a live-fire range, explosives testing, and aircraft traffic at the County airport. Ongoing activities in developed areas constitute a baseline condition for the AEIs and are not restricted. New activities including further development within already existing developed areas are not restricted unless they impact undeveloped portions of an AEI core. If a proposed action within a developed area does not meet site plan guidelines, it must be individually reviewed for ESA compliance.

Some activities such as utility corridor maintenance, fuels management, and a limited amount of development are allowed in each AEI (as described in the HMP). The potential impacts of these activities are considered to be insignificant or discountable because they will occur in habitat that has been previously disturbed or is of poor quality due to its size or proximity to already developed areas. It is our understanding (based on the January 22, 1999, e-mail response from Terry Foxx) that the fuels management activities within the owl AEIs will only consist of ongoing and proposed fire protection activities around existing facilities (e.g. thinning around buildings) or those activities that are already covered under the Dome Fire Emergency BA. The other fire management activities mentioned in the HMP will go through the ESH-ID process and further consultation with the Service when a fire management plan is completed in the future.

In general, activities that detrimentally alter habitat in an AEI or would cause unacceptable disturbance to the species inhabiting the AEI are not allowed under the guidelines of a Site Plan. The Site Plans are designed to minimize impacts to threatened and endangered species and their habitat. The protective measures and restrictions outlined in the Site Plans were developed using the best available data, in cooperation with Service biologists.

The U.S. Fish and Wildlife Service concurs with DOE's determination that implementation of LANL's HMP may affect, but is not likely to adversely affect the Mexican spotted owl, American peregrine falcon, bald eagle, and southwestern willow flycatcher based on the protective measures described in the BA and HMP. If all the restrictions and protective measures outlined in the HMP are strictly followed, potential impacts on owls, falcons, eagles, and flycatchers are expected to be insignificant or

discountable for the following reasons: 1) appropriate seasonal restrictions will be implemented to avoid disturbance to potentially breeding flycatchers, peregrines, and owls and wintering eagles; 2) no nest or roost habitat for any listed species will be altered; 3) the total amount of potential foraging habitat that could be impacted within each species home ranges is expected to be insignificant compared to the amount of available foraging habitat throughout the area; 4) monitoring plans have been developed as an integral part of the HMP; and 5) a mechanism for incorporating necessary technical and regulatory changes and updating the HMP has been included (page 32 of the Overview Document).

In future communications regarding this project, please refer to Consultation #2-22-98-I-336. If we can be of further assistance, please contact Carol Torrez of my staff at (505) 346-2525, ext. 115.

Sincerely,

Jennifer Fowler-Propst
Field Supervisor

cc:
Teralene Foxx, Project Manager, Ecology Group, Los Alamos National Laboratory, P.O. Box 1663, Mail Stop M887, Los Alamos, New Mexico 87545
Elizabeth Withers, U.S. Department of Energy, Los Alamos Area Office, 35th Street, Los Alamos, New Mexico
Field Supervisor, Ecological Services, U.S. Fish and Wildlife Service, Phoenix, Arizona

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

December 9, 2013

Cons. #02ENNM00-2014-I-0014

Geoffrey L. Beausoleil, Acting Manager
National Nuclear Security Administration, Los Alamos Field Office
Department of Energy
Los Alamos, New Mexico 87544

Dear Mr. Beausoleil:

Thank you for your biological assessment entitled, "Biological Assessment of the Effects of Implementing the Jemez Mountains Salamander Site Plan on Federally Listed Threatened and Endangered Species at Los Alamos National Laboratory" (BA); the request for informal consultation and conferencing received on July 25, 2013 and supplemental information supplied in the "Jemez Mountains Salamander (*Plethodon neomexicanus*) Los Alamos National Laboratory (LANL) Site Plan" (Site Plan); and emails dated November 19 and December 3, 2013. The Department of Energy (DOE) requested concurrence with the determination of effects for the endangered Jemez Mountains salamander (*Plethodon* neomexicanus) (salamander) pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. § 1531 *et seq.*). Your proposed action consists of implementing the Site Plan, and includes of the incorporation of this Site Plan into LANL's Habitat Management Plan (HMP). The HMP was consulted upon in 1999 (Consultation #2-22-981-336) as the primary mechanism to ensure compliance with the ESA at LANL. The actions described in the Site Plan and analyzed in the BA, and supplemental emails are hereby incorporated by reference. You determined that implementing the Site Plan "may affect, is not likely to adversely affect" the salamander, and includes placing restrictions on certain types of work in areas identified as core habitat for the salamander on LANL property with the purpose of ensuring that effects to the salamander from those actions identified in the Site Plan are insignificant and discountable.

The Site Plan does not include any areas within designated salamander critical habitat, indicating that no critical habitat will be affected. The Site Plan has modeled and field validated the model to identify the areas on LANL property with the highest potential to be occupied by salamanders based on habitat features for the salamander. Each area identified by the modeling is termed "Area of Environmental Interest" (AEI) and consists of a "core area" and a "buffer area". The core area habitat is defined as suitable habitat where the salamander occurs or may occur at LANL. The core area habitat consists of sections of north-facing slope that contain the required

micro-habitat to support salamanders. The buffer area is 328 feet (100 meters) wide extending outward from the edge of the core area. Only the Los Alamos Canyon AEI is known to be occupied based on surveys. Surveys for the salamander are known to have a very low detection rate for occupied areas and DOE has assumed that all AEIs at LANL are occupied at all times by the salamander.

Within the Site Plan, DOE has assessed activities that could cause habitat alteration and includes any action that alters the soil structure, vegetative components necessary to the species, water quality, or hydrology in undeveloped areas of an AEI. If an activity were to take place outside of the AEI the activity will be assessed if it will have effects inside the AEI core. Within the core areas, only activities specified within the Site Plan and those that have no effect in the core areas (e.g. no habitat alterations or effects within the core areas) will be conducted without further consultation with the Service. Habitat alterations also include soil pits for soil samples deeper than 6 inches (15.2 centimeters) using either hand or mechanized augers. Within the Site Plan, DOE is proposing fuels management practices to reduce wildfire risk and maintenance of utility corridors within the AEIs. The likelihood that salamanders may be affected by the actions in the Site Plan is very low. To ensure that effects to the salamander are insignificant and discountable, the Site Plan incorporates the following conservation measures as restrictions to the identified work:

Fuels Management Practices to Reduce Wildfire Risk

a. Within undeveloped core areas, thinning trees to a level of 80% canopy cover or higher may occur; tree thinning below 80% canopy cover is not part of the action under this consultation.
b. Large logs on the ground will be left in place and not chipped.
c. Large trees that are felled will be left as large logs on the ground
d. When appropriate, smaller trees and understory shrubs that may be thinned will be dispersed and left on-site to aid in soil moisture retention.
e. In buffer areas, thinning of trees may occur to the current LANL-approved prescription level; clear-cutting will not occur.
f. Thinning activities will not occur during the rainy season when salamanders are surface active, between July 1 – October 31. Thinning activities may occur earlier in October if freezing temperatures are present.
g. In the unlikely event that a salamander is observed surface active during thinning activities, all activities shall cease, and the Service will be notified.

Utility Corridors

a. Cutting trees that threaten power lines may occur within 26 feet (8 meters) of either side of an existing utility line at LANL
b. New utility lines and utility lines requiring clearance of a right-of-way greater than 52 feet (16 meters) total in core habitat is not part of the action under this consultation.

Habitat alterations other than the fuels management practices and utility corridor maintenance described above will not occur in undeveloped core areas under the guidelines of the Site Plan or this consultation. The Service concurs with DOE's determination regarding the salamander for the following reasons:

Within the Site Plan, DOE has placed the above detailed restrictions to ensure that any effects to the salamander and its habitat remain insignificant and discountable. Canopy cover will remain at 80% or greater in undeveloped core areas and fire management actions will occur outside of the salamander surface activity period. Maintaining utility line corridors in areas with existing infrastructure (the utility lines) by removing individual hazard trees is not expected to have any measurable effect on salamanders or their potential habitat. Consequently, we concur that potential effects to the salamander from the proposed action will be insignificant and discountable.

This concludes section 7 consultation regarding the proposed action. If monitoring or other information results in modification or the inability to complete all aspects of the proposed action, consultation should be reinitiated. Please contact the Service if: 1) future surveys detect listed, proposed or candidate species in habitats where they have not been previously observed; 2) the proposed action changes or new information reveals effects of the proposal to listed species that have not been considered in this analysis; or 3) a new species is listed or critical habitat designated that may be affected by the action.

Thank you for your concern for endangered and threatened species and New Mexico's wildlife habitats. In future correspondence regarding this project, please refer to consultation #02ENNM00-2014-I-0014. If you have any questions, please contact Michelle Christman of my staff at (505) 761-4715.

Sincerely,

Wally Murphy
Field Supervisor

cc:
Wildlife Biologist, Cuba Ranger District, Cuba, NM (Attn: Ramon Borrego)
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New Mexico Ecological Services Field Office
2105 Osuna Road NE
Albuquerque, New Mexico 87113
Telephone 505-346-2525 Fax 505-346-2542
www.fws.gov/southwest/es/newmexico/

August 6, 2015

Cons. # 02ENNM00-2015-I-0538

Kimberly Davis Lebak, Manager
Department of Energy
National Nuclear Security Administration
Los Alamos Field Office
Los Alamos, New Mexico 87544

Dear Ms. Lebak:

This responds to your July 9, 2015, cover letter and biological assessment (BA) requesting informal consultation for the addition of the Western distinct population segment of the yellow-billed cuckoo (*Coccyzus americanus occidentalis*) (cuckoo) and the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) (jumping mouse) to the Los Alamos National Laboratory Habitat Management Plan, Los Alamos, New Mexico. As documented in your BA, which is hereby incorporated by reference, we find that your proposed action will have insignificant and discountable effects to the cuckoo and the jumping mouse. Therefore, the Service concurs with your determination of "may affect, is not likely to adversely affect" for the cuckoo and the jumping mouse.

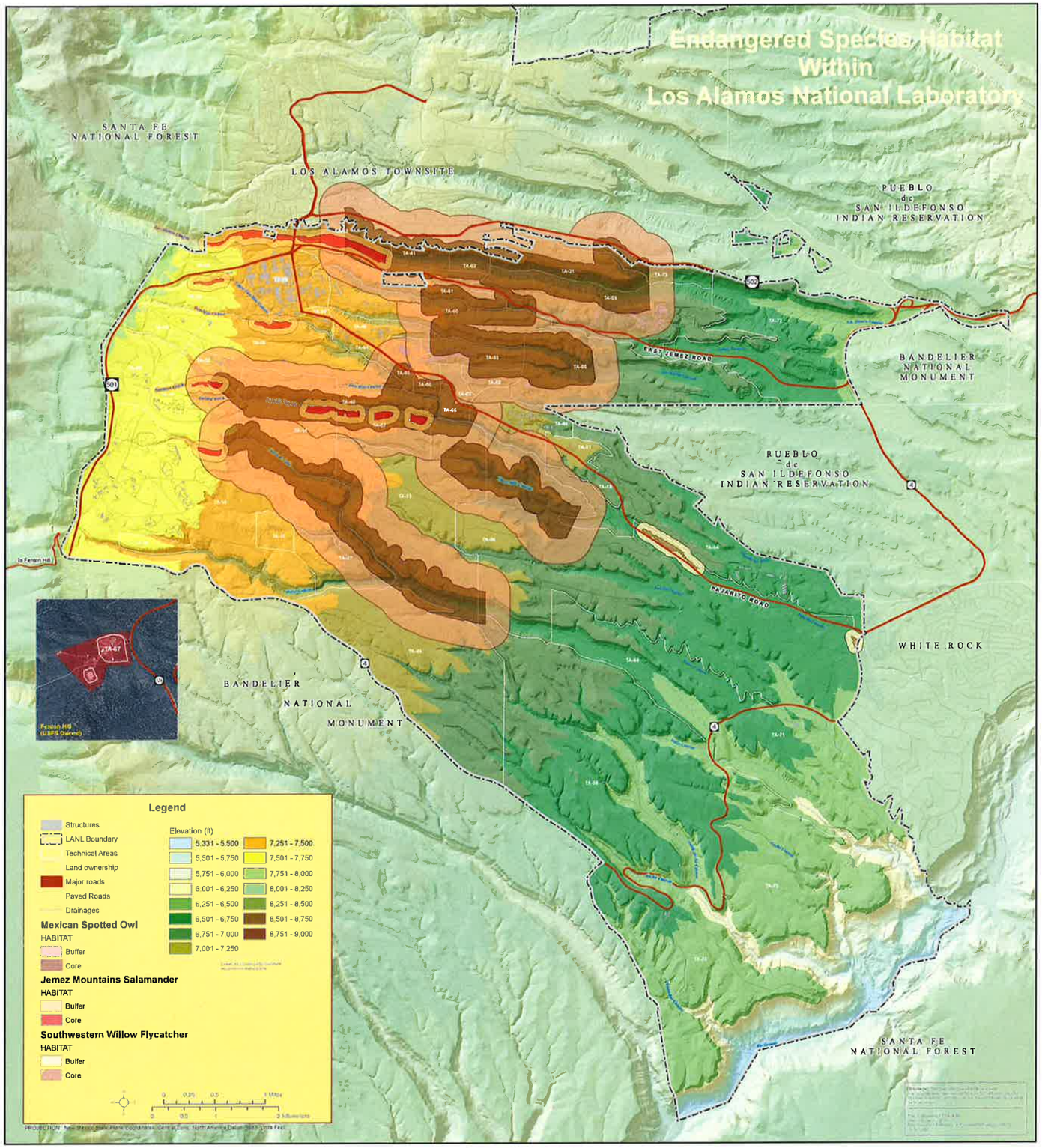
This concludes section 7 consultation regarding the proposed action. If monitoring or other information results in modification or the inability to complete all aspects of the proposed action, consultation should be reinitiated. Please contact the Service if: 1) future surveys detect listed, proposed or candidate species in habitats where they have not been previously observed; 2) the proposed action changes or new information reveals effects of the proposal to listed species that have not been considered in this analysis; or 3) a new species is listed or critical habitat designated that may be affected by the action.

Thank you for your concern for endangered species and New Mexico's wildlife habitats. If you have any questions, please contact Eric Hein of my staff at the letterhead address or at (505) 761-4735.

Sincerely,

for Wally Murphy
Field Supervisor

cc:
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico


Endangered Species Habitat
Within
Los Alamos National Laboratory
SANTA FE
NATIONAL FOREST
LOS ALAMOS TOWNSITE
PUEBLO
de
SAN ILDEFONSO
INDIAN RESERVATION
BANDELIER
NATIONAL
MONUMENT
EAST JEMEZ ROAD
PUEBLO
de
SAN ILDEFONSO
INDIAN RESERVATION
PAJARITO ROAD
WHITE ROCK
BANDELIER
NATIONAL
MONUMENT
SANTA FE
NATIONAL FOREST
TA-67
Fenton Hill
(USFS Owned)
Legend
Structures
LANL Boundary
Technical Areas
Land ownership
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
8,001 - 8,250
8,251 - 8,500
8,501 - 8,750
8,751 - 9,000

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
EPA's NPDES EREPORTING HELP DESK

06/27/2019

Triad National Security LLC
ATTN: Enrique Torres
PO Box 1663, MS K490
Los Alamos, NM 87545

Facility: Los Alamos National Laboratory
PO Box 1663
Los Alamos, NM 87545

NPDES ID: **NMR050013**

Dear Enrique Torres:

This letter acknowledges that you have submitted a complete Multi Sector General Permit (MSGP) Notice of Intent (NOI) **Modification** form. It has been processed and the information you provided has been updated in EPA's database.

If you have other questions concerning the stormwater program, please contact EPA Region 6:

Name: Nasim Jahan
Phone: (214) 665-7522
Email: Jahan.Nasim@epa.gov

If you have any questions regarding this letter, please call the EPA NPDES eReporting Help Desk at 1-877-227-8965 (toll free) or send an email to NPDESeReporting@epa.gov.

EPA NPDES eReporting Help Desk
Operated by Avanti Corporation
1200 Pennsylvania Ave., NW
Mail Code: 4203M
Washington, DC 20460
1-877-227-8965

Los Alamos
NATIONAL LABORATORY
EST.1943

Environmental Protection and Compliance
Los Alamos National Laboratory
PO Box 1663, K491
Los Alamos, NM 87545
(505) 667-2211

Date: JUN 1 1 2019
Symbol: EPC-DO: 19-191
LA-UR: 19-25199

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

Subject: National Pollutant Discharge Elimination System (NPDES) Permit Tracking No. NMR050013, Multi-Sector General Permit (MSGP) Change Notice of Intent (Change NOI) Reporting Pursuant to Part 7.4

To Whom It May Concern:

This letter serves to submit Change NOI information to modify outfalls and monitoring requirements related to MSGP Permit Tracking No. NMR050013 for Triad National Security, LLC (Triad) as the operator for Los Alamos National Laboratory pursuant to Part 7.4 of the MSGP.

Environmental Protection Agency's (EPA's) Electronic Reporting Rule requires that NOIs be submitted using the NeT-MSGP program service on the EPA Central Data Exchange system. However, due to system limitations previously identified by Triad and verified with EPA Region 6 personnel, a complete and accurate NOI could not be created in NeT-MSGP. Therefore, change NOI information cannot be submitted using NeT-MSGP (Attachment 1). As a result, Triad was granted a waiver to submit paper NOI forms from Nasim Jahan (EPA Region 6) on September 26, 2018 (Attachment 1).

Part 6.2.4.1 of the MSGP indicates no monitoring is required when a waterbody's impairment is related to a non-pollutant. EPA Region 6 has concurred that temperature is a non-pollutant, therefore monitoring for temperature in stormwater as an impairment is not required (Attachment 2).

To accurately update the NOI and to facilitate complete and accurate information in NetDMR, Triad is submitting a paper NOI on EPA Form 3510-6 (Attachment 3) and an additional table defining

modifications to the monitored outfall-specific Sector and impaired waters limits sets (Attachment 4) currently populated in the NetDMR system.

Your assistance is greatly appreciated as Triad 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.

Very Truly Yours,

Enrique Torres
Division Leader
Environmental Protection & Compliance Division

ET/TWL/LJD:jdm

Attachment(s): Attachment 1 EPA Region 6 Approval for Triad National Security, LLC to Submit a Paper NOI; EPA Guidance to Submit Change NOI Information via EPA Form 3510-6
Attachment 2 EPA Region 6 Concurrence Regarding Temperature as a Non-Pollutant
Attachment 3 Change NOI for Stormwater Discharges Associated with Industrial Activity under the NPDES Multi-Sector General Permit
Attachment 4 NetDMR Monitoring Requirements for Los Alamos National Laboratory, Operated by Triad National Security, LLC, MSGP ID NMR050013

Copy: Nasim Jahan, EPA Region 6, jahan.nasim@epa.gov, (E-File)
Helen Nguyen, EPA Region 6, nguyen.helen@epa.gov, (E-File)
Sarah Holcomb, NMED/SWQB, sarah.holcomb@state.nm.us, (E-File)
Karen E. Armijo, NA-LA, karen.armijo@nnsa.doe.gov, (E-File)
Michael W. Hazen, ALDESHQSS, mhazen@lanl.gov, (E-File)
William R. Mairson, ALDESHQSS, wrmairson@lanl.gov, (E-File)
Timothy A. Dolan, GC-ESH, tdolan@lanl.gov, (E-File)
Taunia S. Van Valkenburg, EPC-CP, tauniav@lanl.gov, (E-File)
Terrill. W. Lemke, EPC-CP, tlemke@lanl.gov, (E-File)
Holly L. Wheeler, EPC-CP, hbenson@lanl.gov, (E-File)
Leslie J. Dale, EPC-CP, leslie@lanl.gov, (E-File)
adesh-records@lanl.gov, (E-File)
lasomailbox@nnsa.doe.gov, (E-file)
epccorrespondence@lanl.gov, (E-File)

Attachment 1

EPA Region 6 Approval for Triad National Security, LLC to Submit a Paper NOI; EPA Guidance to Submit Change NOI Information via EPA Form 3510-6

EPC-DO: 19-191

LA-UR-19-25199

Date: JUN 1 1 2019

Dale, Leslie J

From: Lemke, Terrill W
Sent: Wednesday, September 26, 2018 4:16 PM
To: Dolan, Timothy Aloysius; Dale, Leslie J; Wheeler, Holly Lynn
Subject: FW: Request for LANL Paper MSGP NOI Waiver

Follow Up Flag: Follow up
Flag Status: Flagged

FYI

Terrill Lemke, PE, CPESC, CISEC
Environmental Compliance Programs
Los Alamos National Laboratory
Los Alamos, NM
Office: 505-665-2397
Cell: 505-699-0725

From: Jahan, Nasim <Jahan.Nasim@epa.gov>
Sent: Wednesday, September 26, 2018 2:43 PM
To: Lemke, Terrill W <tlemke@lanl.gov>
Cc: Emily Gorman <emily@avanticorporation.com>
Subject: RE: Request for LANL Paper MSGP NOI Waiver

Dear Mr. Terrill:

EPA, Region 6 is approving your request for paper submission as the facility is unable to submit the NOI online.. Please mail the hardcopies to the following address:

For Regular U.S. Mail Delivery:
Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2015 MSGP Signature Agreement
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

- **For Overnight/Express U.S. Mail Delivery:**
Stormwater Notice Processing Center
William Jefferson Clinton East Building – Room 7420
ATTN: 2015 MSGP Signature Agreement
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Thank you,

Nasim Jahan

Environmental Engineer
Permits and Technical Section (6WQ-PP)
EPA Region 6 Water Quality Protection Division
1445 Ross Avenue, Ste. 1200
Dallas, TX 75202-2733
Phone: 214.665.7522
Fax: 214.665.2191

From: Lemke, Terrill W [mailto:tlemke@lanl.gov]
Sent: Wednesday, September 26, 2018 3:30 PM
To: Jahan, Nasim <Jahan.Nasim@epa.gov>
Cc: Dale, Leslie J <leslie@lanl.gov>; Dolan, Timothy Aloysius <tdolan@lanl.gov>
Subject: Request for LANL Paper MSGP NOI Waiver

Nasim,

Thank you for speaking with us today. We've had the opportunity to review the changes implemented in the updated NeT-MSGP system that rolled out earlier this year, and have identified the following issues as problematic for submitting an accurate and complete electronic NOI.

A new NOI must be submitted for Triad National Security, LLC (Triad) as a new operator for Los Alamos National Laboratory (LANL) pursuant to Part B.12.C of the 2015 MSGP. Triad is replacing Los Alamos National Security, LLC (LANS) as operator of LANL effective November 1, 2018. Per the schedule in Table 1-2 of the MSGP, Triad's NOI must be submitted by October 2, 2018.

EPA's Electronic Reporting Rule requires that NOIs be submitted using the NeT-MSGP program service on the EPA Central Data Exchange system. However, due to the following system limitations previously identified by LANS and coordinated by EPA Region 6 personnel, a complete and accurate NOI cannot be submitted using NeT-MSGP.

1. Part 9.6.2 of the 2015 MSGP, Permit Conditions for the State of New Mexico, requires that benchmark values be modified to reflect New Mexico water quality standards for facilities in New Mexico, based on benchmark values from the Standards for Interstate and Intrastate Surface Waters (20.6.4.900 New Mexico Administrative Code [NMAC]). These modified benchmark values are not recognized by NeT-MSGP and populated in NetDMR.
2. The 2018-2020 State of New Mexico Clean Water Act §303(d)/ §305(b) Integrated Report requires monitoring of impaired waters pollutants not available for selection in NeT-MSGP (e.g., Adjusted Gross Alpha and Temperature).
3. 20.6.4.900 NMAC requires monitoring of certain modified benchmark and impaired waters metals pollutants as dissolved species, which are not available for selection in NeT-MSGP. Currently, only total metals species may be assigned in NeT-MSGP.
4. Due to extended frozen conditions during the winter and a semi-arid climate, Triad will implement an alternative monitoring period of four (4) two-month monitoring quarters for benchmark values as identified below, in accordance with Part 6.1.6 of the 2015 MSGP. This alternate monitoring schedule does not coincide with the default four (4) three-month quarters listed in Part 6.1.7 of the 2015 MSGP and NeT-MSGP does not allow input of an alternate monitoring schedule. Accordingly, annual impaired waters and Effluent Limitation Guideline monitoring will be conducted between April 1 and November 30 of each year.

   April 1 through May 31
   June 1 through July 31
   August 1 through September 30

These system limitations directly result in inaccurate pollutants, limits, monitoring periods and DMR due dates being populated in NetDMR.

EPA Region 6 has recognized the challenges that the outgoing operator (LANS) has identified with NeT-MSGP related to compliance with Part 9.6.2 of the 2015 MSGP, Permit Conditions for the State of New Mexico, and has been instrumental in helping LANS to resolve these issues. Therefore, per your verbal direction, we are requesting a waiver for Triad to submit a paper NOI in lieu of submitting an inaccurate and incomplete NOI in NeT-MSGP. Please advise at your earliest convenience if you concur with our submittal of a paper NOI, as we must submit by Oct 2.

We appreciate your assistance in helping us maintain compliance. If you have any questions, please contact me at (505) 665-2397.

Terrill

Terrill Lemke, PE, CPESC, CISEC
Environmental Compliance Programs
Los Alamos National Laboratory
Los Alamos, NM
Office: 505-665-2397
Cell: 505-699-0725

From: Emily Hack (Avanti) (EPA NeT Support)
Cc: Jahan Nasim; Wheeler, Holly Lynn; Dale, Leslie J; Hazen, Michael W
Subject: NMR050013 - Triad National Security LLC - MSGP Notice of Intent
Date: Friday, October 26, 2018 11:13:07 AM
Attachments: NMR050013_Triad_Los Alamos National Laboratory_2015 MSGP NOI Acknowledgement.pdf
Triad National Security LLC_Los Alamos National Laboratory_10-02-2018.pdf

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You are CC'ed on this support request (10066). Reply to this email to add a comment to the request.

Emily Hack (Avanti) (EPA NeT Support)

Good afternoon,

The paper Notice of Intent (NOI) submitted under EPA's Multi-Sector General Permit (MSGP) for Los Alamos National Laboratory under Triad National Security LLC has been processed by the EPA NPDES eReporting Help Desk. The facility was assigned NPDES ID NMR050013. Please, retain the attached acknowledgement letter for your records.

Due to the unique nature of the outfall sequence and monitoring requirements, EPA instructed that we enter the NOI directly into the back-end system. Therefore, the NOI will not be generated in the NeT MSGP program at this time. Attached is the NOI that we received. As I'm sure you are aware, for any changes to the NOI in the future, please submit them via paper as well.

Please, let me know if you have any questions.

Sincerely,

Emily Hack
NPDES eReporting Help Desk
Staffed by Avanti Corporation
1-877-227-8965
NPDESeReporting@epa.gov

This email is a service from EPA NeT Support. Delivered by Zendesk

Attachment 2

EPA Region 6 Concurrence Regarding Temperature as a Non-Pollutant

EPC-DO: 19-191

LA-UR-19-25199

Date: JUN 1 1 2019

Dale, Leslie J

From: Jahan, Nasim <Jahan.Nasim@epa.gov>
Sent: Wednesday, March 27, 2019 10:40 AM
To: Dale, Leslie J
Cc: Lemke, Terrill W; Dolan, Timothy Aloysius; Wheeler, Holly Lynn; Holcomb, Sarah, NMENV
Subject: RE: Temperature Monitoring for MSGP

Dear Leslie:

I concur your decision based on your reference. Please let me know if you have any other concerns..

Thank you,

Nasim..

From: Dale, Leslie J <leslie@lanl.gov>
Sent: Wednesday, March 27, 2019 11:16 AM
To: Jahan, Nasim <Jahan.Nasim@epa.gov>
Cc: Lemke, Terrill W <tlemke@lanl.gov>; Dolan, Timothy Aloysius <tdolan@lanl.gov>; Wheeler, Holly Lynn <hbenson@lanl.gov>; Holcomb, Sarah, NMENV <sarah.holcomb@state.nm.us>
Subject: Temperature Monitoring for MSGP

Good Morning Nasim,

We (Los Alamos National Laboratory, NMR0050013) have a question regarding whether temperature is considered a pollutant with respect to impaired waters monitoring under the MSGP. Part 6.2.4.1 of the MSGP, paragraph 2 states "**No monitoring is required** when a waterbody's biological communities are impaired but no pollutant, including indicator or surrogate pollutants, is specified as causing the impaired, or **when a waterbody's impairment is related to** hydrologic modifications, impaired hydrology, or **other non-pollutant.**"

For context, the 2018-2020 State of New Mexico CWA Section 303(d)/Section 305(b) Integrated Report listed temperature as an impairment to Sandia Canyon (Sigma Canyon to NPDES outfall 001, AU ID: NM-9000.A_047). Upon release of the revised Integrated Report, we included temperature as an impairment in our NOI submitted under Triad National Security, LLC (the new operator of Los Alamos National Laboratory) effective November 1, 2018.

We sought clarification from the New Mexico Environment Department – Surface Water Quality Bureau on March 25, 2019. Upon visiting the language in Part 6.2.4.1 of the MSGP, Sarah Holcomb provided guidance that temperature is a non-pollutant.

According to 40 CFR 122.2, Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), **heat**, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:
(a) Sewage from vessels; or
(b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for

disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

We interpret "heat" to mean heat generated by MSGP industrial activities and not ambient temperature associated with stormwater runoff from MSGP facilities, and therefore believe that monitoring for temperature in stormwater as an impairment is not required.

Please let us know whether you concur, as we are preparing to modify our NOI to remove temperature from our monitoring requirements for the 2019 monitoring season.

Thank you,
Leslie Dale, CHMM
Environmental Compliance Programs (EPC-CP)
Los Alamos National Laboratory
PO Box 1663, MS K490
Los Alamos, NM 87545
(505) 606-2371

Attachment 3

Change NOI for Stormwater Discharges Associated with Industrial Activity under the NPDES Multi-Sector General Permit

EPC-DO: 19-191

LA-UR-19-25199

Date: JUN 1 1 2019

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: 09/26/2018 ***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): NMR050013

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: 51 (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: F **Subsector:** F4 **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	002 (Sector AA, Subsector AA1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001) Remove monitored outfall 002 from permit coverage and NetDMR. Outfall was eliminated effective May 1, 2019.		**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude				
Longitude				
Outfall ID	005 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude				
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				

Outfall ID	006 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude				
Longitude				
If substantially identical to other outfall, list identical outfall ID: 005				
Outfall ID	009 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude				
Longitude				
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	007 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude				
Longitude				
If substantially identical to other outfall, list identical outfall ID: 009				
Outfall ID	008 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude				
Longitude				
If substantially identical to other outfall, list identical outfall ID: 009				

Outfall ID	010 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: 009				
Outfall ID	012 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	011 (Sector O, Subsector O1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: 012				
Outfall ID	017 (Sectors AA, F Subsectors AA1, F4)	Sandia Canyon (Sigma Canyon to NPDES outfall 001) Remove monitored outfall 017 from permit coverage and NetDMR. Site achieved No Exposure Status effective December 18, 2018.		**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID:				

Outfall ID	013 (Sectors AA, F Subsectors AA1, F4)	Mortandad Canyon (Within LANL)		**TMDL Name and ID:** N/A
Latitude		Remove SIO 013 from permit coverage. Site achieved No Exposure Status effective December 18, 2018.		**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: 017				
Outfall ID	014 (Sectors AA, F Subsectors AA1, F4)	Mortandad Canyon (Within LANL)		**TMDL Name and ID:** N/A
Latitude		Remove SIO 014 from permit coverage. Site achieved No Exposure Status effective December 18, 2018.		**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: 017				
Outfall ID	015 (Sectors AA, F Subsectors AA1, F4)	Mortandad Canyon (Within LANL)		**TMDL Name and ID:** N/A
Latitude		Remove SIO 015 from permit coverage. Site achieved No Exposure Status effective December 18, 2018.		**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: 017				
Outfall ID	016 (Sectors AA, F Subsectors AA1, F4)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)		**TMDL Name and ID:** N/A
Latitude		Remove SIO 016 from permit coverage. Site achieved No Exposure Status effective December 18, 2018.		**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: 017				

Outfall ID	019 (Sectors AA, F Subsectors AA1, F4)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)		**TMDL Name and ID:** N/A
Latitude		Remove SIO 019 from permit coverage. Site achieved No Exposure Status effective December 18, 2018.		**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: 017				
Outfall ID	020 (Sectors AA, F Subsectors AA1, F4)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)		**TMDL Name and ID:** N/A
Latitude		Remove monitored outfall 020 from permit coverage and NetDMR. Site achieved no Exposure Status effective December 18, 2018.		**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	022 (Sectors AA, P, Subsectors AA1, P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude		Add Sector AA, Subsector AA1 to permit coverage for monitored outfall 022.		**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	021 (Sector AA, P, Subsector AA1, P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude		Add Sector AA, Subsector AA1 to permit coverage for SIO 021.		**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: 022				

Outfall ID	023 (Sector AA, P, Subsector AA1, P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude		Add Sector AA, Subsector AA1 to permit coverage for SIO 023.		
If substantially identical to other outfall, list identical outfall ID: 022				
Outfall ID	024 (Sector AA, P, Subsector AA1, P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude		Add Sector AA, Subsector AA1 to permit coverage for SIO 024.		
If substantially identical to other outfall, list identical outfall ID: 022				
Outfall ID	025 (Sector AA, P, Subsector AA, P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude		Add Sector AA, Subsector AA1 to permit coverage for SIO 025.		
If substantially identical to other outfall, list identical outfall ID: 022				
Outfall ID	026 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID:				

Outfall ID	027 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: 026				
Outfall ID	028 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: 026				
Outfall ID	029 (Sector N, Subsector N2)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID:				
Outfall ID	032 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID:				

Outfall ID	033 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	TMDL Name and ID: N/A
Latitude				Pollutant(s) for which there is a TMDL: N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: 032				
Outfall ID	034 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	TMDL Name and ID: N/A
Latitude				Pollutant(s) for which there is a TMDL: N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: 032				
Outfall ID	035 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	TMDL Name and ID: N/A
Latitude				Pollutant(s) for which there is a TMDL: N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: 032				
Outfall ID	036 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)		TMDL Name and ID: N/A
Latitude	35.867825	Remove monitored outfall 036 from permit coverage and NetDMR. Outfall was eliminated effective March 26, 2019.		Pollutant(s) for which there is a TMDL: N/A
Longitude	-106.293388			
If substantially identical to other outfall, list identical outfall ID:				

Outfall ID	037 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]	**TMDL Name and ID:** N/A
Latitude	35.867859			**Pollutant(s) for which there is a TMDL:** N/A
Longitude	-106.292992	Change outfall 037 from SIO to Monitored Outfall effective March 26, 2019.	Remove 00010 Temperature, water deg. centrigrade from list of impairments	
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID	039 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID	038 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)		**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude		Remove SIO 038 from permit coverage. Outfall was eliminated effective April 23, 2019.		
If substantially identical to other outfall, list identical outfall ID: 039				
Outfall ID	040 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)		**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude		Remove SIO 040 from permit coverage. Outfall was eliminated effective April 23, 2019.		
If substantially identical to other outfall, list identical outfall ID: 039				

Outfall ID	042 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude				
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID	041, Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude				
Longitude				
If substantially identical to other outfall, list identical outfall ID: 042				
Outfall ID	074 (Sector A, Subsector A4)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude				
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID	073 (Sector A, Subsector A4)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A **Pollutant(s) for which there is a TMDL:** N/A
Latitude				
Longitude				
If substantially identical to other outfall, list identical outfall ID: 074				

Outfall ID	075 (Sector P, Subsector P1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	Remove 00010 Temperature, water deg. centrigrade from list of impairments	**TMDL Name and ID:** N/A
Latitude				**Pollutant(s) for which there is a TMDL:** N/A
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID	076 (Sector AA, Subsector A1)	Sandia Canyon (Sigma Canyon to NPDES outfall 001)	01104 Aluminum, total recoverable [as Al]; 01040 Copper, dissolved [as Cu]; 39516 Polychlorinated biphenyls [PCBs]	**TMDL Name and ID:** N/A
Latitude	35.8758507	Add new monitored outfall 076 to permit coverage and NetDMR. Monitoring began June 1, 2019.		**Pollutant(s) for which there is a TMDL:** N/A
Longitude	-106.327924			
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID				**TMDL Name and ID:**
Latitude				**Pollutant(s) for which there is a TMDL:**
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				
Outfall ID				**TMDL Name and ID:**
Latitude				**Pollutant(s) for which there is a TMDL:**
Longitude				
If substantially identical to other outfall, list identical outfall ID: _____				

4. Provide the following Information about your outfall latitude longitude:

Latitude/Longitude Data Source: ☐ Map ☐ GPS ☐ Other

If you used a USGS topographic map, what was the scale? _____

Horizontal Reference Datum: ☐ NAD 27 ☐ NAD 83 ☐ WGS 84

5. Does your facility discharge into a Muncipal Separate Storm Sewer System (MS4)? ☐ YES ☐ NO

If yes, provide the name of the MS4 operator: _____

6. Check if you discharge to any of the waters of the U.S. that are designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water) or as a Tier 3 water (Outstanding National Resource Water)? (See Appendix L).

☐ Tier 2/2.5. Provide the name(s) of receiving water(s): _____

☐ Tier 3 (Outstanding National Resource Waters)*

* **Note: You are ineligible for coverage if you are a new discharger or new source to waters designated as Tier 3 (outstanding national resource waters) for antidegradation purposes under 40 CFR 131.13(a)(3).**

7. If you are subject to benchmark monitoring requirements for a hardness-dependent metal, what is the hardness of your receiving water(s) (see Appendix J)?

_____ (mg/L)

8. If you are subject to benchmark monitoring requirements for a hardness-dependent metal, does your facility discharge into any saltwater receiving waters? ☐ YES ☐ NO

9. Does your facility discharge to a federal CERCLA site listed in Appendix P? ☐ YES ☐ NO

If yes, did you notify the EPA Regional Office in advance of filing your NOI, and did the EPA Regional Office determine that you are eligible for permit coverage pursuant to Part 1.1.4.10*? ☐ YES ☐ NO

* **Note: If you discharge to a federal CERCLA site listed in Appendix P, you are ineligible for coverage under this permit unless you notify the EPA Regional Office in advance and the EPA Regional Office determines you are eligible coverage under this permit. In determining your eligibility for coverage under this Part, the EPA Regional Office may evaluate whether you have included adequate controls and/or procedures to ensure that your discharges will not lead to recontamination of aquatic media at the CERCLA Site such that it will to cause or contribute to an exceedance of a water quality standard.**

F. Stormwater Pollution Prevention Plan (SWPPP) Information

1. Has the SWPPP been prepared in advance of filing this NOI, as required? ☐ YES ☐ NO

2. SWPPP Contact Information:

First Name, Middle Initial, Last Name: _____ _____

Professional Title: _____

Phone: ___ - ___ - ____ Ext. ____

E-mail: _____

3. SWPPP Availability:

Your current SWPPP or certain information from your SWPPP must be made available through one of the following two options. Select one of the options and provide the required information*:

* **Note: You are not required to post any confidential business information (CBI) or restricted information (as defined in Appendix A) (such information may be redacted), but you must clearly identify those portions of the SWPPP that are being withheld from public access.**

☐ **Option 1**: Maintain a current copy of your SWPPP on an Internet page (Universal Resource Locator or URL).

Provide the web address URL: _____

☐ **Option 2**: Provide the following information from your SWPPP:

A. Describe your onsite industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams), and potential spill and leak areas:

B. List the pollutant(s) or pollutant constituent(s) associated with each industrial activity exposed to stormwater that could be discharged in stormwater and any authorized non-stormwater discharges listed in Part 1.1.3:

C. Describe the control measures you will employ to comply with the non-numeric technology-based effluent limits required in Part 2.1.2 and Part 8, and any other measures taken to comply with the requirements in Part 2.2 Water Quality-Based Effluent Limitations (see Part 5.2.4):

D. Provide a schedule for good housekeeping and maintenance (see Part 5.2.5.1) and a schedule for all inspections required in Part 4 (see Part 5.2.5.2):

G. Endangered Species Protection

1. Using the instructions in Appendix E of the MSGP, under which endangered species criterion listed in Part 1.1.4.5 are you eligible for coverage under this permit (only check 1 box)?*

☐ A ☐ B ☐ C ☐ D ☐ E

* **Note: After you submit your NOI and before your NOI is authorized, EPA may notify you if any additional controls are necessary to ensure your discharges have no likely adverse affects on listed species and critical habitat.**

2. Provide a brief summary of the basis for the criterion selected in Appendix E (e.g., communication with U.S. Fish and Wildlife Service or National Marine Fisheries Service to determine no species in action area; implementation of controls approved by EPA and the Services):

3. If you select criterion B, provide the NPDES ID from the other operator's NOI authorized under this permit: ☐☐☐☐☐☐☐☐☐

4. If you select criterion C, you must answer the following questions:

a. What federally-listed species or designated critical habitat are located in your "action area":

b. Using the Appendix E worksheet, check which of the following is applicable to your facility and answer any corresponding questions:

☐ I submitted my completed *Criterion C Eligibility Form* to EPA at least 30 days prior to submitting this NOI and agree to implement any additional measures that were determined by EPA to be necessary to ensure that my discharges and/or discharge-related activities will not have likely adverse affects on listed species and critical habitat.

Date your *Criterion C Eligibilty Form* was sent to EPA: ☐☐/☐☐/☐☐☐☐

Describe any EPA-approved measures you will implement to ensure no likely adverse affects on listed species and critical habitat:

☐ I submitted my completed *Criterion C Eligibility Form* to EPA at least 30 days prior to submitting this NOI and have not been notified of any additional measures necessary to ensure no likely adverse affects on listed species and critical habitat.

Date your *Criterion C Eligibility Form* was sent to EPA: ☐☐/☐☐/☐☐☐☐

5. If you select criterion D or E, you must attach copies of any letters or other communications with the U.S. Fish and Wildlife Service or National Marine Fisheries Service.

H. Historic Preservation

1. If your facility is not located on Indian country lands, is your facility located on a property of religious or cultural significance to an Indian tribe?

☐ YES ☐ NO

If yes, provide the name of the Indian tribe associated with the property: _____

2. Using the instructions in Appendix F of the MSGP, under which historic properties preservation criterion listed in Part 1.1.4.6 are you eligible for coverage under this permit (only check 1 box)?

☐ A ☐ B ☐ C ☐ D

I. Certification Information

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

First Name, Middle Initial, Last Name: Enrique Torres

Title: Division Leader

Signature: _____ Date: 06/11/2019

E-mail: etorres@lanl.gov

Attachment 4

NetDMR Monitoring Requirements for Los Alamos National Laboratory, Operated by Triad National Security, LLC, MSGP ID NMR050013

EPC-DO: 19-191

LA-UR-19-25199

Date: JUN 1 1 2019

							ELG, Modified Benchmark, and Impaired Waters Limits per MSGP Section 9.6.2 and the NM Water Quality Standards (20.6.4.900 NMAC [New Mexico Administrative Code])										
Permit ID	Facility	Permitted Feature	Sector(s)	Subsector	Consolidated Discharge # (Limit Set)	Discharge Description	Parameter Code	Parameter Name	Symbol	Quality Value	Limit Type	Units	Freq. of Analysis	Smpl. Type	Monitoring Period Start Date	Monitoring Period End Date	DMR Due Date
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01104 1 0~~	~~Aluminum, total recoverable [as Al]~~	~~<=~~	~~1010~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~4/1/2019~~	~~5/31/2019~~	~~7/31/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01045 1 0~~	~~Iron, total [as Fe]~~	~~<=~~	~~1000~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~4/1/2019~~	~~5/31/2019~~	~~7/31/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~51450 1 0~~	~~Nitrite Plus Nitrate Total~~	~~<=~~	~~0.68~~	~~Maximum~~	~~mg/L~~	~~1/60~~	~~Gr~~	~~4/1/2019~~	~~5/31/2019~~	~~7/31/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01090 1 0~~	~~Zinc, dissolved [as Zn]~~	~~<=~~	~~99~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~4/1/2019~~	~~5/31/2019~~	~~7/31/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01104 1 0~~	~~Aluminum, total recoverable [as Al]~~	~~<=~~	~~1010~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~6/1/2019~~	~~7/31/2019~~	~~9/30/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01045 1 0~~	~~Iron, total [as Fe]~~	~~<=~~	~~1000~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~6/1/2019~~	~~7/31/2019~~	~~9/30/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~51450 1 0~~	~~Nitrite Plus Nitrate Total~~	~~<=~~	~~0.68~~	~~Maximum~~	~~mg/L~~	~~1/60~~	~~Gr~~	~~6/1/2019~~	~~7/31/2019~~	~~9/30/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01090 1 0~~	~~Zinc, dissolved [as Zn]~~	~~<=~~	~~99~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~6/1/2019~~	~~7/31/2019~~	~~9/30/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01104 1 0~~	~~Aluminum, total recoverable [as Al]~~	~~<=~~	~~1010~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~8/1/2019~~	~~9/30/2019~~	~~11/30/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01045 1 0~~	~~Iron, total [as Fe]~~	~~<=~~	~~1000~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~8/1/2019~~	~~9/30/2019~~	~~11/30/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~51450 1 0~~	~~Nitrite Plus Nitrate Total~~	~~<=~~	~~0.68~~	~~Maximum~~	~~mg/L~~	~~1/60~~	~~Gr~~	~~8/1/2019~~	~~9/30/2019~~	~~11/30/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01090 1 0~~	~~Zinc, dissolved [as Zn]~~	~~<=~~	~~99~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~8/1/2019~~	~~9/30/2019~~	~~11/30/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01104 1 0~~	~~Aluminum, total recoverable [as Al]~~	~~<=~~	~~1010~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~10/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01045 1 0~~	~~Iron, total [as Fe]~~	~~<=~~	~~1000~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~10/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~51450 1 0~~	~~Nitrite Plus Nitrate Total~~	~~<=~~	~~0.68~~	~~Maximum~~	~~mg/L~~	~~1/60~~	~~Gr~~	~~10/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01090 1 0~~	~~Zinc, dissolved [as Zn]~~	~~<=~~	~~99~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~10/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-IW~~	~~IW - Impaired Water~~	~~01104 1 0~~	~~Aluminum, total recoverable [as Al]~~	~~<=~~	~~1010~~	~~Maximum~~	~~ug/L~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-IW~~	~~IW - Impaired Water~~	~~01040 1 0~~	~~Copper, dissolved [as Cu]~~	~~<=~~	~~7~~	~~Maximum~~	~~ug/L~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-IW~~	~~IW - Impaired Water~~	~~39516 1 0~~	~~Polychlorinated biphenyls [PCBs]~~	~~<=~~	~~0.2~~	~~Maximum~~	~~ug/L~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~002~~	~~AA~~	~~AA1~~	~~002-IW~~	~~IW - Impaired Water~~	~~00010 1 0~~	~~Temperature, water deg. centigrade~~	~~<=~~	~~24~~	~~Maximum~~	~~deg C~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
NMR050013	Los Alamos National Laboratory	005	O	O1	005-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	005	O	O1	005-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	005	O	O1	005-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	005	O	O1	005-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	005	O	O1	005-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	005	O	O1	005-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	005	O	O1	005-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~005~~	~~O~~	~~O1~~	~~005-IW~~	~~IW - Impaired Water~~	~~00010 1 0~~	~~Temperature, water deg. centigrade~~	~~<=~~	~~24~~	~~Maximum~~	~~deg C~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
NMR050013	Los Alamos National Laboratory	009	O	O1	009-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	009	O	O1	009-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	009	O	O1	009-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	009	O	O1	009-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	009	O	O1	009-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	009	O	O1	009-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	009	O	O1	009-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~009~~	~~O~~	~~O1~~	~~009-IW~~	~~IW - Impaired Water~~	~~00010 1 0~~	~~Temperature, water deg. centigrade~~	~~<=~~	~~24~~	~~Maximum~~	~~deg C~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
NMR050013	Los Alamos National Laboratory	012	O	O1	012-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	012	O	O1	012-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	012	O	O1	012-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	012	O	O1	012-O1	O1 - Steam Electric Generating Facilities	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	012	O	O1	012-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	012	O	O1	012-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	012	O	O1	012-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~012~~	~~O~~	~~O1~~	~~012-IW~~	~~IW - Impaired Water~~	~~00010 1 0~~	~~Temperature, water deg. centigrade~~	~~<=~~	~~24~~	~~Maximum~~	~~deg C~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~017~~	~~AA, F~~	~~AA1, F4~~	~~017-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01104 1 0~~	~~Aluminum, total recoverable [as Al]~~	~~<=~~	~~1010~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~4/1/2019~~	~~5/31/2019~~	~~7/31/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~017~~	~~AA, F~~	~~AA1, F4~~	~~017-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01040 1 0~~	~~Copper, dissolved [as Cu]~~	~~<=~~	~~7~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~4/1/2019~~	~~5/31/2019~~	~~7/31/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~017~~	~~AA, F~~	~~AA1, F4~~	~~017-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01045 1 0~~	~~Iron, total [as Fe]~~	~~<=~~	~~1000~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~4/1/2019~~	~~5/31/2019~~	~~7/31/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~017~~	~~AA, F~~	~~AA1, F4~~	~~017-11~~	~~11- Fabricated Metal Products, except Coating~~	~~51450 1 0~~	~~Nitrite Plus Nitrate Total~~	~~<=~~	~~0.68~~	~~Maximum~~	~~mg/L~~	~~1/60~~	~~Gr~~	~~4/1/2019~~	~~5/31/2019~~	~~7/31/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~017~~	~~AA, F~~	~~AA1, F4~~	~~017-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01090 1 0~~	~~Zinc, dissolved [as Zn]~~	~~<=~~	~~99~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~4/1/2019~~	~~5/31/2019~~	~~7/31/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~017~~	~~AA, F~~	~~AA1, F4~~	~~017-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01104 1 0~~	~~Aluminum, total recoverable [as Al]~~	~~<=~~	~~1010~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~6/1/2019~~	~~7/31/2019~~	~~9/30/2019~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~017~~	~~AA, F~~	~~AA1, F4~~	~~017-11~~	~~11- Fabricated Metal Products, except Coating~~	~~01040 1 0~~	~~Copper, dissolved [as Cu]~~	~~<=~~	~~7~~	~~Maximum~~	~~ug/L~~	~~1/60~~	~~Gr~~	~~6/1/2019~~	~~7/31/2019~~	~~9/30/2019~~

							ELG, Modified Benchmark, and Impaired Waters Limits per MSGP Section 9.6.2 and the NM Water Quality Standards (20.6.4.900 NMAC [New Mexico Administrative Code])										
Permit ID	Facility	Permitted Feature	Sector(s)	Subsector	Consolidated Discharge # (Limit Set)	Discharge Description	Parameter Code	Parameter Name	Symbol	Quality Value	Limit Type	Units	Freq. of Analysis	Smpl. Type	Monitoring Period Start Date	Monitoring Period End Date	DMR Due Date
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	017	AA, F	AA1, F4	017-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	020	AA, F	AA1, F4	020-IW	IW - Impaired Water	00010 1 0	Temperature, water deg. centigrade	<=	24	Maximum	deg C	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	022	AA	AA1	022-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	022	AA	AA1	022-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	022	AA	AA1	022-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	022	AA	AA1	022-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	022	AA	AA1	022-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	022	AA	AA1	022-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	022	AA	AA1	022-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	022	AA	AA1	022-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	022	AA	AA1	022-11	11- Fabricated Metal Products, except Coating	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	022	AA	AA1	022-11	11- Fabricated Metal Products, except Coating	01045 1 0	Iron, total [as Fe]	<=	1000	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	022	AA	AA1	022-11	11- Fabricated Metal Products, except Coating	51450 1 0	Nitrite Plus Nitrate Total	<=	0.68	Maximum	mg/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	022	AA	AA1	022-11	11- Fabricated Metal Products, except Coating	01090 1 0	Zinc, dissolved [as Zn]	<=	99	Maximum	ug/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019

							ELG, Modified Benchmark, and Impaired Waters Limits per MSGP Section 9.6.2 and the NM Water Quality Standards (20.6.4.900 NMAC [New Mexico Administrative Code])									
Permit ID	Facility	Permitted Feature	Sector(s)	Subsector	Consolidated Discharge # (Limit Set)	Discharge Description	Parameter Code	Parameter Name	Symbol	Quality Value	Limit Type	Units	Freq. of Analysis	Smpl. Type	Monitoring Period Start Date	Monitoring Period End Date	DMR Due Date
NMR050013	**Los Alamos National Laboratory**	**022**	**AA**	**AA1**	**022-11**	**11- Fabricated Metal Products, except Coating**	**01104 1 0**	**Aluminum, total recoverable [as Al]**	**<=**	**1010**	**Maximum**	**ug/L**	**1/60**	**Gr**	**10/1/2019**	**11/30/2019**	**1/31/2020**
NMR050013	**Los Alamos National Laboratory**	**022**	**AA**	**AA1**	**022-11**	**11- Fabricated Metal Products, except Coating**	**01045 1 0**	**Iron, total [as Fe]**	**<=**	**1000**	**Maximum**	**ug/L**	**1/60**	**Gr**	**10/1/2019**	**11/30/2019**	**1/31/2020**
NMR050013	**Los Alamos National Laboratory**	**022**	**AA**	**AA1**	**022-11**	**11- Fabricated Metal Products, except Coating**	**51450 1 0**	**Nitrite Plus Nitrate Total**	**<=**	**0.68**	**Maximum**	**mg/L**	**1/60**	**Gr**	**10/1/2019**	**11/30/2019**	**1/31/2020**
NMR050013	**Los Alamos National Laboratory**	**022**	**AA**	**AA1**	**022-11**	**11- Fabricated Metal Products, except Coating**	**01090 1 0**	**Zinc, dissolved [as Zn]**	**<=**	**99**	**Maximum**	**ug/L**	**1/60**	**Gr**	**10/1/2019**	**11/30/2019**	**1/31/2020**
NMR050013	Los Alamos National Laboratory	022	P	P1	022-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	022	P	P1	022-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	022	P	P1	022-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~022~~	~~P~~	~~P1~~	~~022-IW~~	~~IW - Impaired Water~~	~~00010 1 0~~	~~Temperature, water deg. centigrade~~	~~<=~~	~~24~~	~~Maximum~~	~~deg C~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
NMR050013	Los Alamos National Laboratory	026	P	P1	026-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	026	P	P1	026-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	026	P	P1	026-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~026~~	~~P~~	~~P1~~	~~026-IW~~	~~IW - Impaired Water~~	~~00010 1 0~~	~~Temperature, water deg. centigrade~~	~~<=~~	~~24~~	~~Maximum~~	~~deg C~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
NMR050013	Los Alamos National Laboratory	029	N	N2	029-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	029	N	N2	029-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	029	N	N2	029-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~029~~	~~N~~	~~N2~~	~~029-IW~~	~~IW - Impaired Water~~	~~00010 1 0~~	~~Temperature, water deg. centigrade~~	~~<=~~	~~24~~	~~Maximum~~	~~deg C~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
NMR050013	Los Alamos National Laboratory	031	P	P1	031-IW	IW - Impaired Water	51931 1 0	Adjusted Gross Alpha	<=	15	Maximum	pCi/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	031	P	P1	031-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	11	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	031	P	P1	031-IW	IW - Impaired Water	71900 1 0	Mercury, total [as Hg]	<=	0.77	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	031	P	P1	031-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	032	P	P1	032-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	032	P	P1	032-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	032	P	P1	032-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~032~~	~~P~~	~~P1~~	~~032-IW~~	~~IW - Impaired Water~~	~~00010 1 0~~	~~Temperature, water deg. centigrade~~	~~<=~~	~~24~~	~~Maximum~~	~~deg C~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~036~~	~~P~~	~~P1~~	~~036-IW~~	~~IW - Impaired Water~~	~~01104 1 0~~	~~Aluminum, total recoverable [as Al]~~	~~<=~~	~~1010~~	~~Maximum~~	~~ug/L~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~036~~	~~P~~	~~P1~~	~~036-IW~~	~~IW - Impaired Water~~	~~01040 1 0~~	~~Copper, dissolved [as Cu]~~	~~<=~~	~~7~~	~~Maximum~~	~~ug/L~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~036~~	~~P~~	~~P1~~	~~036-IW~~	~~IW - Impaired Water~~	~~39516 1 0~~	~~Polychlorinated biphenyls [PCBs]~~	~~<=~~	~~0.2~~	~~Maximum~~	~~ug/L~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~036~~	~~P~~	~~P1~~	~~036-IW~~	~~IW - Impaired Water~~	~~00010 1 0~~	~~Temperature, water deg. centigrade~~	~~<=~~	~~24~~	~~Maximum~~	~~deg C~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
NMR050013	**Los Alamos National Laboratory**	**037**	**P**	**P1**	**037-IW**	**IW - Impaired Water**	**01104 1 0**	**Aluminum, total recoverable [as Al]**	**<=**	**1010**	**Maximum**	**ug/L**	**1/YR**	**Gr**	**4/1/2019**	**11/30/2019**	**1/31/2020**
NMR050013	**Los Alamos National Laboratory**	**037**	**P**	**P1**	**037-IW**	**IW - Impaired Water**	**01040 1 0**	**Copper, dissolved [as Cu]**	**<=**	**7**	**Maximum**	**ug/L**	**1/YR**	**Gr**	**4/1/2019**	**11/30/2019**	**1/31/2020**
NMR050013	**Los Alamos National Laboratory**	**037**	**P**	**P1**	**037-IW**	**IW - Impaired Water**	**39516 1 0**	**Polychlorinated biphenyls [PCBs]**	**<=**	**0.2**	**Maximum**	**ug/L**	**1/YR**	**Gr**	**4/1/2019**	**11/30/2019**	**1/31/2020**
NMR050013	Los Alamos National Laboratory	039	P	P1	039-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	039	P	P1	039-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	039	P	P1	039-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~039~~	~~P~~	~~P1~~	~~039-IW~~	~~IW - Impaired Water~~	~~00010 1 0~~	~~Temperature, water deg. centigrade~~	~~<=~~	~~24~~	~~Maximum~~	~~deg C~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
NMR050013	Los Alamos National Laboratory	042	P	P1	042-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	042	P	P1	042-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	042	P	P1	042-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~042~~	~~P~~	~~P1~~	~~042-IW~~	~~IW - Impaired Water~~	~~00010 1 0~~	~~Temperature, water deg. centigrade~~	~~<=~~	~~24~~	~~Maximum~~	~~deg C~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
NMR050013	Los Alamos National Laboratory	043	D	D1	043-D1	D1 - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	043	D	D1	043-D1	D1 - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	043	D	D1	043-D1	D1 - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019

							ELG, Modified Benchmark, and Impaired Waters Limits per MSGP Section 9.6.2 and the NM Water Quality Standards (20.6.4.900 NMAC [New Mexico Administrative Code])										
Permit ID	Facility	Permitted Feature	Sector(s)	Subsector	Consolidated Discharge # (Limit Set)	Discharge Description	Parameter Code	Parameter Name	Symbol	Quality Value	Limit Type	Units	Freq. of Analysis	Smpl. Type	Monitoring Period Start Date	Monitoring Period End Date	DMR Due Date
NMR050013	Los Alamos National Laboratory	043	D	D1	043-D1	D1 - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	043	D	D1	043-1D	1D - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00556 1 0	Oil & Grease	<=	10	30-Day Average	mg/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	043	D	D1	043-1D	1D - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00556 1 0	Oil & Grease	<=	15	Daily Maximum	mg/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	043	D	D1	043-1D	1D - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00400 1 0	pH	>=	6	Minimum	SU	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	043	D	D1	043-1D	1D - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00400 1 0	pH	<=	9	Maximum	SU	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	043	D	D1	043-1D	1D - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00530 1 0	Solids, total suspended	<=	15	30-Day Average	mg/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	043	D	D1	043-1D	1D - Asphalt Paving and Roofing Materials and Lubricant Manufacturing	00530 1 0	Solids, total suspended	<=	23	Daily Maximum	mg/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	043	D	D1	043-IW	IW - Impaired Water	51931 1 0	Adjusted Gross Alpha	<=	15	Maximum	pCi/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	043	D	D1	043-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	11	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	043	D	D1	043-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	043	D	D1	043-IW	IW - Impaired Water	71900 1 0	Mercury, total [as Hg]	<=	0.77	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	81017 1 0	Chemical Oxygen Demand [COD]	<=	120	Maximum	mg/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	4/1/2019	5/31/2019	7/31/2019
NMR050013	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	81017 1 0	Chemical Oxygen Demand [COD]	<=	120	Maximum	mg/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	6/1/2019	7/31/2019	9/30/2019
NMR050013	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	81017 1 0	Chemical Oxygen Demand [COD]	<=	120	Maximum	mg/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	8/1/2019	9/30/2019	11/30/2019
NMR050013	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	81017 1 0	Chemical Oxygen Demand [COD]	<=	120	Maximum	mg/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	074	A	A4	074-A4	A4 - Hardwood Dimension and Flooring Mills	00530 1 0	Solids, total suspended	<=	100	Maximum	mg/L	1/60	Gr	10/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	074	A	A4	074-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	074	A	A4	074-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	074	A	A4	074-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~074~~	~~A~~	~~A4~~	~~074-IW~~	~~IW - Impaired Water~~	~~00010 1 0~~	~~Temperature, water deg. centigrade~~	~~<=~~	~~24~~	~~Maximum~~	~~deg C~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
NMR050013	Los Alamos National Laboratory	075	P	P1	075-IW	IW - Impaired Water	01104 1 0	Aluminum, total recoverable [as Al]	<=	1010	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	075	P	P1	075-IW	IW - Impaired Water	01040 1 0	Copper, dissolved [as Cu]	<=	7	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
NMR050013	Los Alamos National Laboratory	075	P	P1	075-IW	IW - Impaired Water	39516 1 0	Polychlorinated biphenyls [PCBs]	<=	0.2	Maximum	ug/L	1/YR	Gr	4/1/2019	11/30/2019	1/31/2020
~~NMR050013~~	~~Los Alamos National Laboratory~~	~~075~~	~~P~~	~~P1~~	~~075-IW~~	~~IW - Impaired Water~~	~~00010 1 0~~	~~Temperature, water deg. centigrade~~	~~<=~~	~~24~~	~~Maximum~~	~~deg C~~	~~1/YR~~	~~Gr~~	~~4/1/2019~~	~~11/30/2019~~	~~1/31/2020~~
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**01104 1 0**	**Aluminum, total recoverable [as Al]**	**<=**	**1010**	**Maximum**	**ug/L**	**1/60**	**Gr**	**4/1/2020**	**5/31/2020**	**7/31/2020**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**01045 1 0**	**Iron, total [as Fe]**	**<=**	**1000**	**Maximum**	**ug/L**	**1/60**	**Gr**	**4/1/2020**	**5/31/2020**	**7/31/2020**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**51450 1 0**	**Nitrite Plus Nitrate Total**	**<=**	**0.68**	**Maximum**	**mg/L**	**1/60**	**Gr**	**4/1/2020**	**5/31/2020**	**7/31/2020**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**01090 1 0**	**Zinc, dissolved [as Zn]**	**<=**	**99**	**Maximum**	**ug/L**	**1/60**	**Gr**	**4/1/2020**	**5/31/2020**	**7/31/2020**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**01104 1 0**	**Aluminum, total recoverable [as Al]**	**<=**	**1010**	**Maximum**	**ug/L**	**1/60**	**Gr**	**6/1/2019**	**7/31/2019**	**9/30/2019**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**01045 1 0**	**Iron, total [as Fe]**	**<=**	**1000**	**Maximum**	**ug/L**	**1/60**	**Gr**	**6/1/2019**	**7/31/2019**	**9/30/2019**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**51450 1 0**	**Nitrite Plus Nitrate Total**	**<=**	**0.68**	**Maximum**	**mg/L**	**1/60**	**Gr**	**6/1/2019**	**7/31/2019**	**9/30/2019**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**01090 1 0**	**Zinc, dissolved [as Zn]**	**<=**	**99**	**Maximum**	**ug/L**	**1/60**	**Gr**	**6/1/2019**	**7/31/2019**	**9/30/2019**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**01104 1 0**	**Aluminum, total recoverable [as Al]**	**<=**	**1010**	**Maximum**	**ug/L**	**1/60**	**Gr**	**8/1/2019**	**9/30/2019**	**11/30/2019**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**01045 1 0**	**Iron, total [as Fe]**	**<=**	**1000**	**Maximum**	**ug/L**	**1/60**	**Gr**	**8/1/2019**	**9/30/2019**	**11/30/2019**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**51450 1 0**	**Nitrite Plus Nitrate Total**	**<=**	**0.68**	**Maximum**	**mg/L**	**1/60**	**Gr**	**8/1/2019**	**9/30/2019**	**11/30/2019**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**01090 1 0**	**Zinc, dissolved [as Zn]**	**<=**	**99**	**Maximum**	**ug/L**	**1/60**	**Gr**	**8/1/2019**	**9/30/2019**	**11/30/2019**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**01104 1 0**	**Aluminum, total recoverable [as Al]**	**<=**	**1010**	**Maximum**	**ug/L**	**1/60**	**Gr**	**10/1/2019**	**11/30/2019**	**1/31/2020**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**01045 1 0**	**Iron, total [as Fe]**	**<=**	**1000**	**Maximum**	**ug/L**	**1/60**	**Gr**	**10/1/2019**	**11/30/2019**	**1/31/2020**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**51450 1 0**	**Nitrite Plus Nitrate Total**	**<=**	**0.68**	**Maximum**	**mg/L**	**1/60**	**Gr**	**10/1/2019**	**11/30/2019**	**1/31/2020**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-11**	**11- Fabricated Metal Products, except Coating**	**01090 1 0**	**Zinc, dissolved [as Zn]**	**<=**	**99**	**Maximum**	**ug/L**	**1/60**	**Gr**	**10/1/2019**	**11/30/2019**	**1/31/2020**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-IW**	**IW - Impaired Water**	**01104 1 0**	**Aluminum, total recoverable [as Al]**	**<=**	**1010**	**Maximum**	**ug/L**	**1/YR**	**Gr**	**4/1/2019**	**11/30/2019**	**1/31/2020**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-IW**	**IW - Impaired Water**	**01040 1 0**	**Copper, dissolved [as Cu]**	**<=**	**7**	**Maximum**	**ug/L**	**1/YR**	**Gr**	**4/1/2019**	**11/30/2019**	**1/31/2020**

							ELG, Modified Benchmark, and Impaired Waters Limits per MSGP Section 9.6.2 and the NM Water Quality Standards (20.6.4.900 NMAC [New Mexico Administrative Code])									
Permit ID	**Facility**	**Permitted Feature**	**Sector(s)**	**Subsector**	**Consolidated Discharge # (Limit Set)**	**Discharge Description**	**Parameter Code**	**Parameter Name**	**Symbol**	**Quality Value**	**Limit Type**	**Units**	**Freq. of Analysis**	**Smpl. Type**	**Monitoring Period Start Date**	**Monitoring Period End Date**	**DMR Due Date**
NMR050013	**Los Alamos National Laboratory**	**076**	**AA**	**AA1**	**076-IW**	**IW - Impaired Water**	**39516 1 0**	**Polychlorinated biphenyls [PCBs]**	**<=**	**0.2**	**Maximum**	**ug/L**	**1/YR**	**Gr**	**4/1/2019**	**11/30/2019**	**1/31/2020**
Additions to NOI and NetDMR are in **BOLD**.																	
Deletions from NOI and NetDMR are indicated by ~~strikethrough.~~																	
Regular text indicates no change to NOI or NetDMR.																	

ATTACHMENT 2: SWPPP AMENDMENTS

Date	Plan Section	Reason for Amendment	Amendment
Jan 2019	All	MSGP Plan for new industrial facility at TA-16.	New MSGP Plan for Triad, LLC regarding the TA-16 Stockpile Area.

ATTACHMENT 3: CERTIFICATION OF NO UNAUTHORIZED STORMWATER DISCHARGES

Unauthorized Non-Storm Water Discharge Assessment and Certification

Facility:	TA-16 Stockpile Yard		
Outfalls (including SIOs*) or Other Onsite Drainage Points Observed During the Assessment	**Identified Potential Sources of Unauthorized Non-Storm Water Discharge (if applicable)**	**Description of Assessment Criterion Used**	**Describe any Required Actions to Control or Eliminate the Discharge**
078	None	Visual assessment/walk down.	None

Assessor:

Print Name:	Signature:	Title:	Date Assessed:
Kellkenny B. Leen		WFO - DEP	2-5-2020

Authorized Signatory: 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.

Print Name:	Signature:	Title:	Date Certified:
John Branch		WFO-Operations Manager (acting)	2-5-2020

*SIO = Substantially Identical Outfall

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.

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adesh-records@lanl.gov, (E-File)

ATTACHMENT 5: DISCHARGE MONITORING REPORTS

ATTACHMENT 6: ANNUAL REPORTS

ATTACHMENT 7: ROUTINE FACILITY INSPECTIONS

ATTACHMENT 8: QUARTERLY VISUAL ASSESSMENTS

ATTACHMENT 9: CORRECTIVE ACTION DOCUMENTATION AND CERTIFICATION

ATTACHMENT 10: SCHEDULED MAINTENANCE LOG

Date	**Control Measure or Equipment Description** (include location where appropriate)	**Action Taken/Comments**	**Action Taken By** (printed name & Z no.)

ATTACHMENT 11: TRAINING DOCUMENTATION

ATTACHMENT 12: MSGP (OR ACTIVE URL)

Attached is a copy of the MSGP. The active URL for the permit is https://www.epa.gov/npdes/final-2015-msgp-documents

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

LA-UR-17-29454
Approved for public release; distribution is unlimited.

October2017

Threatened and Endangered Species Habitat Management Plan for Los Alamos National Laboratory



Los Alamos
NATIONAL LABORATORY
EST.1943

Cover photo: Mexican Spotted Owls at Los Alamos National Laboratory

Prepared by: Environmental Protection and Compliance Division
Resources Management Team
Los Alamos National Laboratory

Prepared for: U.S. Department of Energy, National Nuclear Security Administration,
Los Alamos Field Office

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ACRONYMS AND TERMS

AEI	area of environmental interest
Bd	Batrachochytrium dendrobatidis (Chytrid Fungus)
DARHT	Dual-Axis Radiographic Hydrodynamic Test (Facility)
dB	decibel
dB(A)	A-weighted decibel
dB(C)	C-weighted decibel
DDT	(dichloro-diphenyl-trichloroethane)
DOE	U.S. Department of Energy
ESA	Endangered Species Act of 1973
fc	foot candles
Field Office	U.S. Department of Energy Los Alamos Field Office
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
LANS	Los Alamos National Security, LLC
NEPA	National Environmental Policy Act of 1969
PCBs	polychlorinated biphenyls
TNT	trinitrotoluene(2,4,6-)
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) fulfills a commitment made to the U.S. Department of Energy (DOE) in the "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). This 2017 update retains the management guidelines from the 1999 HMP for listed species, and updates some descriptive information.

2.0 Role of Site Plans in the HMP

The purpose of the HMP is to provide a management strategy for Endangered Species Act (ESA) compliance through 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 Jemez Mountains Salamander (*Plethodon neomexicanus*). Site plans provide guidance to ensure that LANL operations do not adversely affect threatened or endangered species or their habitats.

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, prime habitat for Black-footed Ferrets, have been observed at LANL. Therefore, there is no site plan for this species.

The New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*) and Yellow-billed Cuckoo (*Coccyzus americanus*) do not require a site plan because they do not have breeding habitat on LANL property. In Keller (2015), it was concluded that if any LANL work activities might affect habitat for these two species, those activities would be reviewed for impacts.

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. The USFWS reviewed allowable activities 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

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 occur in the core and/or buffer of all 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.

3.2 General Description of Buffer Areas and Allowable Buffer Area Development

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 size 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 Los Alamos National Security, LLC (LANS) biologists for tracking (http://int.lanl.gov/environment/bio/controls/index.shtml).

3.3 Emergency Actions

Managers may activate emergency actions if safety and/or property is immediately threatened by something occurring within an AEI (for example, wildfire, water line breakage, etc.). Contact a LANS biologist (http://int.lanl.gov/environment/bio/controls/index.shtml), the Environmental Stewardship Group (505-665-8855), or the DOE Los Alamos Field Office (Field Office; 505-667-6819) as soon as possible. If the emergency occurs outside of regular business hours, contact

the Emergency Management Office (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

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.

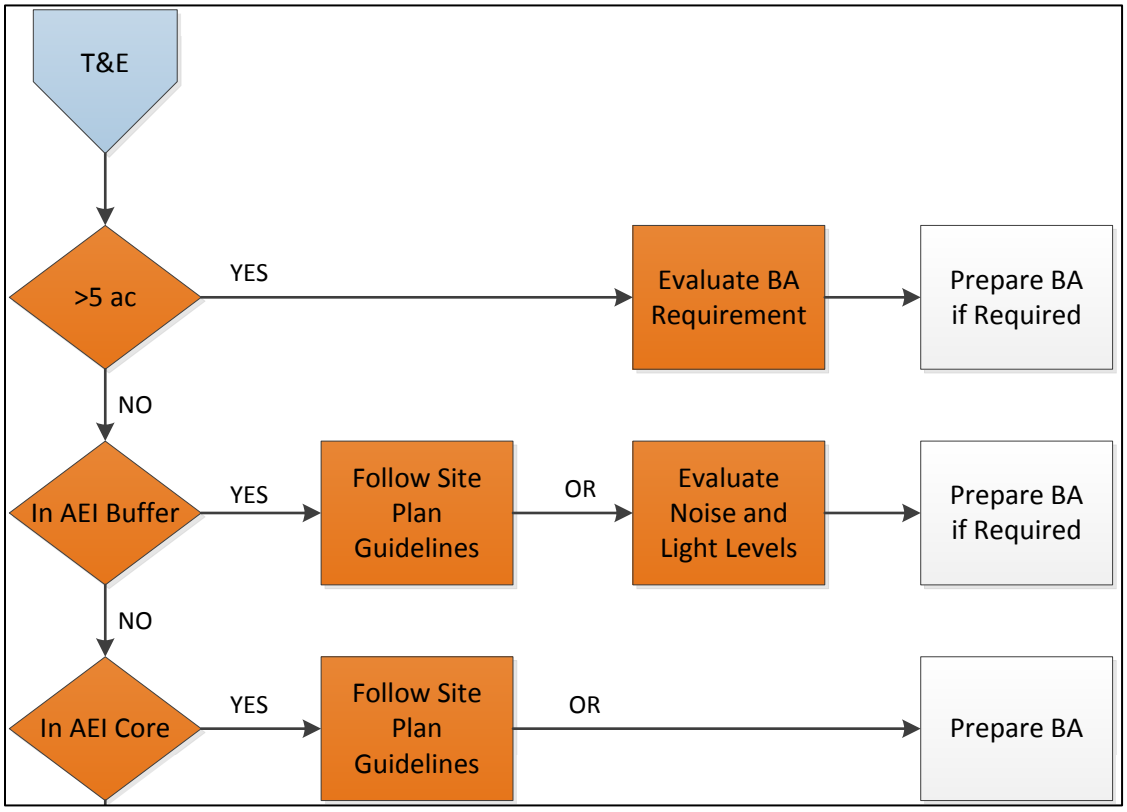

Figure 1. Process flowchart for determining site plan requirements

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 project into the integrated review tool for a new or modified project is required under Program Description 400 (LANL 2016) and allows managers to identify the requirements within their project area. Deployed environmental professionals and core LANS biologists 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 subject matter experts. 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.

4.2 If an Activity Does Not Meet Site Plan Guidelines

If a project reviewer determines that an activity or project cannot meet the guidelines in applicable site plans, LANS biologists evaluate that activity individually for compliance with the ESA. Results of the evaluation of potential impacts allow LANS biologists 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 effect 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 for the activity and submit it to the USFWS for concurrence. Fieldwork and preparation of a biological assessment 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

Habitat locations of threatened and endangered species are not considered sensitive; however, it is in the best interest of threatened and endangered species to restrict specific knowledge about their locations.

5.0 Changes in the HMP since Implementation

The HMP received concurrence from USFWS and was first implemented in 1999. Since that time, both the Peregrine Falcon (*Falco peregrinus*) and the Bald Eagle (*Haliaeetus leucocephalus*) have been delisted. Site plans for those species have been removed from LANL's HMP. Both species are protected at LANL under the Migratory Bird Treaty Act, and the Bald Eagle is also protected under the Bald and Golden Eagle Protection Act.

In 2005, the USFWS concurred with DOE's proposal for updated Mexican Spotted Owl habitat boundaries based on a revised analysis of Mexican Spotted Owl habitat quality within DOE property around LANL (USFWS consultation number 22420-2006-I-0010).

In 2012, the USFWS concurred with DOE's proposal to modify the habitat boundaries for the Los Alamos Canyon Mexican Spotted Owl AEI due to changes from the fire response activities after the Las Conchas wildfire (USFWS consultation number 02ENNM00-2012-IE-0088).

In 2013, the USFWS concurred with the DOE's new site plan for the Jemez Mountains Salamander and its addition to LANL's HMP (USFWS consultation number 02ENNM00-2014-I-0014).

In 2015, the USFWS concurred with the DOE's addition of the New Mexico Meadow Jumping Mouse and Yellow-billed Cuckoo to LANL's HMP (USFWS consultation number 02ENNM00-2015-I-0538).

In 2017, the USFWS concurred with DOE's proposal to modify the habitat boundaries for the lower section of Water Canyon Mexican Spotted Owl AEI due to habitat degradation resulting from long-term drought and fire effects (USFWS consultation number 02ENNM00-2017-I-0255).

6.0 Data Management

The data used in the implementation of the HMP are stored in a geodatabase at LANL. The current map of all of the AEIs at LANL is in Figure A-1 in the appendix.

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 characteristics 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 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 deermice (*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, wildfires, 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 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, is 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 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).

LANS subject matter experts 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 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 chemicals of potential concern (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, LANS biologists 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. LANS biologists 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 that for Mexican Spotted Owls, 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 currently no specific information available on the reaction of Mexican Spotted Owls to explosives detonation. 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 trinitrotoluene(2,4,6-) (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 A-weighted decibel [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). LANS biologists 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). LANS biologists 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 that limit human activity and development in the canyon bottoms.

[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.

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. Noise is also 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 2016 Compliance Order on Consent issued by the New Mexico Environmental Department 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 Individual Permit (EPA 2010) issued by the Environmental Protection Agency 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. LANS biologists 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).

In December 1997, LANS biologists conducted noise measurements at the Los Alamos County airport and in Bayo and Pueblo canyons, including the Los Alamos County Sewage Treatment Facility. 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 3-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 3-minute period was 60 (range 41 to 70).

LANS biologists 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 (dB(C) scale (Keller and Foxx 1997). Measurements of noise levels using the dB(C) scale are greater than if measured using the dB(A) scale. 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.

LANS biologists measured sound levels from various pieces of construction equipment used at LANL project sites 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 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 level before construction began was 56.6 dB(A), and the average during construction was 82.1 dB(A).

LANS biologists 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 a 10 percent developed area in their buffers had significantly higher levels of background noise than undeveloped AEIs. The mean background sound level was 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.

LANS biologists 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 biological assessment 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.

LANS biologists took sound level measurements around the LANL Biosafety Level 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 Biosafety Level 3 laboratory 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 in 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. LANS biologists 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.

An updated Mexican Spotted Owl habitat model was developed and refined for application on LANL property 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 property, 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.

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

Occupancy simply refers to whether or not an AEI is occupied during a species' period of sensitivity. For Mexican Spotted Owls, the primary concern is to protect 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 LANS biologist 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

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. LANS biologists 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, LANS biologists 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 must be reported to LANS biologists for tracking (http://int.lanl.gov/environment/bio/controls/index.shtml).

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

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 area 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 LANS biologists 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

LANS biologists 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). LANS biologists 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. LANS biologists 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 biological assessment (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. LANS biologists 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 LANS biologists 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 LANS biologists 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

	Levels of Impact	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

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.

- Make every reasonable effort 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.
- Install signs on dirt roads and trails leading into AEIs labeling them as restricted access areas and provide a contact number 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.
- Employ appropriate erosion and runoff controls to reduce soil loss. The controls must be put in place and periodically checked throughout the life of projects.
- Revegetate all exposed soils as soon as feasible after construction to minimize erosion.
- Focus development away from undeveloped areas on the western end of the Los Alamos Canyon AEI.

5.0 Levels of Development in AEI Core and Buffers

5.1 Allowable Habitat Alteration in the Buffer Areas

The following quantifications of development and guidance for allowable habitat alteration in buffer areas were published and consulted on in the 1999 version of the HMP. Most AEIs changed in dimensions during the 2005 redelineation of the habitats, and many have experienced additional development under past consultations. Many projects were reviewed and received USFWS concurrence between 1999 and 2017.

The current development status for each of the AEIs is at the end of each AEI description.

Cañon de Valle—In 1999, 16.3 ha (40.3 ac) of the core was developed and 52.2 ha (129 ac) of the 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 was developed, with most of the changes due to consultations. The 2017 redelineation of the lower Water Canyon AEI resulted in another reduction of 69 ha (170 ac). The current size of this AEI is 277 ha (685 ac) of core and 524 ha (1295 ac) of buffer habitat. Of that, 21 ha (52 ac) of the current core is developed and 71 ha (176 ac) of the current buffer is developed.

Pajarito—In 1999, 6.7 ha (16.5 ac) of the core was developed and 75.1 ha (186.5 ac) of the buffer was developed. For this AEI, it was recommended that only an additional 35 ha (86.4 ac) of the buffer be developed. The 1999 HMP stated that once the cap is reached or a single large-scale project is proposed, additional consultation with the USFWS would be required. By 2011,

27 ha (66.7 ac) of the core and 89 ha (220 ac) of the buffer was developed, with most of the changes due to consultations. The current size of this AEI is 236 ha (585 ac) of core and 449 ha (1,111 ac) of buffer habitat. Of that, 27 ha (67 ac) of the current core is developed and 89 ha (220 ac) of the current buffer is developed.

Los Alamos—In 1999, 77.16 ha (190 ac) of the core was developed and 167.2 ha (413.1 ac) of the buffer was developed. Because this AEI is heavily developed, additional development was restricted to a few selected areas within the buffer. By 2011, 94 ha (232.2 ac) of the core and 181 ha (447.3 ac) of the buffer was developed, with most of the changes due to consultations. The current size of this AEI is 325 ha (805 ac) of core and 535 ha (1,323 ac) of buffer habitat. Of that, 64 ha (158 ac) of the current core is developed and 129 ha (319 ac) of the current buffer is developed.

Sandia-Mortandad—In 1999, 29 ha (71.7 ac) of the core was developed and 75.1 ha (185.6 ac) of the buffer was developed. For this AEI, LANS biologists recommended only an additional 38.1 ha (94.1 ac) of the buffer be developed before additional USFWS consultations take place. By 2011, 45 ha (111.2 ac) of the core and 83 ha (205.1 ac) of the buffer was developed, with most of the changes due to consultations. The current size of this AEI is 270 ha (669 ac) of core and 371 ha (918 ac) of buffer habitat. Of that, 44 ha (110 ac) of the current core is developed and 83 ha (206 ac) of the current buffer is developed.

Three Mile—In 1999, 3.8 ha (9.4 ac) of the core was developed and 21.5 ha (51.1 ac) of the buffer was developed. For this AEI, LANS biologists recommended only 64.3 ha (158.8 ac) additional area of buffer be developed before additional USFWS consultations take place. By 2011, 12 ha (29.6 ac) of the core and 37 ha (91.4 ac) of the buffer was developed, with most of the changes due to consultations. The current size of this AEI is 131 ha (325 ac) of core and 295 ha (730 ac) of buffer habitat. Of that, 11 ha (29 ac) of the current core is developed and 36 ha (91 ac) of the current buffer is 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 2013 (78 FR 343). The most recent recovery plan for the Southwestern Willow Flycatcher was published 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 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 occupies an estimated 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 habitat loss and modification 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 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 at Cochiti Lake. There are other riparian/wetland areas on LANL property associated with canyon bottoms, the most significant being the Pajarito wetlands in the lower end of Pajarito Canyon. A major paved road parallels the wetlands area in Pajarito Canyon.

2.2.2 Ecological Risk

There is no specific information on the impact of chemicals on the Southwestern Willow Flycatcher.

2.2.2.1 Ecorisk Assessment

LANS subject matter experts completed two ecological risk assessments between 1997 and 2009 that included the Southwestern Willow Flycatcher. The ecological risk assessment process involves using computer modeling to assess potential effects to animals from chemicals of potential concern 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 chemicals of potential concern (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 available on the reactions of Southwestern Willow Flycatchers to pedestrians and vehicles. 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 available on the reaction of Southwestern Willow Flycatchers to aircraft.

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 available on the reaction of Southwestern Willow Flycatchers to explosives detonation. The Southwestern Willow Flycatcher AEI is not located close to any explosives testing sites at LANL.

2.2.3.4 Other Sources of Noise

LANS biologists 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 available on the effects of artificially produced light on Southwestern Willow Flycatchers. 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 the 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 property 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

There is one Southwestern Willow Flycatcher AEI on LANL property. 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.

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) that have 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

Occupancy simply refers to whether or not an AEI is occupied during a species' period of sensitivity. For Southwestern Willow Flycatchers, LANS biologists 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. The Activity Table (Table 2, Section 4.5.2) 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 LANS biologist 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

Sections 4.4 and 4.5 provide the guidelines for habitat alterations and allowable activities in AEI core and buffer areas. The flowchart (see Figure 1) provides a quick reference that should be used to determine if 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. LANS biologists 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 over the long term 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. 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.

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 2, Section 4.5.2) for occupied AEIs.

4.4.4 Restrictions on Habitat Alterations

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 LANS biologist 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

LANS biologists 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 United States 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

The dates shown in the Activity Table (Table 2) are the dates between which the activity in the row is restricted under the guidelines of this site plan. 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 LANS biologist (http://int.lanl.gov/environment/bio/controls/index.shtml).

Table 2. Restrictions on Activities in Undeveloped Occupied Southwestern Willow Flycatcher AEI

	Levels of Impact	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

This section provides a list of management practices to apply in the AEI.

- No wetland vegetation will be removed outside of developed areas.
- Employ appropriate erosion and runoff controls 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.
- Revegetate all exposed soils 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. LANS biologists 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), LANS biologists 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 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 (77 FR 56481) and the final listing as endangered was on September 10, 2013 (78 FR 55599).

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; 78 FR 9876).

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 (77 FR 56481). 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 (78 FR 9876).

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 (77 FR 56482).

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 that 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 (77 FR 56482). Forested habitats on LANL property 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 (77 FR 56482). 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 (77 FR 56482).

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 Salamanders 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 the 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 AEIs 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: 2,150 m (7,000 ft) 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, LANS biologists 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 from fire and extreme drought effects since this landcover map was published. 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 LANS biologists 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 were hand digitized using ArcGIS (Environmental Science Research Institute, Redlands, California) by LANS biologists 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 footprint.

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 LANS biologists.

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 LANS biologists 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 LANS biologists 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 LANS biologist (505-665-3366) as soon as possible. If the emergency occurs outside of regular business hours, contact the Emergency Management Office (505-667-6211). This office will then communicate with the appropriate LANS 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. LANS biologists are 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 LANS biologists.

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 (77 FR 56482), 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 LANS biologists. 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). LANS biologists 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 LANS biologists 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

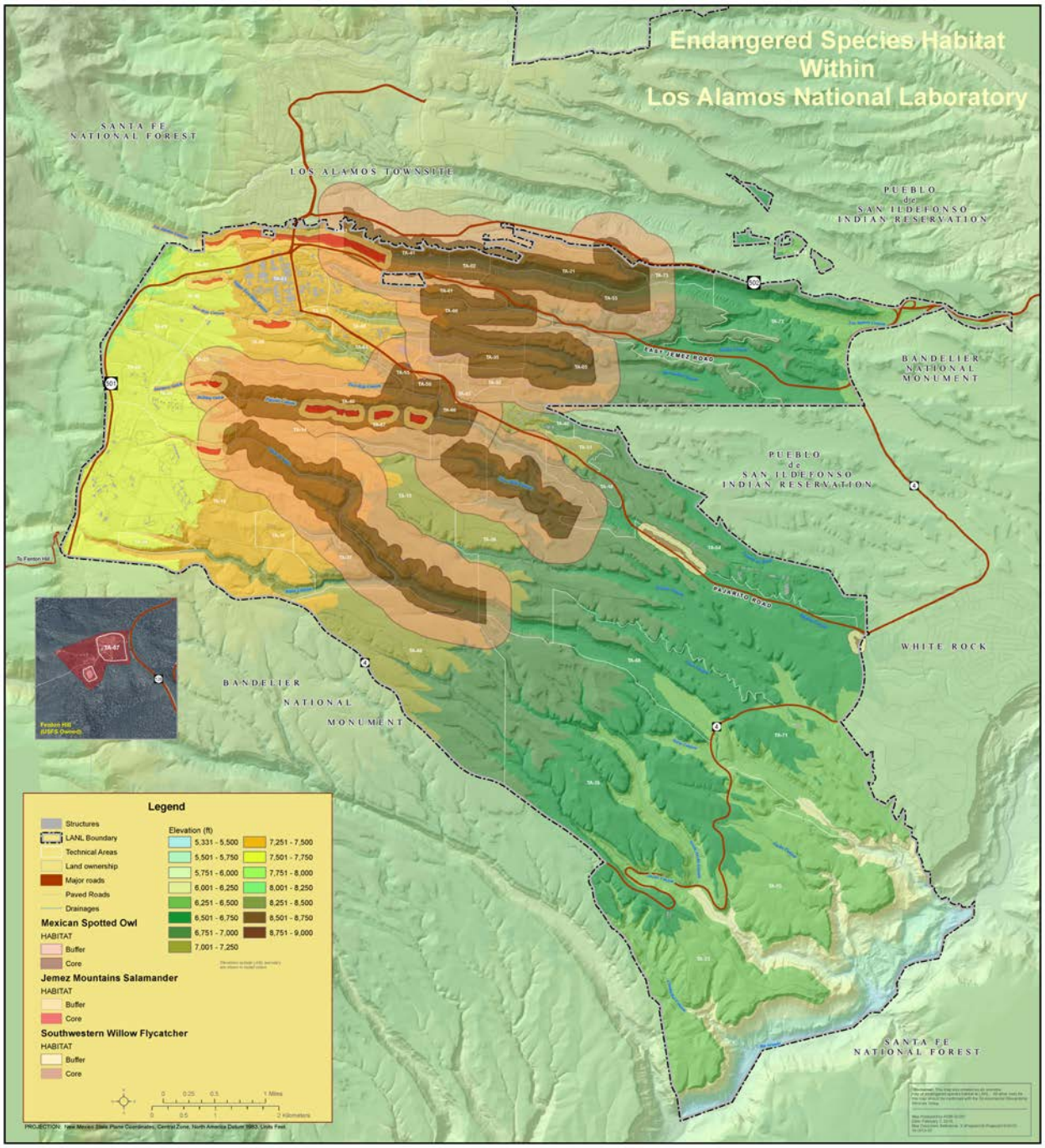


Figure A-1. Most recent map of all AEIs at LANL

ATTACHMENT 14: MSGP IPAC TRUST RESOURCES REPORT

NOTE: The Permit requires this information. However, LANL EPC-ES has completed consultation with U.S. Fish and Wildlife Service. Letters of Consultation are contained in the NOI (see Attachment 1). Refer to Attachment 13 for the species habitat management plan.

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

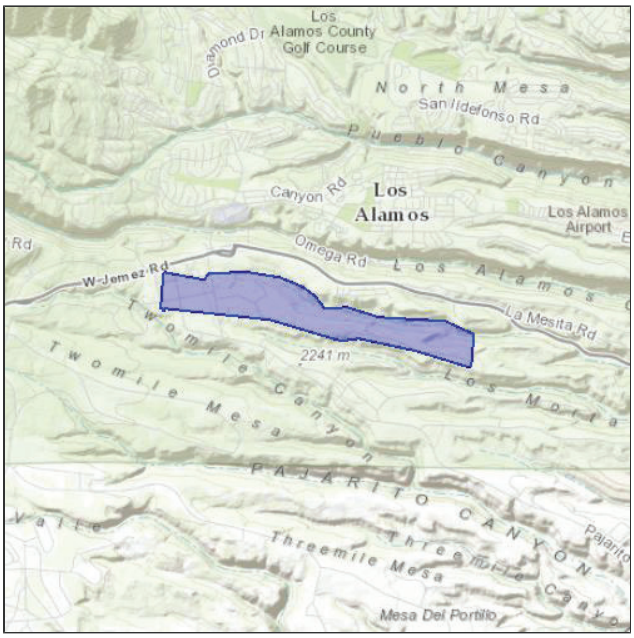
LXATM-TI5EJ-BAJEQ-3NC5E-SOGYTE

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, *STORMWATER MULTI-SECTOR GENERAL PERMIT FOR INDUSTRIAL ACTIVITIES*

The EPC-CP-QAPP-MSGP is in the process of being replaced by EPC-CP-PIP-2101, *NPDES Multi-Sector General Permit*. The current document, ENV-CP-QAPP-MSGP R-5, is included in the attachment and will be replaced in the hard copy of the SWPPP once the new document is completed.

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:
	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.

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1.0 QUALITY PROGRAM

LANL will comply with the monitoring requirements as specified by the 2008 National Pollutant Discharge Elimination System (NPDES) Stormwater Multi-Sector General Permit for Industrial Activities. Compliance will be demonstrated through the successful implementation of this project plan and applicable procedures.

Los Alamos National Laboratory (the Laboratory) has established a comprehensive stormwater program for its industrial activities. Historically, the Laboratory operated under the NPDES Baseline General Permit and then under the NPDES 1995, 2000, and 2008 Multi-Sector General Permits. The Laboratory submitted its NOI for 2008 coverage in December 2008.

The 2008 MSGP was issued on September 22, 2008 and became effective on September 29, 2008.

The purpose of this project plan is to ensure compliance with the following:

- 2008 NPDES Multi-Sector General Permit (MSGP) and the Clean Water Act (CWA)
- DOE Order 450.1, *Environmental Protection Program*, and DOE Order 5400.5, *Radiation Protection of the Public and Environment*, which establish environmental protection program policies, requirements, and responsibilities

The Environmental Protection, Environmental Compliance Programs (ENV-CP) Water Quality Team has been tasked with overseeing institutional stormwater compliance related activities at the Laboratory.

1.1 QUALITY PROGRAM PURPOSE

This Quality Assurance Project Plan (QAPP) describes the policies and requirements that ensure MSGP activities are conducted in a consistent, agreed-upon manner.

This QA Project Plan describes the policies and requirements that ensure the MSGP processes are conducted in a consistent, agreed-upon manner. Drivers for the quality plan include:

- DOE Order 414.1C, *Quality Assurance*
- SD330, *LANL Quality Assurance Program*

This QA Project Plan (QAPP), including implementing procedures, is a sub-tier document to the SD330, *LANL Quality Assurance Program*. The following documents provide requirements to ensure that the MSGP Program is operated in accordance with established plans and procedures:

- SD330, *LANL Quality Assurance Program*
- QA Project Plan for the MSGP (this document)
- Implementing procedures

1.2 ORGANIZATION

ENV-CP is responsible for compliance oversight of the Laboratory's MSGP coverage. The Group is organized by teams under the line management direction of the Group Leader. Teams are cross-functional and focus on specific Laboratory water quality responsibilities, deliverables, or

products. Teams are guided by Team Leaders who have the responsibility to assure the program is completed and properly implemented.

The Team Leader coordinates the project and reports to the ENV-CP Group Leader. The Project Lead implements program oversight, coordinates contractor efforts (if there are any), and reports to the Team Leader. A QA Specialist is assigned to work for the Team Leader to provide quality assurance assistance, advice, and review. In addition, representatives from other groups may participate and contribute to this team as subject matter experts for project activities. The project organization is shown in Attachment 1.

Applicable regulatory drivers include the following:

- Clean Water Act (CWA)
- 2008 NPDES Multi-Sector General Permit (MSGP)
- DOE Order 450.1, *Environmental Protection Program*
- DOE Order 5400.5, *Radiation Protection of Public and Environment*
- P401, *Procedure to Identify, Communicate, and Implement Environmental Requirements*

1.3 RESPONSIBILITIES

The following table lists specific responsibilities:

Who	What
Group Leader	Assure that qualified staff complies with regulatory requirements associated with the MSGP.
Project Lead	Ensure that MSGP-related activities are performed in accordance with the requirements specified in this plan.
ENV-CP Staff	Perform MSGP-related activities as assigned by the Team Leader or Project Leader

2.0 PERSONNEL DEVELOPMENT

Qualified team members will be hired and trained as prescribed in ENV-DO-QP-115, *Personnel Training*. Minimum training requirements for ENV personnel are described in the ENV Division Qualification Standards. The LANL Human Resources Division maintains documentation of education qualification. Required MSGP qualifications and training plans are listed below.

2.1 MSGP CURRICULA

The MSGP Program requires personnel with the following training requirements:

MSGP Inspectors

Curricula 10697 ENV-RCRA MSGP Inspector
Item 43337 ENV-CP-QAPP-MSGP
Item 54892 ENV-RCRA-QP-022 MSGP Stormwater Corrective Actions

Item 42415 ENV-DO-QP-101 *Environmental Reporting Requirements for Releases or Events*
Item 42547 ENV-DO-QP-111 *Reporting Environmental Releases to Pueblo Governments*
Item 40708 ENV-DO-QP-108 *Preparation of External Correspondence for Review and Approval*
Item 43172 ENV-DO-QP-112 *Coordinating Regulatory Inspections*
Item 42891 ENV-DO-QP-113 *Tracking Issues and Actions*
Item 43805 ENV-DO-QP-114 *Logbook Use and Control*
Item 45777 ENV-DO-QP-100 *General Field Safety*

Curricula 131 Field Worker Training Requirements
Item 43562 or 3583 or 16585 CPR/AED: LANL Workplace
Item 3574 or 13264 First Aid

MSGP SWPPP Preparers

Curricula 7814 ENV-RCRA MSGP SWPPP Preparer
Item 43337 ENV-CP-QAPP-MSGP
Item 56593 ENV-RCRA-QP-044 *Preparing Storm Water Discharge Monitoring Reports (MDMRs) for the NPDES Multi-Sector General Permit*
Item 40708 ENV-DO-QP-108 *External Correspondence*
Item 43172 ENV-DO-QP-112 *Coordinating Regulatory Inspections*
Item 42891 ENV-DO-QP-113 *Tracking Issues and Actions*
Item 43805 ENV-DO-QP-114 *Logbook Use and Control*
Item 45777 ENV-DO-QP-100 *General Field Safety*

Curricula 51 ENV-RCRA Design Engineer
Item 44269, COE Review of LANL Produced Design Documents, AP-341-620
Item 44266, COE System Design Descriptions, AP-341-61
Item 44263, COE Engineering Drawings and Sketches, AP-341-608
Item 44261, COE Calculation, AP-341-605
Item 44258, COE Requirements and Criteria Document, AP-341-602
Item 44257, COE Functions & Requirements Document, AP-341-601
Item 43658, CORE Engineering Overview
Item 55428, COE Management Level Determination, AP-341-502
Item 54168, P342 Engineering Standards
Item 47029, COE LANL Review of Design by External Agencies, AP-341-622
Item 43666, Engineering Design Management
Item 43663, Engineering Technical Baseline
Item 44225, COE Evaluation of Vendor Information, AP-341-701

MSGP Visual Assessors

Curricula 10698 ENV-RCRA MSGP Visual Assessor
Item 43337 ENV-RCRA-QAPP-MSGP
Item 50493 ENV-RCRA-QP-064 *MSGP Storm Water Visual Assessments*
Item 42415 ENV-DO-QP-101 *Environmental Reporting Requirements for Releases or Events*
Item 42547 ENV-DO-QP-111 *Reporting Environmental Releases to Pueblo Governments.*
Item 40708 ENV-DO-QP-108 *External Correspondence*

Item 43172 ENV-DO-QP-112 *Coordinating Regulatory Inspections*
Item 42891 ENV-DO-QP-113 *Tracking Issues and Actions*
Item 43805 ENV-DO-QP-114 *Logbook Use and Control*
Item 45777 ENV-DO-QP-100 *General Field Safety*

Curricula 131 Field Worker Training Requirements
Item 43562 or 3583 or 16585 CPR/AED: LANL Workplace
Item 3574 or 13264 First Aid

2.2 MSGP INSPECTOR QUALIFICATIONS

Inspections:

- Post high school education or experience in engineering or environmental science or a related field; or industrial site field experience involving stormwater pollution prevention.
- 2 years experience of completing MSGP inspections or 1 year MSGP inspection experience with the Certified Inspector of Sediment and Erosion Control (CISEC) certification.
- 6 months knowledge of LANL facility operations.
- Demonstrated ability, as determined by the Multi-Sector General Permit Project Lead and/or Water Quality Team Leader, to successfully and effectively evaluate and identify the following at industrial sites:
    - Conditions and activities that could impact stormwater quality at the facility.
    - Inadequate or ineffective BMPs.
    - Required modification or maintenance of existing BMPs.
    - Locations requiring new or additional BMPs.
    - Potential pollutant sources associated with the facility.
    - Appropriate and correct site stabilization measures.
- Demonstrated ability, as determined by the Multi-Sector General Permit Project Lead and/or Water Quality Team Leader, to evaluate the compliance status of each industrial facility and document identified issues during an inspection.
- Demonstrated ability, as determined by the Multi-Sector General Permit Project Lead and/or Water Quality Team Leader, to properly and effectively complete inspection reports, including the ability to perform the following:
    - Prepare reports in a clear, concise manner, identifying site conditions and issues.
    - Write legibly and describe conditions clearly and accurately.
    - Use proper spelling and grammar.
    - Complete the MSGP Routine Inspection Report forms accurately.
    - Accurately enter findings into the Corrective Actions Report database.

- Conduct inspections in a professional manner.
- Be a member of, or contractor supporting, ENV-RCRA or ENV Division.

2.3 MSGP SWPPP PREPARER QUALIFICATIONS

SWPPP Preparation:

One of the 2 criteria below must be satisfied:

- BS degree or experience in engineering, environmental science, or related field, with a background involving stormwater pollution prevention and regulatory compliance relating to MSGP sites and a 1 year minimum of LANL facility operations knowledge and 1 year experience of completing MSGP inspections; or
- Certified Professional in Erosion and Sediment Control (CPESC) or Professional Engineer (PE) with a demonstrated background in stormwater management, sediment and erosion control, and regulatory compliance.

In addition to:

- Demonstrated ability, as determined by the Multi-Sector General Permit Project Lead and/or Water Quality Team Leader, to:
  - Prepare SWPPPs per LANL format and in compliance with NPDES MSGP requirements.
  - Identify and specify appropriate BMPs and stabilization measures.
  - Identify potential pollutant sources associated with the facility.
  - Perform necessary calculations to meet regulatory requirements.
  - Prepare a site map.
  - Be a member of, or contractor supporting, ENV-CP or ENV Division.

5.4 MSGP VISUAL ASSESSOR QUALIFICATIONS

Quarterly Visual Assessments:

- Education or experience in engineering, environmental science, or a related field; or industrial site field experience involving stormwater pollution prevention; and
- Completed ENV-RCRA training on how to collect and evaluate visual assessment; and
- Demonstrated ability, as determined by the Multi-Sector General Permit Program Lead and/or Water Quality Team Leader, to:
  - Collect quarterly visual samples at the designated outfall.
  - Complete the applicable portions of the MSGP Quarterly Visual Assessment Form.
  - Have working knowledge of the regulatory requirements in Section 4.2 of the MSGP.

5.5 TRAINING RESPONSIBILITIES

All personnel performing MSGP project-related work are required to obtain appropriate training prior to performing work governed by a procedure. Training for all project personnel will be performed and documented in accordance with ENV-DO-QP-115, *Personnel Training*.

The following table lists specific responsibilities regarding training requirements.

Who	What
Group Leader	Ensure project personnel meet all Laboratory training requirements.
Program Lead	Establish and document job descriptions for each position within the MSGP Project. Ensure all project personnel have the appropriate level of education,

	experience, and training.

3.0 QUALITY IMPROVEMENT

The MSGP Project subscribes to the principles of problem prevention and continuous improvement. The Project Lead is committed to evaluating improvement opportunities identified by trending and reporting.

The Project Lead provides verbal and written updates, as needed, to the Team Leader and Group Leader to keep group management apprised of the focus of the MSGP Project activities and to address any shortcomings that may be identified.

3.1 CORRECTIVE ACTIONS WITHIN ENV-RCRA

Corrective actions for all ENV-RCRA programs and projects are initiated, tracked, corrected, and documented according to P330-6 *Nonconformance Reporting*, P322-4 *Laboratory Performance Feedback and Improvement Process*, *SD330, Los Alamos National Laboratory Quality Assurance Program*, and Division/Group procedures.

3.3 QUALITY IMPROVEMENT RESPONSIBILITIES

The following table lists specific responsibilities for quality improvement:

Who	What
Project Lead	Monitor program performance and ensure issues are corrected in a timely manner.
ENV-CP Staff	Identify opportunities for process improvement, health and safety enhancement, environmental protection, or other improvements of the program's operations. Discuss the identified opportunities with the Project Lead. Ensure issues are reported and corrected in a timely manner.

4.0 DOCUMENT CONTROL/RECORDS MANAGEMENT

The program lead, at least one reviewer, and the Group Leader will approve all revisions to this plan. Revisions to the plan will be provided to the QA Specialist. This plan will be reviewed and revised (if necessary) biennially.

This document will be controlled under the organization's document control system (ENV-DO-QP-106, *Document Control*). Controlled copies of ENV documents are located on the Internet: http://int.lanl.gov/orgs/env/rcra/qa.shtml, all other copies are uncontrolled.

Procedures will be developed as necessary and in accordance with ENV-DO-QP-105, *Preparation, Review, and Approval of Procedures*.

Phone calls, email, or fax communications will be documented and controlled if the content provides direction or results in decisions.

4.1 PROGRAM RECORDS

The number, type, and detail of all records to be kept will provide sufficient information to allow an individual with equivalent education and training to verify or reconstruct the results. Implementing procedures specify the records, forms, logbook entries, or other information to be kept as documentation of the performance of the procedure.

Records to be kept in the ENV-CP records system include the following:

- Copy of the Multi-Sector General Permit
- Annual Site Compliance Evaluation reports
- Corrective Action Reports
- Reports and certifications required by MSGP
- Records of all data used to complete MSGP Notice of Intent
- Discharge Monitoring Reports

Records to be kept by the Deployed Environmental Professional assigned to the FOD in which the industrial facility resides includes the following:

- Copies of Stormwater Pollution Prevention Plans
- Reports and certifications required by MSGP
- Routine Inspection Forms
- Supporting analytical data reports including Visual Assessment Forms
- Corrective Action Reports
- Discharge Monitoring Reports
    - Annual Site Compliance Evaluation reports

All ENV-CP records will be maintained and available (after the deadline for submittal as given in applicable procedures) for auditing in the records center at ENV-CP (ENV-DO-QP-110, *Records Management*). Records will be archived in compliance with Laboratory and DOE requirements for records retention, storage, and management.

4.2 PROGRAM RECORDS RESPONSIBILITIES

The following table lists specific responsibilities for program records management:

Who	What
Team Leader	Ensure QAPP meets minimum specifications for documentation and records of the SD330, *Los Alamos National Laboratory Quality Assurance Program*
Program Lead	Conduct annual review of records to ensure compliance with project requirements.

4.3 ELECTRONIC MEDIA

The project will utilize electronic means as necessary to maintain data and perform calculations on these data. Electronic means will not however replace paper copies. All records that must be maintained to meet the requirements of the Permit will be kept in hard copy as the official record.

4.4 DATABASES

Analytical data will be maintained in the LANL Water Quality Database (WQDB). Security, verification, and validation of data are maintained in accordance with LANL procedures.

Security -- ENV data will be maintained electronically in a secure manner and will be protected from loss by being maintained as part of an official dataset that is backed up at least weekly.

Verification of data -- All ENV data, either electronic or hardcopy must undergo a verification and validation process that includes the following:

Verification

- Paper deliverables match electronic data that are stored in an official dataset. Paper deliverables include:
  - chain of custody for sample data
  - field log, if applicable, for sample data
  - data packages for analytical data
  - documentation packages for supporting data (e.g., geographic information system)
- All hand-entered data have been verified by a person other than the individual performing the entry
- Electronic uploads of data (e.g., electronic data deliverables) have been spot checked (at least 10%) to ensure the upload performed as expected
- Hard copy supporting information (e.g., data packages, chains of custody, validation reports, etc.) is evaluated for completeness, archived, and available for audit

Validation --analytical data validation is the responsibility of the EP Directorate. The process will include the following:

- Validate that sample and quality assurance/quality control data and information meet contract specifications
- Assign validation flags, as appropriate
- Identify the analytical supplier
- Identify the analytical method

Verification of calculations -- A person other than the person who generated the query will review for accuracy all compliance related calculations performed in a database through queries. This review will be documented and forwarded to the appropriate record series.

Spreadsheets:
Backups -- All spreadsheets used to hold data and generate reports to be used in demonstrating compliance will be maintained in a secure location. The preferred location is on the Group server. Spreadsheets will be backed up at least weekly.

Verification of data -- All compliance-related data uploaded into a spreadsheet will be verified to be accurate against the original paper copy. Data that are uploaded through electronic means will undergo a 10% verification. Data that are uploaded through manual means will undergo a 100% verification. Someone other than the data entry person must perform the 100% review. This review will be documented and forwarded to the appropriate record series.

Verification of calculations -- A person other than the person who generated the spreadsheet will review for accuracy all compliance-related calculations performed in a spreadsheet. This review will be documented and forwarded to the appropriate record series. Modifications to the function of these spreadsheets will also be verified in this manner.

Software control -- The integrity of spreadsheets will be ensured by limiting access to these spreadsheets to only trained, authorized personnel. Additionally, at least once per year, the function of the spreadsheets will be verified by hand calculations. Documentation of this review will be forwarded to the appropriate record series.

4.4 IMPLEMENTATION RESPONSIBILITIES

The following table lists specific responsibilities:

Who	What
Program Lead	Regularly assess data integrity methods used by MSGP personnel.

5.0 PLANNING AND PERFORMING WORK

Work conducted under this program ensures compliance with the 2008 Multi-Sector General Permit; the Clean Water Act; and DOE Orders 450.1, *Environmental Protection Program*, and 5400.5, *Radiation Protection of the Public and Environment*.

Work that contributes to achieving the quality specifications of the MSGP deliverables will be planned and documented as described in this document and implementing procedures.

Work will be performed according to applicable plans and implementing procedures. The team leader will provide first line supervision of personnel assigned to project tasks to ensure work is performed to achieve project quality specifications. Before changing a work process that affects the project quality specifications, the team leader will ensure the same level of planning and review as used in the initial project planning steps.

5.1 WORK PROCESSES

All work should be regarded as a process. Each process consists of a series of actions and is planned and carried out by qualified workers using specified work processes and equipment under administrative, technical, and environmental controls established by management to achieve an end result. Workers are the best resource of contributing ideas for improving work processes and will be involved in work process design, process evaluation, and providing the feedback necessary for improvement.

All work is planned and performed using the principles of Integrated Safety Management and in compliance with P300, *Integrated Work Management for Work Activities*.

5.3 WORK PERFORMANCE

Management should ensure that the following are clearly identified and conveyed to workers prior to beginning work:

- customer and data requirements for the work and final product;
- acceptance criteria applicable to work and final product;
- hazards associated with the work;
- technical standards applicable to work and final product; and
- safety, administrative, technical, and environmental controls to be employed during the work.

The work processes used to meet the regulatory requirements and the requirements of this plan can be divided as follows:

- Stormwater Pollution Prevention Plans (Multi-Sector General Permit Section 5.0)
- Inspections (Multi-Sector General Permit Section 4.0)
- Monitoring (Multi-Sector General Permit Section 6.0)
- Discharge Monitoring Reports (Multi-Sector General Permit Section 7.1 – Reporting Monitoring Data to EPA)
- Best Management Practices (Multi-Sector General Permit Section 2.0 –Control Measures)
    - Reporting and Recordkeeping (Multi-Sector General Permit Section 7.0)

5.4 STORMWATER POLLUTION PREVENTION PLAN

Stormwater Pollution Prevention Plan (SWPPP) development and implementation by the regulated industrial facility is required for MSGP compliance (refer to Section 8.0 of the 2008 MSGP for S*ector-Specific Requirements for Industrial Activity* and Appendix D, *Sectors of Industrial Activity Covered by This Permit*). The SWPPP is intended to document the selection, design, and installation of control measures. Additional documentation requirements are intended to document the implementation (including inspection, maintenance, monitoring, and corrective

action) requirements identified in the 2008 MSGP permit. The SWPPP is a written assessment of potential sources of pollutants in stormwater runoff and control measures that will be implemented at the specific industrial facility to minimize the discharge of pollutants in runoff from the site. These control measures include site-specific Best Management Practices (BMPs), inspections, employee training, and reporting. The procedures detailed in the SWPPP must be implemented by the facility and updated as necessary, with a copy of the SWPPP kept on-site.

The SWPPP development process involves evaluating regulated industrial activities and requiring Facility Management support in implementation, improvement, and revision of the Plans.

5.4.1 DISCHARGE MONITORING REPORTS

The Laboratory is required to submit analytical results of stormwater monitoring and to keep the results with the facility specific SWPPP. The Laboratory must certify and submit analytical monitoring results obtained from each facility specific sampling location (i.e., the sampling station located at the monitored outfalls) associated with industrial activity on a Discharge Monitoring Report (DMR) form or use it to report any of the following:

- no discharge for all outfalls for a specific monitoring period;
- the industrial facility status has changed to inactive and unstaffed;
- the facility status has changed to active; or
- no further pollutant reductions are achievable for all outfalls and for all pollutants (see Section 6.2.1.2 of the 2008 MSGP).

5.4.2 ANNUAL SITE COMPLIANCE EVALUATION REPORT

The Laboratory is required to submit an annual report (Attachment 2) to the Environmental Protection Agency (EPA) that includes the findings from the comprehensive site inspection and any corrective action documentation. The documentation must include the following:

- identification of the condition triggering the need for corrective action review;
- date and description of the problem identified;
- summary of the corrective action taken or to be taken;
- notice of whether SWPPP modifications are required as a result of the discovery or corrective action;
- date corrective action was initiated; and
- date corrective action was completed or is expected to be completed.

The following table lists responsibilities:

Who	What
Project Lead	Ensure that SWPPP requirements are performed in accordance with the MSGP.

Facility Management Support	Implement SWPPP requirements as recommended by the Project Lead.
ENV-CP Staff and Deployed Environmental Professionals (DEPs)	Assure SWPPP implementation as required by MSGP.
DEPs	Develop, modify, and update SWPPPs and assist facility personnel with SWPPP implementation.

5.5 INSPECTIONS

The MSGP requires periodic inspection of industrial processes and maintenance of (BMPs) to assure effectiveness of control measures. The Laboratory has implemented a quarterly or monthly inspection process (depending on the industrial facility) to support this determination. A copy of the Routine Inspection Form is provided in Attachment 3.

5.6 STORMWATER MONITORING

Benchmark stormwater monitoring is the required mechanism for determining the effectiveness of corrective actions and meeting the requirements of the MSGP. Refer to Attachment 4, *MSGP Facilities and Stormwater Monitored Outfalls Associated with Industrial Activity 2011***,** for a list of Laboratory sites that have monitoring requirements. Laboratory management has made an investment in time and materials, in addition to a commitment to comply with the 2008 MSGP Permit. All stormwater monitoring is conducted by ENV-CRP personnel. The MSGP Project currently has a network of 23 monitoring stations. Considerations to be used for MSGP stormwater monitoring development decisions will include MSGP requirements, new state water quality standards, Administrative Authority requests, or new permit requirements. Stormwater monitoring will be conducted as specified in the MSGP.

Effluent Limitations stormwater monitoring is required for the following type of facility of LANL:

Regulated Activity	**Parameter**	**Effluent Limit**	**Monitoring Frequency**	**Sample Type**
Discharges from asphalt emulsion facilities	Total Suspended Solids	23.0 mg/L daily max. 15.0 mg/L, 30-day avg.	1/year	grab
	pH	6.0-9.0 s.u.	1/year	grab
	Oil and Grease	10.0 mg/L 30-day avg.	1/year	grab

This determination was made in accordance with Section 1.1.2.4 of the MSGP. The TA-60 Asphalt Batch Plant meets the criteria for effluent limitations monitoring in this section. Exceedances of the effluent limits in this table require immediate action. In addition, if follow-up monitoring after corrective actions also exceeds an effluent limit guideline, an Exceedance Report for Numeric Effluent Limits must be submitted to EPA no later than 30 days after lab results have been received and verified.

Impaired Waters stormwater monitoring is required for discharges made to an impaired water. The canyons within and surrounding Los Alamos National Laboratory are declared as Impaired Waters by the New Mexico Environment Department. The pollutants vary from canyon to canyon and are listed in Attachment 5, *Pollutants Under Impaired Waters Monitoring.* The pollutants may be discontinued in subsequent annual monitoring if the concentration is below background levels in stormwater or if the constituent is not detected.

Visual assessments are also required by the MSGP and are an important tool for collecting information to determine the effectiveness of controls in preventing potential contaminants from migrating off Laboratory property. Accordingly, field personnel must conduct visual assessments for stormwater collected at the monitoring stations or discharged through substantially identical outfalls associated with industrial facilities located throughout the Laboratory. Information recorded will document all observations that are required by the MSGP (see ENV-RCRA-QP-064, *Multi-Sector General Permit Storm Water Visual Inspections*).

The Laboratory's MSGP permit requires stormwater quality monitoring to evaluate compliance with water quality standards and evaluation against benchmarks. Parameters sampled at the monitoring stations are selected based on permit requirements and the results of the previous year.

Four stormwater samples per year are required under the 2008 MSGP, but it is not necessary to collect them in consecutive quarters if climatic conditions that prevented quarterly collection are documented (see *Adverse Weather Conditions* in Section 6.1.5 of the MSGP). Sample locations are listed in Attachment 4, *MSGP Facilities and Stormwater Monitored Outfalls Associated with Industrial Activity 2011*, and collection will be conducted in accordance with LANL and NPDES Permit requirements and the current year MSGP Sampling and Analysis Plan.

Stormwater samples are used to demonstrate compliance with water quality standards and requirements to evaluate results against benchmark parameters (Attachments 5 and 6). Any persons involved in the preparation, retrieval, and analysis must maintain positive control of samples at all times until sample disposal. ENV-RCRA personnel will follow guidance in the Associate Directorate for Environmental Programs (ADEP) document ENV-WQH-QP-029, *Creating and Maintaining a Chain of Custody*, as well as, ENV-RCRA-QP-047, *Inspecting Storm Water Runoff Samplers and Retrieving Samples*, and ENV-RCRA-QP-048, *Processing MSGP Storm Water Samples*.

Chain of custody is maintained during:

Activity	Responsibility
Sample collection and preparation	All persons (other than analytical personnel) performing sample preparation and collection will be trained to sample collection procedures and must adhere to the chain of custody requirements therein.
Analysis	Analytical laboratories performing sample analysis will maintain sufficient procedures to ensure positive control of samples as specified in the existing Statement of Work.
Storage/ disposal	Analytical laboratories will maintain retained samples and/or sample portions under chain of custody until reanalysis, or ultimate disposal.

The LANL Sample Management Office (SMO) will be the central point for all analytical laboratory selection, evaluations, sample submittal, and data return. The SMO will evaluate potential analytical laboratories, prepare analytical statements of work that include requirements, and arrange contracts with selected laboratories for analysis of all samples. The SMO will accept samples from field collection personnel, process the sample, ship the samples to the off-site analytical laboratories, and receive the data packages from the laboratories.

All analytical data will be received from analytical laboratories in electronic format and uploaded into a database. All received data will be checked for completeness and adherence to contract requirements. After uploading, all data will undergo verification and validation (V&V) for evidence of laboratory contamination, improper analytical method, and other analytical issues which could potentially affect data quality.

Field data collected by sample collection personnel will be verified and validated by the SMO when field personnel deliver samples to the SMO.

If significant V&V issues are identified, results will be forwarded to and discussed with the responsible project leads.

Data issues that result from procedural failures, personnel errors, or other failures to follow requirements will be documented as issues and corrected according to ENV-DO-QP-113, *Tracking Issues and Actions*.

The following table lists responsibilities:

Who	What
Project Lead	Ensure that all project monitoring requirements are performed in accordance with the MSGP. Review and update the MSGP Sampling and Analysis Plan annually.

	When complete, communicate findings to the team members for implementation. Make appropriate arrangements with the SMO to accept, process, and submit samples to an analytical laboratory for required analyses as specified in the SAP.
MSGP Water Quality Compliance Personnel	• Implement monitoring program as required by the MSGP Project Lead. • Conduct stormwater sampling in accordance with the MSGP Sampling and Analysis Plan and applicable procedures. • Ensure procedures for sample handling and control during sample preparation and retrieval are followed.
Sample Management Office	• Develop Statements of Work (SOW) for all analytical laboratories that perform analytical work for the MSGP project in accordance with P840-1, *Procurement Quality*. • Ensure analytical laboratories comply with the DOE's SOW. Conduct an annual audit of the laboratory to ensure compliance with the SOW. • Approve Statements of Work for analytical laboratories that are contracted to analyze water samples. • Approve analytical laboratories that are contracted to analyze water samples for regulatory compliance purposes. • Accept samples and submit them to and approved analytical laboratory for analysis. • Track progress of samples at the analytical laboratory and resolve issues with sample analysis. • Receive data packages from the analytical laboratory and enter data into the database. • Provide the MSGP Project Lead with monthly invoice updates. • Perform V&V of field data submitted and uploaded from forms when samples are submitted to the SMO.
Operations Integration Office (OIO), Systems Integration (SI)	Perform V&V of data packages uploaded by the SMO or send data packages to a subcontractor company for independent V&V.

5.7 DISCHARGE MONITORING REPORTS

The Laboratory is required to submit analytical results of stormwater monitoring and to keep the results with the specific SWPPP. The Laboratory must submit analytical monitoring results obtained from each monitoring station associated with industrial activity on a MSGP Discharge Monitoring Report (MDMR) form (one form must be submitted for each storm event from which, a sample was collected).

MDMRs shall be written in accordance with ENV-RCRA-QP-044, *Preparing Storm Water Discharge Monitoring Reports (MDMRs) for the NPDES Multi-Sector General Permit*. MDMRs shall be submitted to EPA within 30 calendar days of receiving validated

analytical results. Refer to the DMR language under the SWPPP Section above for additional requirements.

Site analytical requirements are defined by the industrial activity in the MSGP permit. All MSGP analytes applicable to LANL are consistent with the requirements of 40 CFR Part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants.*

Sample analytical requirements vary by site depending on the industrial activities performed at the site. Refer to Attachment 5 for a list of analytes by industrial sector. If an insufficient quantity of sample is available, then sample collection will be prioritized at that location for future events. Additional samples may be collected to meet permit requirements.

ENV-RCRA shall refer to the requirements of the 2008 Multi-Sector General Permit, and the most current MSGP Sampling and Analysis Plan to determine the priorities of required analyses.

The following table lists responsibilities:

Who	What
Project Lead	• Ensure implementing procedures for sample analyses are used. • Ensure that MDMRs are submitted to EPA and NMED in accordance with the MSGP.
MSGP Water Quality Compliance Personnel	Assure MDMRs are completed and certified as required by the MSGP and have received a full quality assurance review.

5.8 ADVERSE WEATHER CONDITIONS AND CLIMATES WITH IRREGULAR STORMWATER RUNOFF

Section 4.2.3 of the 2008 MSGP allows the industrial facility to take a substitute sample during the next qualifying storm event when adverse weather conditions prevent the collection of samples during a specific quarter. Adverse weather conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions. Documentation of the rationale for no visual assessment for the quarter must be included in the facility specific SWPPP.

Since LANL is located in an area where limited rainfall occurs during parts of the year (i.e., in a semi-arid climate) and has periods of freezing conditions, LANL has identified an alternative monitoring period of four quarters as follows for each calendar year.

- April 1-May 31

- June 1-July 31
- August 1-September 30
- October 1-November 30

The following table lists specific responsibilities.

Who	What
Project Lead	Ensure that the monitoring schedule is documented in facility specific SWPPPs and provided to EPA on the MDMRs.

5.9 REPORTING AND RECORDKEEPING

All monitoring data shall be collected in accordance with the requirements specified in the 2008 MSGP. LANL will submit monitoring results to EPA within 30 days of receiving validated laboratory results. The address for submittal of monitoring results is as follows.

U.S. Environmental Protection Agency
Office of Water, Water Permits Division
Mail Code 4203M, ATTN: MSGP Reports
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

LANL shall keep copies of the following documentation for a period of at least 3 years from the date that LANL's coverage under the MSGP expires or is terminated.

- SWPPP (including any modifications made during the term of the 2008 MSGP)
- Additional documentation requirements as identified in Section 5.4 of the MSGP
- All reports and certifications required by the MSGP
- Monitoring data
- Records of all data used to complete the NOI.

The following table lists specific responsibilities:

Who	What
Project Lead	Periodically audit MSGP records to ensure documentation of compliance is being retained.
Deployed Environmental Professionals	Retain records as required by the MSGP for industrial facilities located in their FOD.

5.10 BEST MANAGEMENT PRACTICES

It is critical that the Laboratory be able to effectively inspect and maintain the Best Management Practices that have been installed at various locations. Quarterly inspections must be completed and provided to the Project Lead for inclusion into the records system. In addition, the Project Leader conducts a Comprehensive Annual Site Inspection and writes a report to document the status of BMPs and other identified corrective actions. This report is sent to EPA each year. Laboratory management has made an investment in time and materials, in addition to a commitment to minimizing the potential migration of contaminants in stormwater. Report findings are evaluated and in conjunction with facility personnel, BMPs are modified, installed, or removed as necessary.

The following table lists responsibilities.

Who	What
Project Lead	Assist facility personnel and Deployed Environmental Professionals with implementation, inspection, and maintenance of BMPs at MSGP facilities.
Facility Management Support	• Coordinate with Project Lead and provide funding as needed to install, inspect, maintain and implement identified BMPs. • Certify the corrective actions identified by the Project Lead and/or facility personnel (or their representatives) for their individual facilities in the Annual Report.

5.11 INFORMATION MANAGEMENT

The Water Quality Database is a database information system designed in part to support the information management (IM) needs of the Laboratory's MSGP. MSGP support includes stormwater discharge monitoring reporting, Geographic Information System (GIS) development, and other IM activities as needed.

The following table lists responsibilities:

Who	What
Project Lead	Coordinate with IM support personnel to meet regulatory requirements.

5.12 RESPONDING TO WATER QUALITY EXCEEDANCES

The identification of a pollutant source(s) contributing to a water quality exceedance will be addressed through the creation of a corrective action that is entered into the Corrective Acton

Report database in accordance with ENV-DO-QP-113, *Tracking Performance Feedback and Actions* and *ENV-RCRA-QP-022, MSGP Stormwater Corrective Actions*. Federal stormwater regulations implemented under the Laboratory's MSGP (40 CFR 122, EPA Administered Permit Programs: The National Pollutant Discharge Elimination System) require that corrective action be taken if exceedances of water quality standards or MSGP numeric effluent limits are identified. Corrective actions are typically accomplished by modifying, as appropriate, existing BMPs and SWPPPs.

When a water quality exceedance occurs, the Laboratory will submit the data on the required MDMRs, investigate the occurrence, and document corrective actions.

When an exceedance of the MSGP benchmark parameters is detected, the Project Lead will assure the analytical data is reviewed, notify appropriate SWPPP owners, and recommend and track corrective actions where required.

The following steps lead to corrective actions:

STEP	Action
1	Establish that an analytical result from a location is valid and has exceeded a standard or MSGP benchmark.
2	Evaluate and demonstrate that the analyte is of LANL origin, if possible.
3	Determine the source and assign responsibility for the corrective action.
4	Develop a corrective action plan.

The following table lists responsibilities:

Who	What
Project Lead	• Assure that analytical data is reviewed and accurate. • Notify appropriate SWPPP owners, Laboratory management, and Deployed Environmental Professionals. • Develop a corrective action plan. • Follow up with corrective actions if required. • Track corrective actions.
Facility Management and DEP	• Review analytical data with Project Lead and provide input into a possible corrective action necessary to improve water quality where needed. • Evaluate and improve BMPs in accordance with site conditions, industry standards, and manufacturer

	recommendations.

5.13 INSTRUMENTATION AND EQUIPMENT

Compliance will be tracked by performing inspections of samplers and other associated equipment, inspecting BMPs, and conducting annual site compliance evaluations. Adequate records will be maintained to demonstrate the operating history of essential instrumentation and equipment.

LANL will properly operate and maintain all systems of monitoring and control and related appurtenances which are installed or used to achieve compliance with the MSGP and the SWPPP. Backup instrumentation and equipment will be timely deployed in the event of equipment failure.

Instrument calibration is essential for documenting the quality of data obtained with the instrument. All technical work that depends upon the accuracy of data will be performed using equipment for which the calibration status and limits of accuracy are known and controlled.

Field team personnel will calibrate and perform maintenance procedures on all monitoring and analytical field instruments to ensure accuracy of measurements and will maintain appropriate records of such activities. All field calibrations will be documented as prescribed by procedures or manufacturer's instructions.

The following table lists specific responsibilities.

Who	What
Project Lead	• Ensure data are collected and equipment is operated and maintained in accordance with project requirements. • Provide equipment maintenance and calibration specifications and ensure MSGP Water Quality Compliance Team personnel operate and conduct field activities in accordance with implementing procedures and specific work orders.

6.0 DESIGN

Design activities will be conducted and reviewed in accordance with PD340, *Conduct of Engineering* and P341, *Engineering Process Manual*.

Design standards under this program include, but are not limited to temporary and permanent BMPs, corrective action measures, and stormwater monitoring support.

Design inputs will be specified and approved on a timely basis for making design decisions. Inputs will contain the level of detail required to permit the performance of design activities correctly.

Formal design reviews, including design verifications and evaluation of design changes, will be conducted to ensure that the design input is correctly incorporated into the design output. Changes to design will undergo the same review as the original design.

Verification and validation of the adequacy of designs are conducted before relying on the performance of the design function. Verification and validation are conducted in accordance with implementing procedures.

The following table lists responsibilities.

Who	What
Project Lead	• Provide input to the design process in accordance with appropriate standards, requirements, and implementing procedures. • Determine the qualifications required to perform a review of design documents. • Identify a resource with skills, knowledge, ability, training, and certifications required to complete the review of the facility engineering design documents. • Communicate the results of the review to the requestor.
ENV-CP Staff	Review design documents and requests as assigned. Inform the Project Lead of concerns regarding the facility engineering designs.

7.0 PROCUREMENT

Items and services required for this process are commercial grade in nature and no special procurement requirements or needs are necessary. All procurements will be made in accordance with P840-1, *Procurement Quality*. For items and all services for which special requirements are necessary, the Project Lead and project members will identify such items or services.

The following table lists responsibilities:

Who	What
Group Leader	Ensure all procurements are conducted in accordance with P840-1.
Project Lead	Recommend to Group Leader contracting items and services. Develop acceptance criteria.
ENV-CP Staff	Identify potential suppliers of products or services necessary to complete work activities that must be procured from outside ENV-RCRA.

8.0 INSPECTION AND ACCEPTANCE TESTING

Any materials or services will be inspected and/or tested prior to acceptance for use in this project in accordance with P330-8, *Inspection and Test for Acceptance*. Most supplies used during performance of project activities are commercial grade in nature and require no special acceptance practices or procedures.

The following table lists responsibilities:

Who	What
Group Leader	Ensure procedures for inspection meet SD330, *Los Alamos National Laboratory Quality Assurance Program* requirements.
Project Lead	Verify that all materials and services meet acceptance criteria.
ENV-CP Staff	Follow established procedures for inspection and acceptance testing.

9.0 MANAGEMENT ASSESSMENT

The ENV-CP Group conducts internal management assessments of projects and programs in accordance with the requirements in P328-3, *Management Assessment* and P328-4, *Management Observation and Verification*. Assessments of the program are documented and filed as records.

When violations of requirements are found during a management assessment, a nonconformance report is initiated in accordance with P330-6, *Nonconformance Reporting* for nonconforming items. Nonconforming services or processes are tracked and documented in accordance with P322-4, *Issues and Corrective Action Management*.

The following table lists responsibilities:

Who	What
Group Leader	Ensure management self-assessments for the MSGP program are conducted as specified in implementing procedures.
Project Lead	Ensure program management self-assessments are conducted.

10.0 INDEPENDENT ASSESSMENT

Independent assessments are those assessments conducted by organizations external to ENV-RCRA. As required by the SD330, *Los Alamos National Laboratory Quality Assurance Program*, this program may be assessed by outside organizations in accordance with P328-2, *Independent Assessment*.

Periodically audits/assessments will be conducted, with input from the Project Lead identifying one or more areas of the project to be audited.

The following table lists responsibilities:

Who	What
Project Lead	• Approve audit schedules. • Provide input to the QA Specialist as to the content of audit. • Review audit reports for factual accuracy. Address all findings and implement corrective actions as appropriate.
QA Specialist	• Identify areas to be addressed during internal audits. • Contract with the Quality Management Group to perform annual internal audits. • Review audit procedures to ensure they meet the requirements in this section.
Team Members	Cooperate with auditors by providing information, data, etc. Implement corrective actions as directed by the Project Lead.

11.0 ATTACHMENTS

Attachment 1- MSGP Program Organization

Attachment 2 – Annual Reporting Form

Attachment 3 – Routine Inspection Form

Attachment 4 – MSGP Facilities and Storm Water Monitored Outfalls Associated with Industrial Activity 2011, Permit NMR05GB21

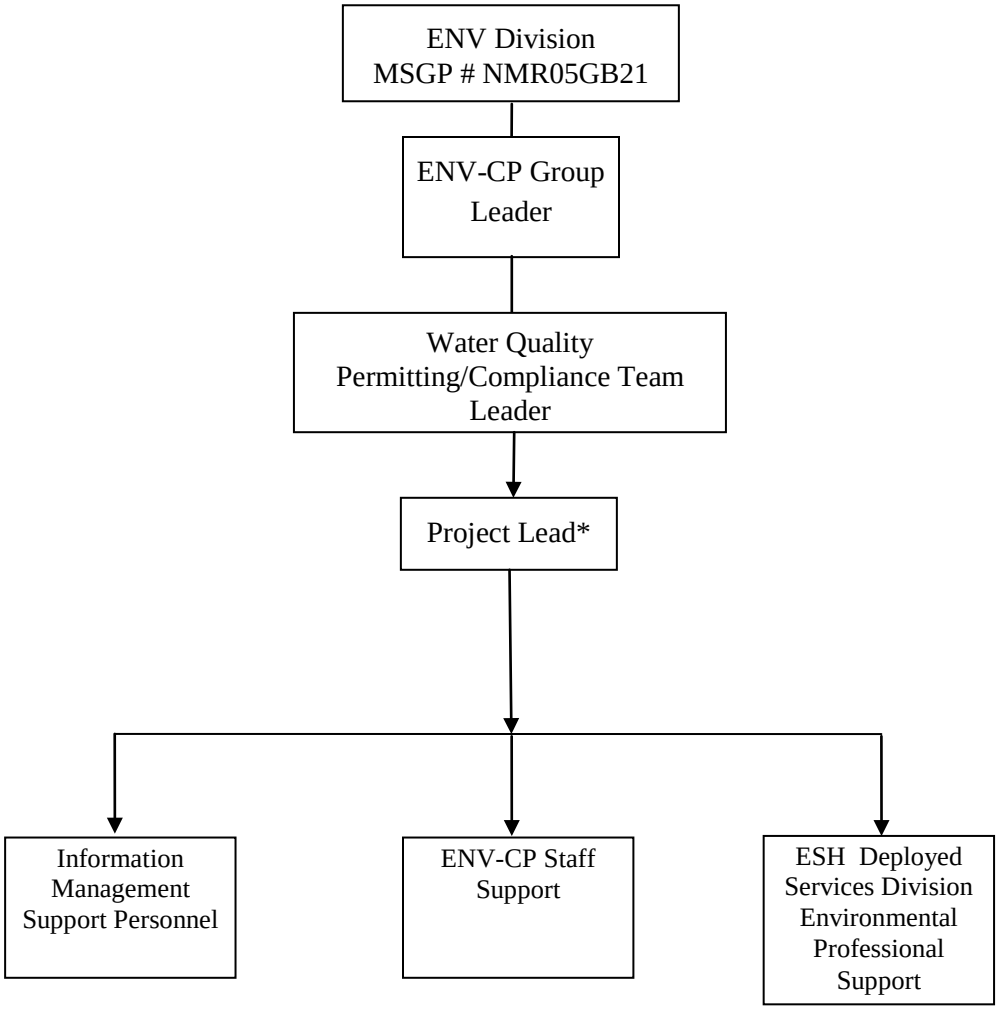
Attachment 5 – Pollutants under Impaired Waters Monitoring

Attachment 6 – Analytes by Industrial Sector

Attachment 7 – References and Guidance Documents

Click here for "Required Read" credit.

ATTACHMENT 1- MSGP PROGRAM ORGANIZATION



*Project Lead acts as liaison and will work directly with Team Leaders for staff assignments.

ATTACHMENT 2 – ANNUAL REPORTING FORM

NPDES Permit Tracking No.:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

Annual Reporting Form

A. GENERAL INFORMATION

1. Facility Name:
2. NPDES Permit Tracking No.:
3. Facility Physical Address:
   a. Street:
   b. City: c. State: d. Zip Code: -
4. Lead Inspectors Name: Title:
   Additional Inspectors Name(s):
5. Contact Person: Title:
   Phone: - - Ext. E-mail:
6. Inspection Date: / /

B. GENERAL INSPECTION FINDINGS

1. As part of this comprehensive site inspection, did you inspect all potential pollutant sources, including areas where industrial activity may be exposed to stormwater?
   ☐ YES ☐ NO

   If NO, describe why not:

NOTE: *Complete Section C of this form for each industrial activity area inspected and included in your SWPPP or as newly identified in B.2 or B.3 below where pollutants may be exposed to stormwater.*

2. Did this inspection identify any stormwater or non-stormwater outfalls not previously identified in your SWPPP? ☐ YES ☐ NO

   If YES, for each location, describe the sources of those stormwater and non-stormwater discharges and any associated control measures in place:

NPDES Permit Tracking No.:

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

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

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

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

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

6. Have you taken or do you plan to take any corrective actions, as specified in Part 3 of the permit, since your last annual report submission (or since you received authorization to discharge under this permit if this is your first annual report), including any corrective actions identified as a result of this annual comprehensive site inspection?

☐ YES ☐ NO

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

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

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: 1	Los Alamos NATIONAL LABORATORY EST.1943
Effective Date: 03/07/2019	Next Review Date: 03/07/2022	

Environment, Safety, Health, Quality, Safeguards, Security Directorate

Environmental Protection and Compliance Division – Compliance Programs

Quality Procedure

MSGP Routine Facility Inspections

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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]*
EPC-CP-QP-023 R0	05/17/2018	New Document. Process formerly part of procedure ENV-RCRA-QP-022 R2, *MSGP Corrective Actions*.
EPC-CP-QP-023 R1	03/07/2019	Added question to inspection form, associated text to document, and renumbered steps. Removed reference to Los Alamos National Security, LLC. Added reference to LANL BMP Manual. Minor edits made.

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1.0 INTRODUCTION

The National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP), also referred to as the permit, 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 where 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.

LANL 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 LANL 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 LANL 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 Permitting and Compliance Team

EPC-CP MSGP Stormwater Permitting and Compliance 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 *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 SWPPPs) and documenting results accurately;
- Acting as liaison between the FOD, Deployed Environment, Safety, and Health (DESH) 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 DESH Manager

The DESH manager works with programmatic entities and the FOD to identify adequate resources for their industrial facilities to ensure permit requirements can be implemented. The DESH Manager is responsible for the performance of DEPs under their management and to ensure DEPs are trained and qualified. 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 form or as requested by the MSGP program lead if an inspection form 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.*
- LANL 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 that 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 an example of the inspection form in hard copy format.

Some terminology varies between the MC Express software and the MC 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. MC 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 1*:** 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. Document the weather and 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"
   THEN click the expand arrow located on the right side of this task line and change the "N/A" line to "Yes".

   OR

   IF the response to Item 2 is "Failed",
   THEN document any corrective action 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. Item 9: Observe and document the outfall is free of unauthorized non-stormwater discharges 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 unauthorized discharges observed in the "Comments" field of the task line.

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

13. Item 10: 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.

    NOTE 2: If the DEP or EPC-CP MSGP stormwater personnel determine that additional controls are necessary, or that existing controls are insufficient and require replacement with a different type of control, the DEPs are responsible for the selection and oversight of proper installation of appropriate control measures per guidance provided in the LANL Stormwater BMP Manual.

14. **IF** the location has more than one control measure,
    THEN complete Step 13 for each control measure shown on the work order.

15. Item 11: 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. Document 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.

16. **IF** the facility has more than one sector of NPDES specified industrial area/activity, **THEN** complete Step 15 for each industrial area/activity shown on the work order.

    For industrial activities that do 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".

17. Item 12: 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.

18. Item 13: 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 change the "Complete" to "Yes". If additional control measures are needed to comply with the Permit, click the expand arrow located on the right side of the task line and change the "Failed" to "Yes" and describe the control measures in the "Comments" field of the task line.

19. When all task lines have been completed, make sure you have clicked the "Save" bar at the bottom of the page.

20. 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 14: 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,
   THEN

   [a] Click the "Date" field to open the pop-up window.

   [b] Make necessary adjustments using the timestamp application.

   [c] Click "Set" to apply changes.

3. Item 15: 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 16: 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 the 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 an example of EPC-CP-Form-1020, *MSGP Routine Facility Inspection* in hard copy format.

1. Item 14: 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,
   THEN note the date and time the inspection began in the Labor Report field.

2. Item 15: The field inspector prints his/her name.

3. The field inspector reviews the inspection form for accuracy.

IF a correction or update is needed,
THEN the inspector will draw a single line through the information to be updated, write in the new information, and add his/her initials and the date the information was updated.

4. Item 16: The field inspector certifies 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 MC desktop application using your login credentials.
2. Click "Open" in the tool bar at the top of the page to open the MC 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 17: 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.

   The certification statement will be signed no more than 14 days after completion of the inspection.
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.

- DESH 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" (required 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, *MSGP Corrective Actions*
- *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.

BMP	Best Management Practice
EPC-CP	Environmental Protection and Compliance – Compliance Programs
DEP	Deployed Environmental Professional
DESH	Deployed Environment, Safety, and Health
IWD	Integrated Work Document
FOD	Facility Operations Director
LANL	Los Alamos National Laboratory
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.

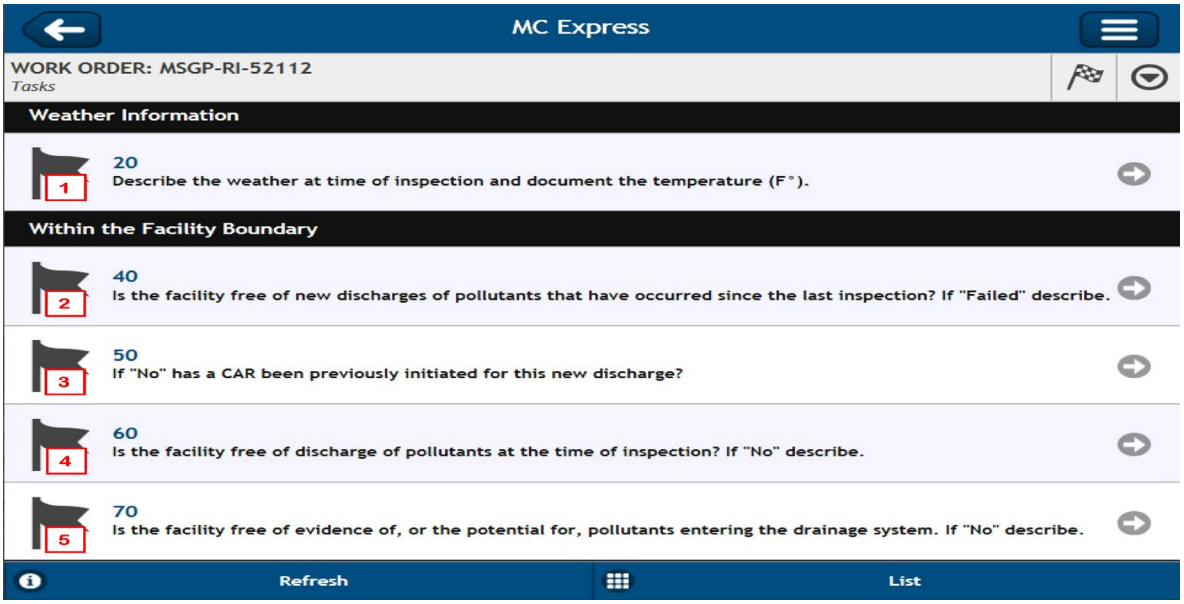
Los Alamos National Laboratory Storm Water BMP Manual.

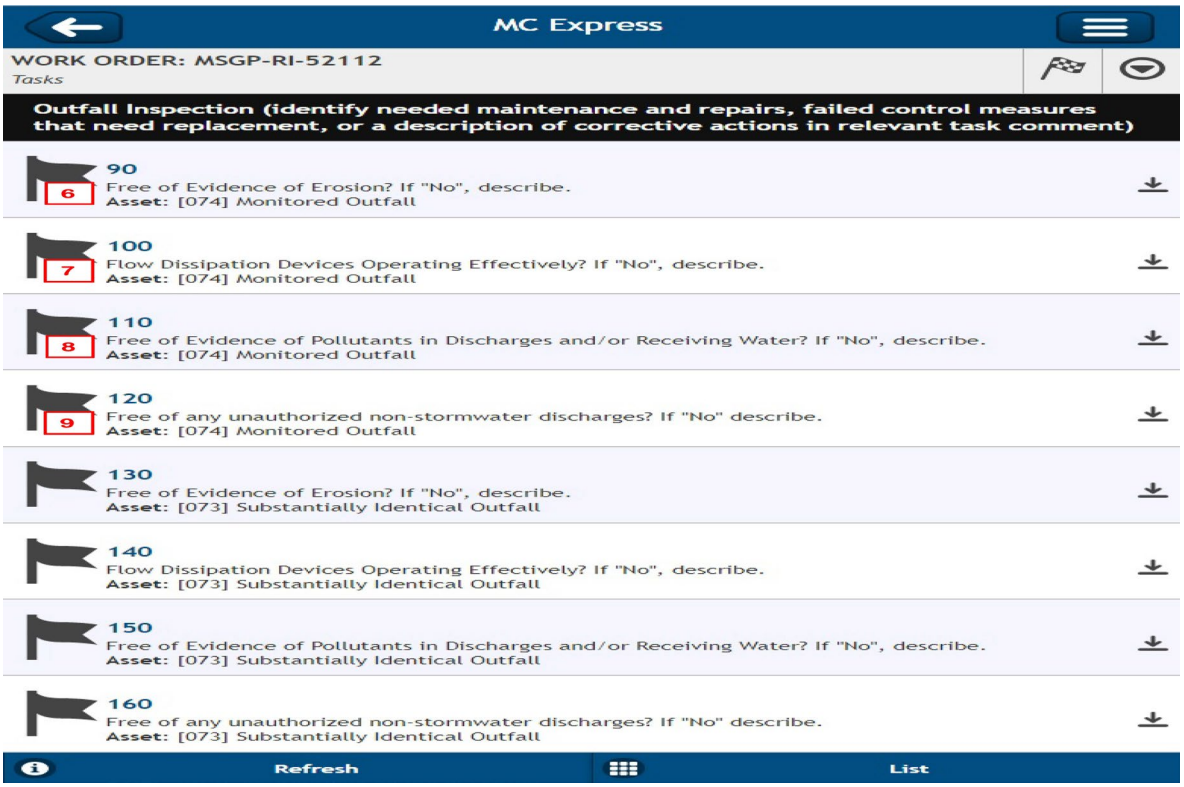
10.0 ATTACHMENTS

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

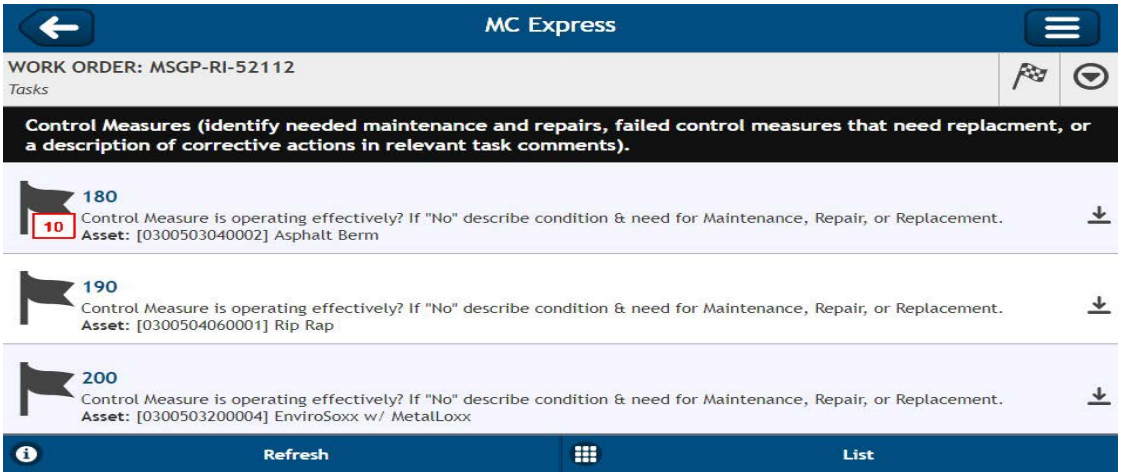
Attachment 2: EPC-CP-Form-1020, MSGP Routine Facility Inspection Hard Copy *Example*

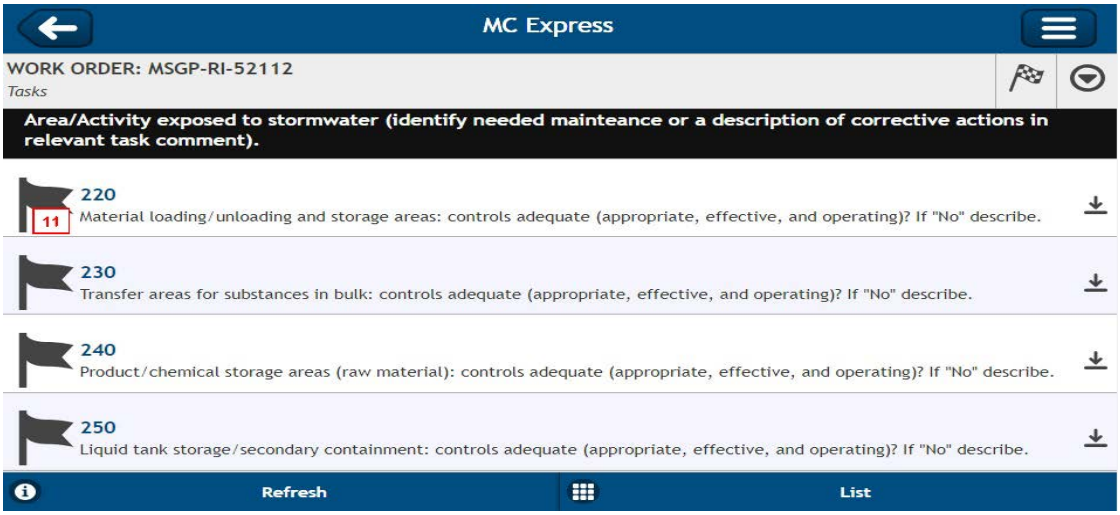
Attachment 1: Screenshot ExampleS of EPC-CP-Form-1020, *MSGP Routine Facility Inspection* in MC Express

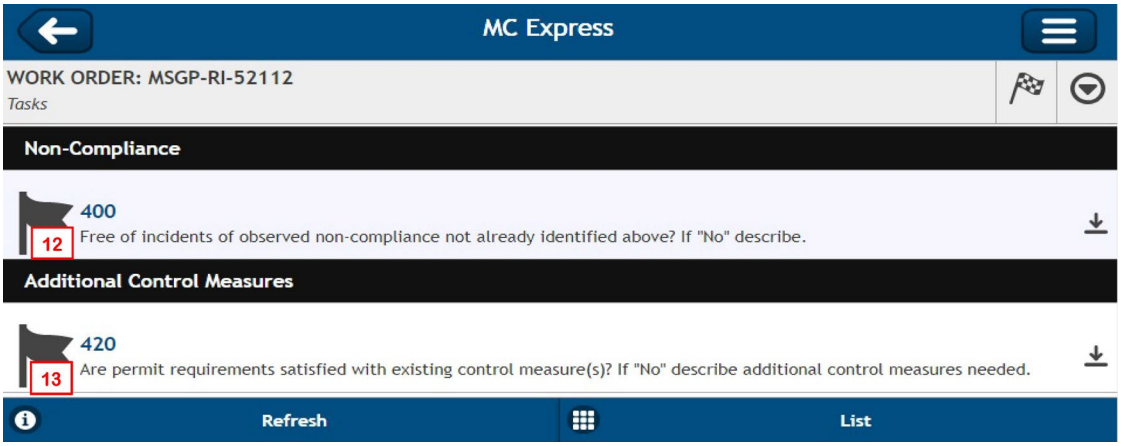




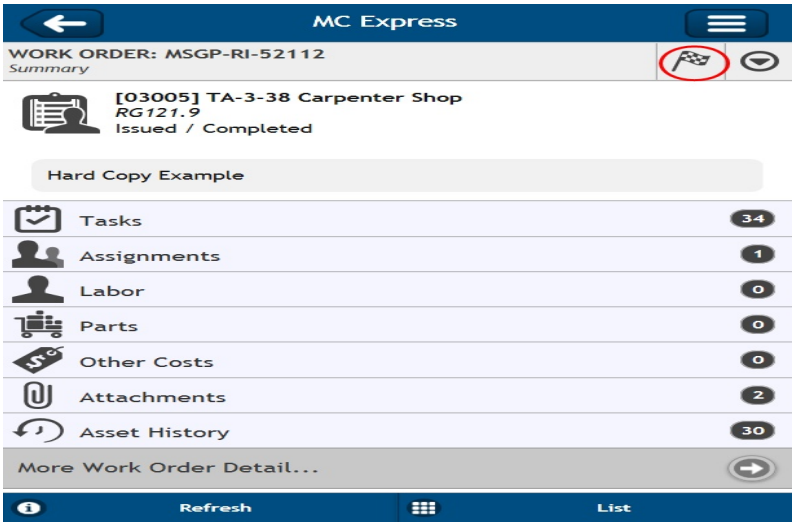
Attachment 1: Screenshot ExampleS of EPC-CP-Form-1020, *MSGP Routine Facility Inspection* in MC Express (cont.)

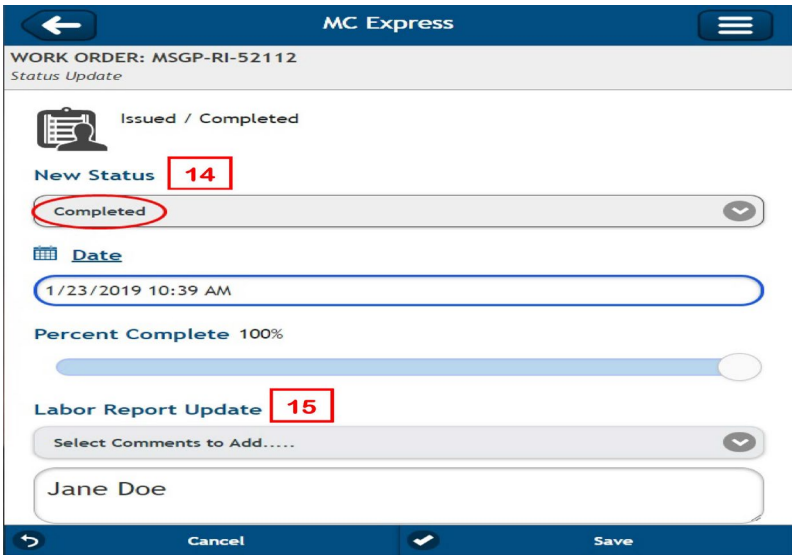






Attachment 1: Screenshot ExampleS of EPC-CP-Form-1020, *MSGP Routine Facility Inspection* in MC Express (cont.)







Attachment 2: EPC-CP-Form-1020, *MSGP Routine Facility Inspection* Hard Copy Example

Page 1 of 3

Los Alamos National Laboratory

Work Order MSGP-RI-52112
MSGP Routine Inspection
Printed 1/23/2019 - 12:45 PM (Duplicate Copy)

Maintenance Details

Requested By: Admin, Jane on 1/23/2019 12:30:00 PM
Taken By: Banar, Alethea
Procedure: MSGP Routine Facility Inspection (EPC-CP-Form-1020.2)
Last PM: N/A

Target: 12/31/2020
Priority/Type: / Inspection
Department: Utilities and Infrastructure

MSGP Program
RG121.9
TA-3-38 Carpenter Shop

Contact: Admin, Jane
Phone: 123-4567

Reason: Example MSGP Routine Facility Inspection

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 [074]** Free of Evidence of Erosion? If "No", describe.		☐	☐	☐
7	100	**Monitored Outfall [074]** Flow Dissipation Devices Operating Effectively? If "No", describe.		☐	☐	☐
8	110	**Monitored Outfall [074]** Free of Evidence of Pollutants in Discharges and/or Receiving Water? If "No", describe.		☐	☐	☐
9	120	**Monitored Outfall [074]** Free of any unauthorized non-stormwater discharges? If "No" describe.		☐	☐	☐
	130	**Substantially Identical Outfall [073]** Free of Evidence of Erosion? If "No", describe.		☐	☐	☐
	140	**Substantially Identical Outfall [073]** Flow Dissipation Devices Operating Effectively? If "No", describe.		☐	☐	☐
	150	**Substantially Identical Outfall [073]** Free of Evidence of Pollutants in Discharges and/or Receiving Water? If "No", describe.		☐	☐	☐
	160	**Substantially Identical Outfall [073]** Free of any unauthorized non-stormwater discharges? If "No" describe.		☐	☐	☐
10		**Control Measures (identify needed maintenance and repairs, failed control measures that need replacment, or a description of corrective actions in relevant task comments).**				
	180	**Asphalt Berm [0300503040002]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☐
	190	**Rip Rap [0300504060001]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☐
	200	**EnviroSoxx w/ MetalLoxx [0300503200004]** Control Measure is operating effectively? If "No" describe condition & need for Maintenance, Repair, or Replacement.		☐	☐	☐
11		**Area/Activity exposed to stormwater (identify needed mainteance or a description of corrective actions in relevant task comment).**				
	220	Material loading/unloading and storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
	230	Transfer areas for substances in bulk: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐

EXAMPLE

EPC-CP-Form-1020.2 01/2019

Attachment 2: EPC-CP-Form-1020, *MSGP Routine Facility Inspection* Hard Copy EXAMPLE (cont.)

Page 2 of 3

240	Product/chemical storage areas (raw material): controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
250	Liquid tank storage/secondary containment: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
260	Industrial processing and finished product storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
270	Equipment operation and maintenance areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
280	Fueling areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
290	Outdoor vehicle and equipment washing areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
300	Machinery: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
310	Waste handling and disposal areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
320	Erodible areas/construction: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
330	Locations and sources of run-on to the site: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
340	Salt storage piles or pile containing salt: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
350	Dust generation and vehicle tracking: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
360	Housekeeping (Industrial materials/residues/trash in contact with stormwater): controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
370	Leaks and spills: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
380	**Sector A [03005-]** Wood processing, transport or treated wood storage areas: controls adequate (appropriate, effective, and operating)? If "No" describe.		☐	☐	☐
	Non-Compliance				
12 400	Free of incidents of observed non-compliance not already identified above? If "No" describe.		☐	☐	☐
	Additional Control Measures				
13 420	Are permit requirements satisfied with existing control measure(s)? If "No" describe additional control measures needed.		☐	☐	☐

Labor Report

14 **Completed:** 1/23/2019 10:39:00 AM

15 **Report:** [Additional notes, observations, or site conditions not documented in Task Line Comments field]

Jane Doe

16 Jane Doe — Signature / Name | 1/23/2019 — Date | Signature / Name | Date

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

EPC-CP-Form-1020.2 01/2019

EXAMPLE

Attachment 2: EPC-CP-Form-1020, *MSGP Routine Facility Inspection* Hard Copy EXAMPLE (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, DESH Group Leader, EPC Group Leader)

17 Print name and title:_____

Signature:_____ Date:_____

EXAMPLE

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

EPC-CP-QP-022	Revision: **3**	Los Alamos NATIONAL LABORATORY EST.1943
Effective Date: 12/20/2018	Next Review Date: 12/20/21	

Environment, Safety, Health, and Quality, Safeguards and Security Directorate

Environmental Protection and Compliance Division – Compliance Programs

Quality Procedure

MSGP Corrective Actions

Document Owner/Subject Matter Expert:

Name:	Organization:	Signature:	Date:
Holly Wheeler	EPC-CP	Signature on File	12-19-18

Derivative Classifier: ☒ **Unclassified**

Name:	Organization:	Signature:	Date:
Jacob Meadows	EPC-CP	Signature on File	12-19-18

Approval Signatures:

Subject Matter Expert:	Organization:	Signature:	Date:
Holly Wheeler	EPC-CP	Signature on File	12-19-18
Responsible Line Manager:	Organization:	Signature:	Date:
Terrill Lemke	EPC-CP Team Leader	Signature on File	12-20-18
Responsible Line Manager	Organization	Signature:	Date:
Taunia Van Valkenburg	EPC-CP Group Leader	Signature on File	12-20-18

This copy is uncontrolled.
Users are responsible for ensuring they work to the latest approved version.
To document a required read, Login to UTrain, and go to the Advanced Search.

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	08/10	New Document.
1	11/10	Incorporated EPC-CP-QP-062 *MSGP Routine Inspections* into this document.
2	01/13	Biennial revision, new template implemented.
EPC-CP-QP-022 R3	12/202018	Revision to reflect new 2015 MSGP requirements. New procedure format was used and organizational changes made. This document replaces ENV-RCRA-QP-022, R2, which was split into EPC-CP-QP-023, R0, MSGP Industrial Stormwater Routine Facility Inspections, and EPC-CP-QP-022, R3, MSGP Corrective Actions.

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1.0 INTRODUCTION

The National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP) contains specific environmental requirements for identifying, implementing, documenting and reporting conditions requiring corrective actions. Laboratory personnel (the Deployed Environmental Professionals (DEPs) and Environmental Protection and Compliance Division – Compliance Programs (EPC-CP) Storm Water Team (also referred to as EPC-CP MSGP stormwater personnel) are required to perform routine facility inspections and document all conditions requiring corrective actions found on an inspection form (see EPC-CP-QP-023). Conditions requiring corrective actions can be identified during facility walk-downs, normal daily operations, and/or analytical data evaluations, and can be identified by facility personnel, the DEP or EPC-CP MSGP stormwater personnel.

1.1 Purpose

This procedure governs the activities of Laboratory personnel working at Los Alamos National Laboratory (LANL) involved in identifying, implementing, documenting and entering a condition requiring corrective action, including a permit limit exceedance, into the MSGP Corrective Action Report (CAR) Findings database or CAR database. Part 4.4 of the MSGP contains specific documentation requirements relative to corrective actions. This procedure satisfies these requirements.

1.2 Scope

Requirements set forth in this document apply to personnel responsible for meeting the permit conditions on behalf of LANL industrial sites covered by the MSGP. This permit requires periodic inspection of sites and identification, implementation, documentation, tracking and reporting of conditions requiring corrective actions.

1.3 Applicability

This procedure applies to the EPC-CP MSGP stormwater personnel and DEPs who conduct stormwater inspections and monitoring activities at permitted MSGP sites within LANL.

2.0 PRECAUTIONS AND LIMITATIONS

2.1 The hazard level for field activities and office work described in this procedure is a **LOW hazard** rating and does not require an Integrated Work Document (IWD).

2.2 Inspections or walk-downs 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 open burning).

3.0 PREREQUISITE ACTIONS

3.1 Planning and Coordination

DEPs and EPC-CP MSGP stormwater personnel require a CAR database user account (https://msgp-car.lanl.gov/forms/frmservlet?config=msgp_car). Facility Operations Directors (FODs), Deployed Environment, Safety, and Health (DESH) Managers and Operations (Ops) Managers can request a read-access account by contacting the EPC-CP MSGP data administrator for access.

3.2 Tools and Equipment

Tools and equipment for documenting inspections and updating the CAR database include the following:

- 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 on using portable electronic devices on Laboratory property), and
- Access to the CAR database.

Tools and equipment for field work associated with performing inspections and site walk-downs are listed below.

- Sturdy hiking boots or steel or composite toed shoes with soles that grip (some sites require steel or composite toed shoes).
- Safety glasses if required by site.
- Cell phone (only government cell phones with batteries removed are allowed in secure areas.) See https://int.lanl.gov/policy/documents/P217.pdf for requirements on using portable electronic devices on Laboratory Property.)
- Copy of this procedure.
- Copy of facility specific Stormwater Pollution Prevention Plan (SWPPP) and map(s) (as needed).
- Necessary access.
- Stockpile of temporary stormwater controls (Best Management Practices [BMPs], e.g., inlet protection, absorbent pads for spills, gravel bags, S-Fence, wattles, etc.)

4.0 ROLES AND RESPONSIBILITIES

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

4.1 EPC-CP MSGP Stormwater Personnel

EPC-CP MSGP stormwater personnel will be fully knowledgeable of the specific regulatory requirements identified in the MSGP. Additional responsibilities are listed below.

- Implement this procedure;
- Oversee the corrective action process;
- Identify conditions requiring corrective action during internal routine facility inspections, "no exposure" assessments, and/or facility walk-downs performed by them, or during evaluation of monitoring data when permit limits are exceeded;
- Perform a quality review of conditions requiring corrective action submitted in the CAR database;
- Notify managers and/or legal counsel of non-compliances;
- Assist DEPs and other customers with issues associated with the CAR database;
- Prepare and submit 45-day exceedance notification to Region 6, Environmental Protection Agency (EPA) containing information provided by the DEP;
- Prepare and submit the Annual Report summarizing all conditions requiring corrective action for the year in EPA's electronic NPDES eReporting tool (NeT);
- Prepare management requested metrics relative to conditions requiring corrective action;
- Provide information to the Issues Management Coordinator (IMC) for entering water quality exceedances and other permit violations into the Issues Management (IM) tool; and
- Train personnel to use the CAR database.

4.2 Deployed Environmental Professionals

DEPs will be fully knowledgeable of the site-specific SWPPP for their assigned sites and corrective action requirements identified in the MSGP. In addition, they shall be appropriately trained to meet the job qualifications identified in the *Quality Assurance for Stormwater Multi-Sector General Permit for Industrial Activities Program* (ENV-CP-QAPP-MSGP) and shall be familiar with the regulatory requirements identified in the MSGP, demonstrated by achieving a satisfactory score on the *MSGP Routine Facility Inspections* on-the-job training course #53040. Further, they shall be familiar with facility operations and controls to minimize potential pollutant sources and proactively maintain controls in an attempt to prevent conditions that require corrective action.

The DEPs are responsible for implementing this procedure. They will identify conditions requiring corrective actions observed at their industrial sites and enter them into the CAR database. DEPs act as liaison between the FOD, DESH Manager and facility/operations personnel to ensure all corrective actions are addressed appropriately by overseeing maintenance and/or installation of additional controls, as needed. DEPs are responsible for ensuring corrective action(s) is completed per MSGP requirements and the corrective action timeline (see Sections 5.2.1 and 5.2.2 of this procedure). They will also provide timely updates to the CAR database for closure or update of corrective actions as they are implemented.

When permit limits are exceeded, DEPs are responsible for identifying the source and maintaining existing controls or implementing additional controls, as necessary, to prevent further exceedances.

If the DEP or EPC-CP MSGP stormwater personnel determine that additional controls are necessary, or that existing controls are insufficient and require replacement with a different type of control, the DEPs are responsible for the selection and oversight of proper installation of appropriate control measures per guidance provided in the LANL Stormwater BMP Manual.

DEPs will notify the EPC-CP MSGP data administrator or MSGP Program Lead of key personnel changes (FOD, DESH Manager, Ops Manager, DEP) to ensure automated CAR status notifications are distributed to the appropriate personnel.

CAUTION

Failure to appropriately control pollutant discharges can result in fines and penalties.

Implementing the same control measure numerous times without an improvement in minimization of off-site pollutants is an indication that the control measure is not stringent enough to meet Technology-Based or Water Quality-Based effluent limits identified in the MSGP. Per the MSGP, documentation is required in the SWPPP that justified the selection, design, installation and implementation of a control measure to ensure effluent limits are met.

4.3 EPC-CP Storm Water Team Leader

The EPC-CP Storm Water Team Leader (or team leader) is responsible for compliance oversight relative to the MSGP. The team leader will ensure resources needed to implement the regulatory requirements identified in the MSGP are identified and environmental risks are assessed. Upper management will be notified of these 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 will make the final determination of the required action. The Team Leader will notify upper management of instances of non-compliance with the permit.

4.4 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 also acts as the duly authorized signatory that certifies the Annual Report or Routine Facility Inspections conducted by EPC-CP personnel. The group leader will notify upper management of instances of non-compliance with the permit or other identified environmental risk.

4.5 DESH Manager

The DESH Manager shall work with programmatic entities and the FOD to identify resources for their industrial sites to ensure permit requirements can be implemented. The DESH Manager is responsible for the performance of DEPs under their management. They also provide oversight for ensuring that industrial sites are complying with the MSGP and are responsible for notifying upper management of instances of non-compliance with the permit or other identified environmental risk they become aware of.

4.6 Facilities Operations Director

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

5.0 PROCESS DESCRIPTION

Requirements regarding corrective actions are described in Part 4 of the MSGP. These requirements and conditions are summarized in this section and directly correspond to data fields and lists of values available in the CAR database.

5.1 Identifying Conditions Requiring Corrective Actions

Deployed Environmental Professional (DEP)

[1] **IF** any of the following conditions are identified,
THEN review and revise, as appropriate, the selection, design, installation, and implementation of control measures in the SWPPP to eliminate the condition and prevent recurrence in the future:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by the MSGP [see Section 5.6 of this procedure for a description of allowable discharges]);
- 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 MSGP;
- It is observed during the routine facility inspection, facility walk-down, and/or the quarterly visual assessment 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 stormwater from the facility, or significantly increases the quantity of pollutants discharged;
- 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 exceedance of the four quarter average is mathematically certain, (i.e., if the sum of quarterly sample results to date is more than four times the benchmark level) this is considered a benchmark exceedance;
- If effluent limitation guidelines are exceeded at the Asphalt Batch Plant (Sector D); or
- If impaired water quality standards are exceeded.

DEP and/or EPC-CP MSGP stormwater personnel

[2] Enter all conditions requiring a corrective action into the EPC-CP MSGP CAR database.

DEP and/or Facility Personnel

[3] Take immediate action to mitigate the condition requiring a corrective action.

[4] If needed, follow the permit timeline and process for individual corrective actions that require extensive maintenance.

[5] Any person authorized to conduct work at LANL can identify a potential stormwater issue. If this occurs, they will:

[a] Contact the DEP or EPC-CP MSGP stormwater personnel.

[b] The DEP or EPC-CP MSGP stormwater personnel will determine if a condition exists that requires a corrective action.

5.2 Corrective Action Deadlines and Documentation

Specific deadlines for taking corrective action and required documentation are provided in the subsections below.

5.2.1 Immediate Action

DEP and/or Facility Personnel

[1] **IF** a condition exists that requires corrective action, as described in Section 5.1 [1], **THEN** take the following action immediately (on the same day the condition is found):

[a] All reasonable steps necessary to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational.

[b] Clean up any contaminated surfaces so that material will not discharge during subsequent storm events.

[c] Minimize or prevent the discharge of pollutants until a permanent solution (if necessary) is installed and made operational.

[d] Any corrective action resulting in a change to a stormwater control or procedure (documented in the SWPPP) requires modification of the SWPPP within 14 calendar days of completing corrective action work.

NOTE

For minor conditions, immediate action is often sufficient and no additional action is necessary.

[2] **IF** a condition is identified at a time in the work day when it is too late to initiate corrective action (i.e., 3:00 pm or later),
THEN:

[a] Corrective action must begin no later than the following work day.

[b] Implement the requirements identified in Section 5.2.1 [1] above.

CAUTION

Solely calling or e-mailing personnel requesting action to be taken is not considered taking immediate action. Entering a Facility Service Request (FSR) is appropriate if it formally starts the work process to address the condition. Temporary BMPs still need to be put in place to minimize or prevent off-site migration of pollutants, especially if a storm event is likely.

5.2.2 Subsequent Action

DEP and/or Facility Personnel

[1] **IF** additional action is required,
THEN:

[a] Complete the corrective action (e.g., install a new or modified control and make it operational or complete the repair) before the next storm event or within 14 calendar days from the time of discovery.

[b] Any corrective action resulting in a change to a stormwater control or procedure documented in the SWPPP requires modification of the SWPPP within 14 calendar days of completing corrective action work.

[2] **IF** completion of the corrective action is infeasible within the 14-day timeframe,
THEN:

[a] Document the reasoning in the database.

[b] Provide a schedule for completion of the corrective action in the database.

NOTE

Completion of the corrective action cannot exceed 45 days from the time of discovery without having to notify EPA. These time intervals are not grace periods, but are schedules considered reasonable for documenting finding(s) and for making repairs and improvements. They are included in the MSGP to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely. In no instance will the corrective action remain open indefinitely (Part 4.3.2 of the MSGP).

5.2.3 Corrective Action Documentation

DEP and/or EPC-CP

[1] Document existence of any of the conditions listed in Section 5.1 [1] of this procedure in the CAR database within 24 hours of becoming aware of such condition (or if identified late in the work day, by the following work day).

[2] Include the following information in the documentation:

- Description of the condition triggering the need for corrective action review. For any spills or leaks, include the following information:
  - a description of the incident including material, date/time, amount, location, and reason for spill;
  - any leaks, spills or other releases that resulted in discharges of pollutants to waters of U.S., through stormwater or otherwise;
- Date the condition was identified; and
- Description of immediate actions taken (Part 4.3.1 of the MSGP) to minimize or prevent the discharge of pollutants. For any spills or leaks, include response actions, the date/time clean-up was completed, notifications made (if any), and staff involved. Also include any measures taken to prevent the reoccurrence of such releases (Part 2.1.2.4 of the MSGP).

[3] Provide the dates when each corrective action was initiated and completed (or is expected to be completed).

[a] If applicable, document why it is infeasible to complete the necessary installations or repairs within the 14-day timeframe, and

[b] Document your schedule for installing the controls and making them operational as soon as practicable after the 14-day timeframe.

[c] **IF** EPA must be notified regarding an extension of the 45-day timeframe, **THEN** the DEP must document the rationale for an extension.

EPC-CP MSGP stormwater personnel

[4] Prepare and submit 45-day exceedance notifications based on information entered into the CAR database by the DEPs.

DEP

[5] Ensure that the information in the CAR database is kept up-to-date, to include the following:

[a] a thorough description of the nature of the condition requiring corrective action,

[b] corrective action(s) taken and/or outstanding,

[c] the steps and schedule for completing a corrective action (if not completed within 14 days), and

[d] rationale for why the corrective action cannot be completed within 45-days.

5.3 Effect of Corrective Action

When the condition requiring corrective action is a permit violation (e.g., non-compliance with an effluent limit or exceedance of a water quality standard), correcting it does not remove the original

violation. Additionally, failing to take corrective action in accordance with Part 4 of the MSGP is an additional permit violation.

NOTE

The EPA will consider the appropriateness and promptness of corrective action in determining enforcement responses to permit violations (Part 4.5 of the MSGP).

5.4 Substantially Identical Outfalls

When the condition requiring corrective action is associated with an outfall that has been identified as a "substantially identical outfall" (see Parts 3.2.3 and 6.1.1 or the MSGP), a review will assess the need for corrective action for all related substantially identical outfalls. Any necessary changes to control measures that affect these other outfalls will be made before the next storm event if possible, or as soon as practicable following that storm event. Any condition requiring corrective action(s) will be addressed within the timeframes set forth in Part 4.3 of the MSGP (also see Section 5.2 of this procedure).

5.5 Spills

DEP and/or Facility Personnel

[1] Clean up all leaks or spills immediately and enter into the CAR database.

[a] If the spill is immediately cleaned up, and controls are implemented to prevent further leakage, the condition requiring corrective action can be closed.

5.6 Allowable Non-Stormwater Discharges

The following are allowable non-stormwater discharges authorized by the MSGP:

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

material and sweeping, using hydrophobic mops/rags) and you have implemented appropriate control measures to minimize discharges of mobilized solids and other pollutants (e.g., filtration, detention, settlement);

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

5.7 Entering a Condition Requiring Corrective Action

To enter a condition requiring corrective action into the CAR database, perform the steps in this section.

Enter clear, complete, and concise language. Correct grammar, punctuation, and spelling errors.

Select the appropriate value from each pull-down menu that applies to the condition requiring corrective action. This information will be used to populate a report that will be submitted to the EPA and is extracted from the database to populate automatic e-mail notifications to managers. Therefore, it is critical that all information entered into the CAR database is correct.

DEP or EPC-CP MSGP stormwater personnel

[1] Using internet explorer, access the CAR database at https://msgp-car.lanl.gov/forms/frmservlet?config=msgp_car.

[2] From the main screen, click on "Enter New Corrective Action."

[a] Select the "Corrective Action Header" tab.

[b] Enter the following (refer to Attachment 1 for data entry screenshot cross reference to Item numbers in red listed below):

- Item 1: Name of facility by clicking on the "List" tab and selecting a facility (refer to Attachment 2 for a list of available facilities).
- Item 2: Date/Time problem was identified (mm/dd/yyyy hh:mm) (*the inspection date or the date you first become aware of the issue*).

  There must be a space between the date (mm/dd/yyyy) and the time (hh:mm).

  All dates and times will be entered as mm/dd/yyyy hh:mm in 24-hr (military time) format. Time is tracked to document whether immediate action was taken, whether the issue was documented within 24 hours, and the specific time interval before a corrective action is completed and closed (see Section 5.2 of

this procedure for corrective action deadlines). Do not leave time as 00:00 (the system default) unless the action occurred at midnight.

- Item 3: Date/Time of Notification to EPC-CP (mm/dd/yyyy hh:mm) (*the date the condition is entered into the CAR database or verbal or written notification is provided to the EPC-CP MSGP Program Lead. Conditions reported by verbal or written notification must still be entered into the CAR database*.)

  The existence of any of the conditions listed in Section 5.1 of this procedure must be documented in the CAR database within 24 hours of becoming aware of such condition (or if identified late in the work day, by the following work day).

- Item 4: FOD Responsible for CA (Name & Org) by clicking in the box. FOD designations (for example "STO") and the associated name list will pop up. Select the appropriate FOD.

  Contact the EPC-CP MSGP Program Lead at 667-1312 or hbenson@lanl.gov if the FOD name or organization is incorrect, so this can be corrected.

- Item 5: Describe Specific Evaluation Location (for example, "Northeast corner of Building TA-3-66.")

- Item 6: Inspector Z-Number by clicking in the box, which will populate with the Z number of the person who is logged into the database and performing entry. In most instances, the DEP will be identified as the inspector.

- Item 7: Person Identifying Condition Z-Number by clicking in the box, which will populate with the Z number of the person who is logged into the database and peforming entry. If the person identifying the condition is someone other than the inspector, enter that person's Z-number.

  Any person authorized to conduct work at LANL can identify a potential stormwater issue. If this occurs, they will contact the DEP or EPC-CP MSGP stormwater personnel who will determine if a condition exists that requires corrective action.

- Item 8: Status defaults to "A new corrective action" without making a selection. In the event a condition is entered that is determined to not require corrective action, this status can be changed to "Void" by clicking in the box and selecting from the Status list. The decision to assign a status of "Void" is at the discretion of EPC-CP MSGP stormwater personnel and reserved for EPC-CP use.

- Item 9: If the Status is changed to "Void," enter a clear rationale for voiding the record.

- Item 10: 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" meaning the form cannot be saved unless these fields are completed. For the purpose of fulfilling

corrective action documentation requirements (see Section 5.2.3 of this procedure), all applicable fields are required fields.

The system will automatically assign a Corrective Action Report identification (ID) number and move to the "Corrective Action Details" tab.

[c] Select the "Corrective Action Details" tab.

[d] Enter the following:

- Item 11: Identify the condition triggering the need for this review by clicking on the "List" button and selecting the appropriate condition or, if none of the available conditions fit the issue, selecting "Other" and entering a description of the condition (refer to Attachment 2 for a list of available conditions/finding descriptions).

  These conditions are described in Section 5.1 of this procedure. Qualified personnel (EPC-CP MSGP stormwater personnel and DEPs) must be knowledgeable of these conditions and select the correct one when entering an issue. If there is uncertainty about which condition applies, refer to the definitions in Section 8.1 of this procedure or contact the MSGP Program Lead at 667-1312 or hbenson@lanl.gov for clarification prior to selecting "Other."

- Item 12: If the condition in Item 11 is set to "Other," enter a description of the condition in this field.

- Item 13: 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 (e.g., at TA-60 Roads and Grounds).

  Spills or other emergency conditions meeting the criteria for corrective action (identified in Parts 4.1 and 4.2 of the MSGP) will require documentation in the CAR database even though the condition was not identified during an inspection.

- Item 14: Enter how the problem was identified by clicking on the "List" button and selecting the appropriate option, or if none of the available options fit, selecting "Other."

- Item 15: If "Other" is selected for Item 14, enter a description of how the problem was identified in this field.

- Item 16: Enter a description of the condition requiring corrective action, or identify action to be taken to eliminate or further investigate the problem (e.g., describe modifications or repairs to control measures, work conducted to address the condition or to be scheduled in the future, etc.,) or if no modifications are needed, the basis for that determination. Include relevant dates and facts when updating this field as the corrective action progresses.

- Item 17: Indicate whether the problem was identified at a Substantially Identical Outfall (see Section 5.4 of this procedure) by typing "Y" for yes and "N" for no.

- Item 18: If the answer to Item 17 is "Y," enter the associated SIO(s) in this field. If the answer to Item 17 is "N," leave this field blank. SIOs are identified in the site-specific SWPPPs. For assistance with identifying SIOs contact the MSGP Program Lead.
- Item 19: If the answer to Item 17 is "Y," describe how the corrective action taken is appropriate for all SIOs (see Section 5.4 of this procedure), document any additional corrective action(s) needed for any of the SIOs, or document why no additional action is needed for the SIOs. If the answer to Item 17 is "N," leave this field blank.
- Item 20: Did/will the corrective action require modification to the SWPPP? Type in "Y" for yes and "N" for no (see Section 5.1 of this procedure for conditions that require SWPPP review and revision).
- Item 21: Date/Time Corrective Action was initiated (mm/dd/yyyy hh:mm).

  The duration between the Date/Time problem was identified and Date/Time corrective action was initiated is used to determine whether "immediate action" was taken (see Section 5.2.1 of this procedure). Immediate action is a requirement of the MSGP and therefore, will be documented in accordance with permit requirements.
- Item 22: Date/Time corrective action was completed **OR** expected completion Date/Time (mm/dd/yyyy hh:mm).

  If the corrective action has not been completed, enter an expected completion date and time. The system will not allow entry of a date in both locations.

  The duration between the Date/Time Problem was Identified and Date/Time corrective action was completed or the Date/Time Problem was identified and expected completion Date/Time is used to determine whether "subsequent action" timeframes and documentation requirements were/are being met, and to forecast where a 45-day exceedance notification to EPA is required (see Section 5.2.3 of this procedure). When information is incorrect or not entered, the MSGP data administrator or Program Lead will contact the originator and request correction(s).
- Item 23: If the corrective action is not or will not be completed within 14 days, provide the status of the corrective action at the end of the 14 day timeframe, the rationale for why it is infeasible to complete the corrective action within 14 days, and describe any remaining steps (including timeframe/schedule associated with each step) necessary to complete the corrective action.
- Item 24: Date EPA notified of intent to exceed 45 Days (mm/dd/yyyy hh:mm) is to be completed by EPC-CP MSGP stormwater personnel to document submittal of notification letter.
- Item 25: Once all of the above information is entered correctly, click "Save" so the corrective action information is retained.

[3] **IF** there are additional conditions to enter requiring corrective action, as described in Section 5.1 [1],
THEN perform these steps:

[a] Return to the "Corrective Action Header" tab.

[b] Click the "Enter New Corrective Action" button in the lower left hand corner of the screen.

[c] Click "Back to Record Selection" to return to the list of saved conditions requiring corrective action on the initial screen (if desired).

5.8 Updating Corrective Actions

DEP or EPC-CP MSGP stormwater personnel

[1] Access the CAR database at https://msgp-car.lanl.gov/forms/frmservlet?config=msgp_car.

[a] On the main screen, scroll down to the corrective action number to be edited.

[b] Click "Edit."

[2] Navigate to the desired field, and input the updated information. Most changes will occur relative to updating the status, schedule, and dates of corrective actions.

[3] Click "Save" to save all changes to the information.

5.9 Validation of Corrective Actions

EPC-CP MSGP stormwater personnel

[1] Access the CAR database at https://msgp-car.lanl.gov/forms/frmservlet?config=msgp_car.

[2] Ensure information entered into the CAR database is correct.

[a] Check all entered fields for a condition requiring corrective action to ensure that information is clear, correct, and concise.

[b] **IF** not,
THEN notify the DEP of the information that needs to be changed.

[c] The DEP is responsible for ensuring all information is validated before generating the annual report.

[3] **IF** the identified condition requiring corrective action is a repeat of a previous condition or if it is determined not to be a condition requiring corrective action,
THEN

[a] Under "Status," select "Void."

[b] The "Void" designation allows MSGP stormwater personnel to manually exclude this information in the annual report.

5.10 Issues Management

EPC-CP MSGP stormwater personnel or DEPs use the IM tool as the institutional performance issues and tracking system for identified quality assurance (QA) affecting issues. A QA affecting issue includes, but is not limited to, the following conditions.

- Exceedance of a water quality standard.
- Exceedance of an effluent limitation (i.e., at the Asphalt Batch Plant).
- Repeat conditions requiring corrective actions or trends identified by EPC-CP MSGP stormwater personnel.
- Conditions requiring immediate action, where failure to take action would result in pollutants being released to waters of the state.
- Immediate non-compliance with the MSGP.
- Violations identified by the regulatory authority.

The MSGP Program Lead periodically evaluates a summary of open conditions requiring corrective actions in the CAR database. Using the above conditions, the MSGP Program Lead or DEP determines which corrective actions, if any, will be transferred into the IM tool.

DEP or EPC-CP MSGP stormwater personnel

[1] **IF** an issue needs to be entered into the IM tool,
THEN send the following information to the EPC Division IMC for entry into the IM tool:

- Organization responsible for the issue/problem;
- A description of the nature of the condition identified and what needs to be done to address it;
- Regulatory citation for the non-compliance;
- Issues Responsible Manager (IRM);
- Action, actionee, and due date for each issue; and
- Whether the issue was identified internal or external to LANL.

5.11 Notifications for New and Overdue Corrective Actions

[1] When a new condition requiring corrective action is entered into the CAR database, the FOD, Ops Manager, DESH Manager, inspector (usually the DEP) and EPC-CP MSGP stormwater personnel and managers are notified automatically by e-mail on the evening of the day the corrective action was entered.

[2] Automated e-mail notifications will be sent during the corrective action process depending on the length of time it will take to close.

[3] A notification will be sent out:

- When a new corrective action is entered into the database (see Attachment 3); and
- Weekly notifications of outstanding (open) corrective actions (see Attachment 4).

Each notification contains a hyperlink to a web-based report containing a list of all open issues and timeline status where final corrective actions have not been completed (see Attachment 5) by the FOD. The report contains the FOD, Facility, unique Corrective Action identification number assigned by the CAR database, the person identifying the condition, the date the issue was identified, the date corrective action was initiated, the projected completion date, and a color-coded count (corresponding to the Corrective Action deadlines in Section 5.2 of this procedure) of the number of days to take action and the number of days the issue has been open, and the issue/problem description.

These notifications serve to apprise recipients of the status of open conditions requiring corrective actions and to provide sufficient time for MSGP stormwater personnel to provide documentation to EPA at the 45-day deadline. This will assist the FOD, DESH Managers, Ops Managers, and the DEPs with keeping track of conditions requiring corrective actions.

6.0 TRAINING

The following personnel require training before implementing this procedure:

- EPC-CP Group Leader and Team Leader;
- EPC-CP MSGP stormwater personnel;
- DEPs; and
- Other LANL or subcontract personnel identified as being required to conduct stormwater inspections, or other assessments and enter conditions requiring corrective actions into the CAR database as part of their job duties.

For EPC-CP MSGP stormwater personnel, the training method for this procedure is "self-study" (reading). DEPs shall achieve a satisfactory score on Training Course 53040, *MSGP Routine Facility Inspections OJT*. Other participating groups may require training documentation pursuant to local procedures.

Personnel performing this procedure will be familiar with the most current version of the following procedure:

- ENV-CP-QAPP-MSGP, *Multi-Sector General Permit for Industrial Activities Program*

7.0 RECORDS

Conditions requiring corrective actions are contained within the CAR database. DEPs will retain documentation substantiating these conditions, corrective actions, and timelines reported in the CAR database (e.g., e-mails, FSRs, Work Orders, etc., as appropriate). These documents shall be made available to EPC-CP upon request.

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.

Numeric effluent limitation—The degree of effluent reduction attainable by the application of the best practicable control technology currently available (see 40 CFR Part 443.12). For LANL, numeric effluent limitations apply only to the Asphalt Batch Plant (Sector D) (see Table 1-1 of the MSGP). Constituents with limitations for Sector D include Total Suspended Solids, pH, and oil and grease (see Table 8.D-2 of the MSGP).

Note: Exceedance of a numeric effluent limitation is a violation of the MSGP (see Part 4.1 of the MSGP).

Non-numeric effluent limitations—Per Part 2.1.2 of the MSGP, these include minimizing exposure, good housekeeping, maintenance, spill prevention and response, erosion and sediment controls, management of runoff, salt storage controls, employee training, elimination of non-stormwater discharges, and minimizing dust generation and vehicle tracking of industrial materials.

Unauthorized release or discharge—The release of any liquid or solid substance (within the boundary of an MSGP site) that is not an allowable non-stormwater discharge (see Section 5.6). Examples are hydraulic oil, gasoline, diesel, powdered concrete, concrete washout, steam condensate line leaks, etc.

Impaired water quality exceedance—Exceedance of a New Mexico water quality standard. These standards are specified in the New Mexico Administrative Code, Title 20, Chapter 6, Part 4, *Standards for Interstate and Intrastate Surface Waters*.

Note: Industrial stormwater discharges must be controlled as necessary to meet applicable water quality standards within the State of New Mexico (see Part 2.2.1 of the MSGP).

8.2 Acronyms

See LANL *Acronym Master List*.

BMP	Best Management Practice
CA	Corrective Action
CAR	Corrective Action Report
EPA	Environmental Protection Agency

EPC-CP	Environmental Protection and Compliance-Compliance Programs
DEP	Deployed Environmental Professional
DESH	Deployed Environmental, Safety and Health
ID	Identification
IM	Issues Management
IMC	Issues Management Coordinator
IRM	Issues Responsible Manager
IWD	Integrated Work Document
FOD	Facility Operations Director
FSR	Facility Service Request
HEY	Heavy Equipment Yard
LANL	Los Alamos National Laboratory
MSGP	Multi-Sector General Permit
N	No
NPDES	National Pollutant Discharge Elimination System
Ops	Operations
P	Procedure
PD	Program Description
QA	Quality Assurance
QP	Quality Procedure
SD	System Description
STO	Science and Technology Operations
SWPPP	Stormwater Pollution Prevention Plan
40 CFR	Title 40 of the Code of Federal Regulations
WMC	Waste Management Coordinator
Y	Yes

9.0 REFERENCES

- *Final National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Industrial Activities.* Federal Register: June 16, 2015, Volume 80, Number 115.
- *Unites States Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activity (MSGP)*
- *Los Alamos National Laboratory Storm Water BMP Manual*

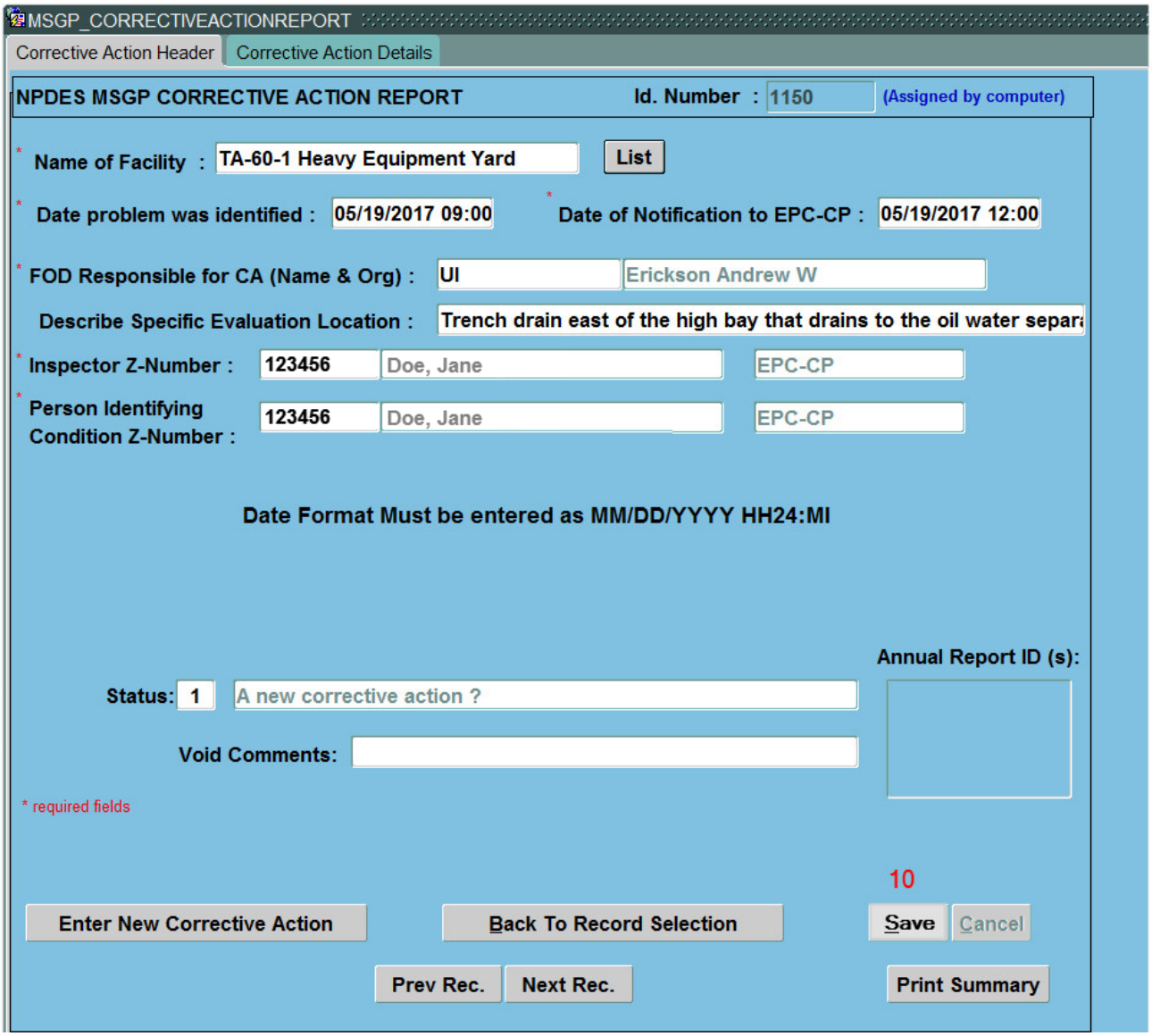
- PD100, *DOE/NNSA Approved Los Alamos National Laboratory 10 CFR 857 Worker Safety and Health program Description*
- SD100, *Integrated Safety Management System*
- P101-18, *Procedure for Pause/Stop Work*
- EPC-CP-QP-023, *MSGP Routine Facility Inspections*

10.0 ATTACHMENTS

Attachment 1: Screenshot Example of CAR Database
Attachment 2: Lists of Limited Values in the CAR Database
Attachment 3: Example New Corrective Action Finding Notification
Attachment 4: Example Weekly Notification of Outstanding Corrective Action Findings
Attachment 5: Example Outstanding Corrective Action Report

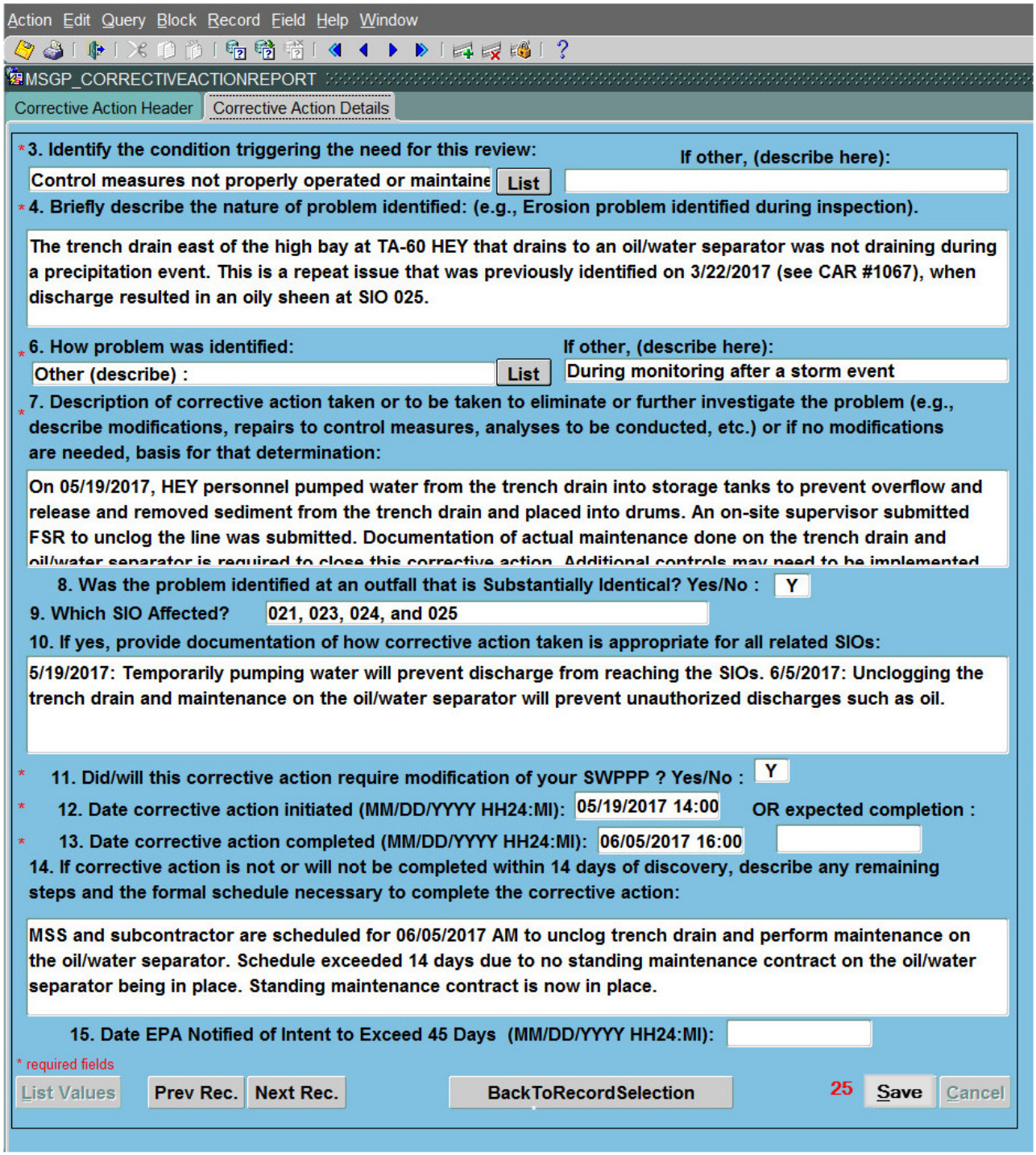
Attachment 1 – Screenshot Example of CAR Database

Corrective Action Header tab



Attachment 1 – Screenshot Example of CAR Database (cont.)

Corrective Action Details tab



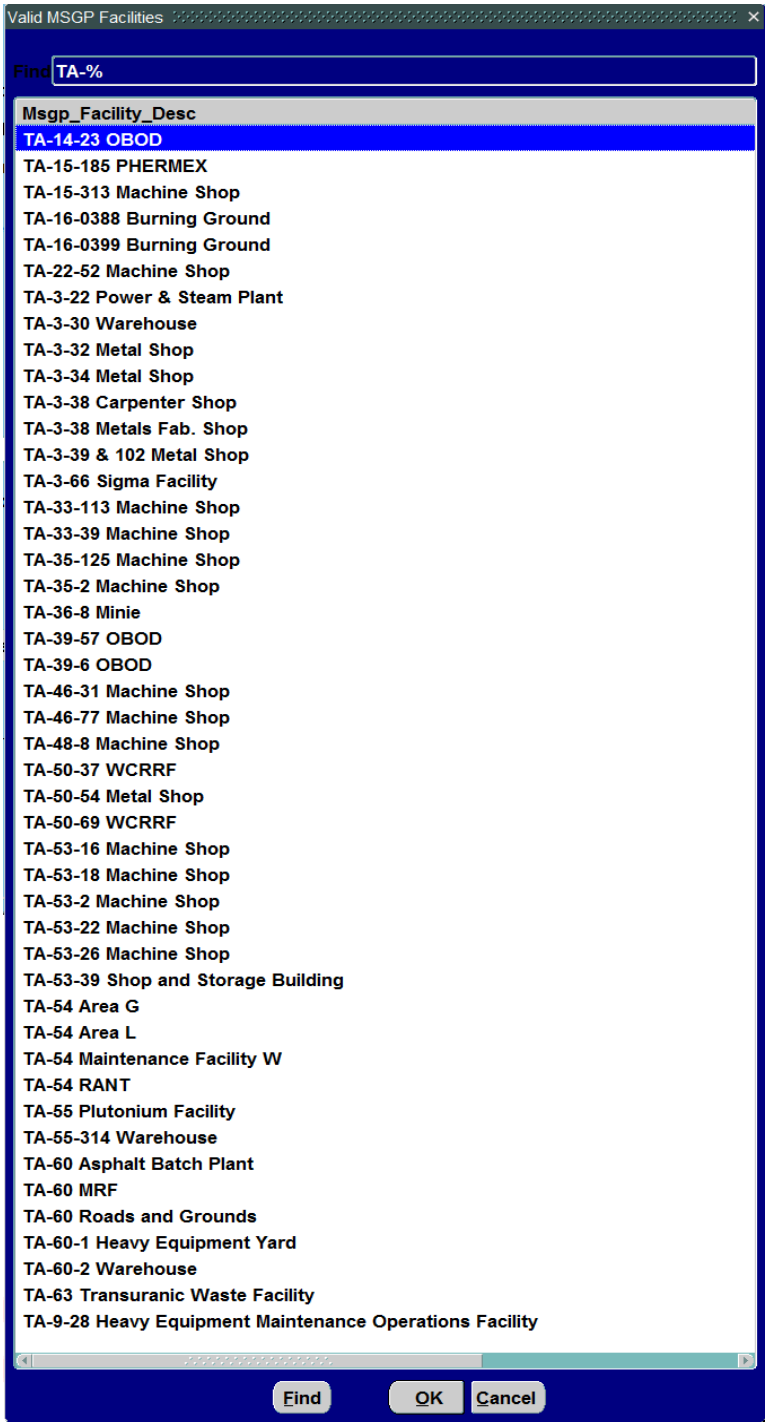
Attachment 1 – Screenshot Example of CAR Database (cont.)

Full Text for Item 16: Description of Corrective Action Taken or to be Taken

On 05/19/2017, HEY personnel pumped water from the trench drain into storage tanks to prevent overflow and release. Sediment was also removed from the trench drain and placed into drums. An on-site supervisor submitted an FSR to unclog the line. Documentation of actual maintenance done on the trench drain and oil/water separator is required to close this corrective action. Additional controls may need to be implemented until maintenance is complete to ensure that oil is not discharged into the drainage channel north of the site. In addition, the SWPPP must be modified to identify the preventative maintenance schedule and include the procedure for conducting it. On 05/30/2017, the SWPPP was modified to include a quarterly maintenance schedule and a procedure for routine maintenance on the oil/water separator. On 06/05/2017, MSS jet-routed the drain to remove the clog and a subcontractor performed maintenance on the oil/water separator.

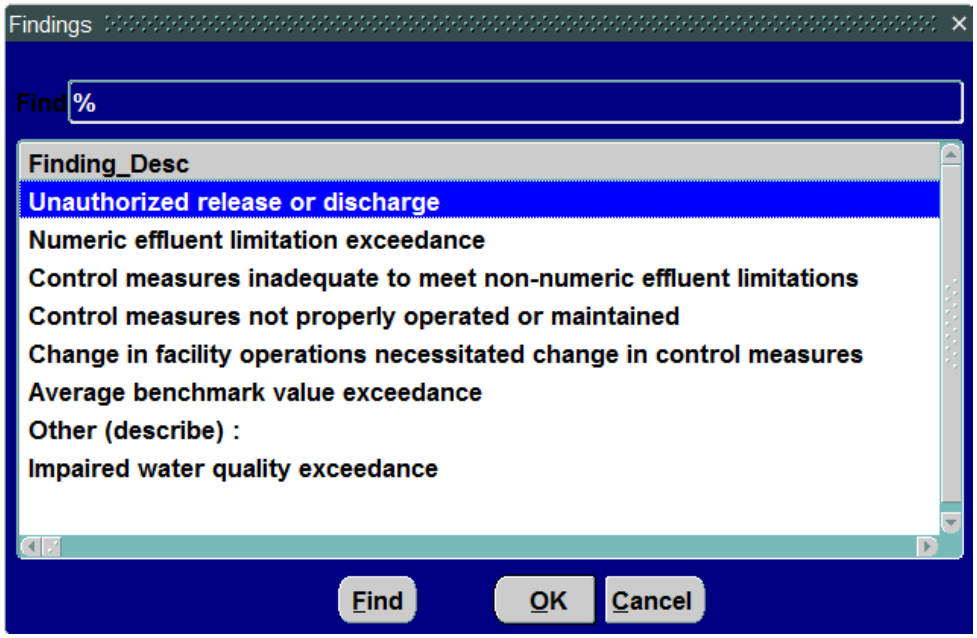
Attachment 2 – Lists of Limited Values in the CAR Database

Name of Facility *(Item 1 on Attachment 1 Screenshot)*

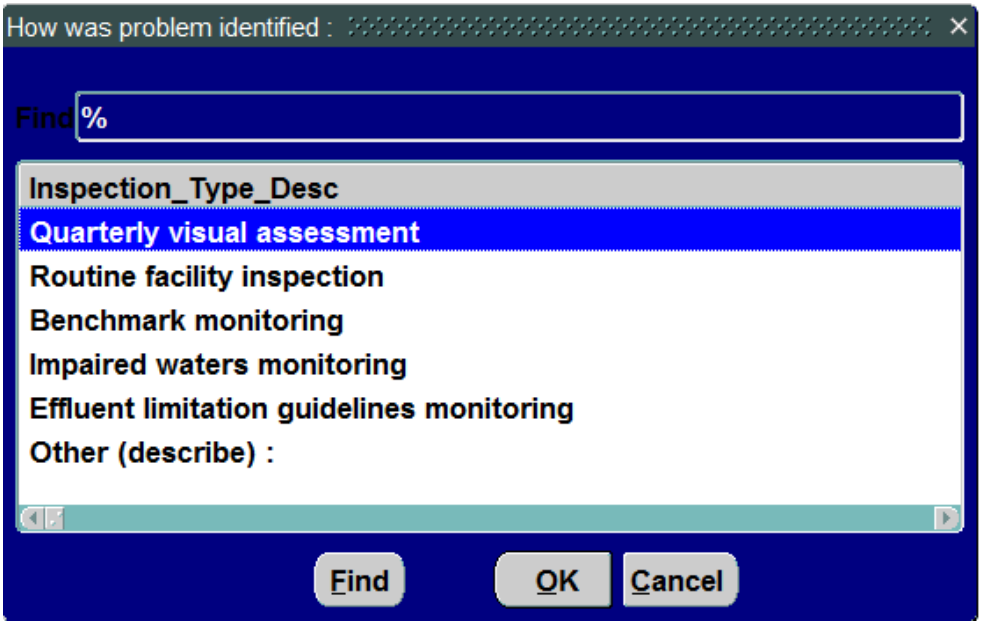


Attachment 2 – Lists of Limited Values in the CAR Database (cont.)

Finding Description/Condition Triggering Need for Review *(Item 11 on Attachment 1 Screenshot)*



Inspection Type/How Problem was Identified *(Item 14 on Attachment 1 Screenshot)*



Attachment 3 – Example New Corrective Action Finding Notification

From: MSGPCorrectiveActionDB@esp-esh-as01.lanl.gov [mailto:MSGPCorrectiveActionDB@esp-esh-as01.lanl.gov]
Sent: Friday, January 19, 2018 10:00 PM
To:
Cc:

Subject: New Corrective Action finding relative to the NPDES MSGP Program

This email is generated automatically by the National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP) Corrective Action Report (CAR) database to provide notification of discovery of a new condition requiring corrective action. As the recipient of this notification, you are responsible for immediately taking all reasonable steps necessary to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational.

"Immediately" requires initial action on the same day a condition is found. However, if a problem is identified at a time in the work day when it is too late to initiate corrective action (after 2 P.M.), the initiation must begin no later than the following work day.

Documentation of newly identified conditions requiring corrective action must occur within 24 hours of discovery, evidenced by entry into the CAR database.

At TA-50-37 WCRRF on 01/17/18, a condition requiring a corrective action was observed and a corrective action report was generated per the 2015 Multi-Sector General Permit requirements for stormwater controls at industrial sites. The condition(s) requiring a corrective action(s) is/are listed below.

CA#: 1296 located at TA-50-37 WCRRF.

> **Person Identifying Condition:** DOE JANE
>
> **Description of finding:** Unauthorized release or discharge
>
> **Condition requiring corrective action:** Forklift was leaking hydraulic fluid
>
> **Description of the corrective action taken or to be taken to eliminate the condition or further investigation:** On 1/17/2018 prior tot he start of work the operator noticed the forklift was leading hydraulic fluid from the line to the mast. Approximately 4 to 6 oz leaked onto the asphalt. The Operation Center was notified and the WMC and ENV. The Nuc Operators placed spill pads under the leak. FSR#182723 was entered to repair forklift and apply microblaze. At 1702 MSS personnel applied micro blaze to the spill. On 1/18/2018 the WMC collected all spill pads and managed them accordingly.
>
> **Status:** The corrective action was initiated on 01/17/2018 and was completed on 01/17/2018.

Click HERE to access the list of MSGP corrective action(s) not yet completed for EWMO.

Click HERE to access the list of all MSGP corrective action(s) not yet completed.

The ESH Deployed Environmental Professional (DEP) assigned to your organization/area is (are) Jane Doe.

The color legend on the linked reports corresponds to the following schedule for corrective action completion as required by the 2015 MSGP:

You must complete the corrective action within 14 calendar days of discovery.

If completion of final corrective actions within 14 days is not feasible, the reason(s) must be documented and a description of steps required and formal schedule for completion, which must be done as soon as practicable after the 14-day timeframe, but not longer than 45 days after discovery. The reasons, steps and schedule for completion must be entered into the CAR database.

If the completion of corrective action will exceed the 45-day timeframe, you make take the minimum additional time necessary, provided that you notify Region 6 of the Environmental Protection Agency:

- of your intent to exceed 45 days,
- your rationale for an extension, and
- a completion date.

To assist the preparation of this notification, as a responsible individual, you must contact the EPC-CP Project Lead at 667-1312 for any corrective action that remains open 35 days or more, and provide a formal status of the progress for each corrective action. By day 40, the DEP must provide the EPC-CP Project Lead the rationale for potentially exceeding the required 45-day timeframe and a proposed completion date for each associated corrective action. The DEP must also amend the rationale and completion date in the CAR database.

An extension request must be submitted to Region 6 of the U.S. Environmental Protection Agency by EPC-CP personnel prior to day 45 for final corrective actions not completed or estimated to be completed within 45 days of discovery.

The responsible individual must ensure compliance with the proposed completion schedule.

These intervals are not considered grace periods, but are defined schedules to ensure the conditions requiring corrective action do not persist indefinitely.

Where corrective actions result in changes to controls or any procedures documented in the facility's Storm Water Pollution Prevention Plan (SWPPP), the DEP must modify the SWPPP accordingly within 14 calendar days of completing corrective action work.

Attachment 4 – Example Weekly Notification of Outstanding Corrective Action Findings

From: MSGPCorrectiveActionDB@esp-esh-as01.lanl.gov [mailto:MSGPCorrectiveActionDB@esp-esh-as01.lanl.gov]
Sent: Monday, January 01, 2018 10:00 PM
To:
Cc:
Subject: Weekly Notification of Outstanding NPDES MSGP Corrective Action finding(s)

This email is generated automatically by the National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP) Corrective Action Report (CAR) database to provide notification of discovery of a new condition requiring corrective action. As the recipient of this notification, you are responsible for immediately taking all reasonable steps necessary to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational.

"Immediately" requires initial action on the same day a condition is found. However, if a problem is identified at a time in the work day when it is too late to initiate corrective action (after 2 P.M.), the initiation must begin no later than the following work day.

Documentation of newly identified conditions requiring corrective action must occur within 24 hours of discovery, evidenced by entry into the CAR database.

At TA-3-38 Carpenter Shop , 1 total MSGP stormwater corrective action(s) has (have) not been completed.

At TA-3-38 Metals Fab. Shop , 1 total MSGP stormwater corrective action(s) has (have) not been completed.

At TA-60-1 Heavy Equipment Yard , 7 total MSGP stormwater corrective action(s) has (have) not been completed.

At TA-60-2 Warehouse , 4 total MSGP stormwater corrective action(s) has (have) not been completed.

Click HERE to access the list of MSGP corrective action(s) not yet completed for UI.

Click HERE to access the list of all MSGP corrective action(s) not yet completed.

The ESH Deployed Environmental Professional (DEP) assigned to your organization/area is (are) Jane Doe :John Doe.

The color legend on the linked reports corresponds to the following schedule for corrective action completion as required by the 2015 MSGP:

You must complete the corrective action within 14 calendar days of discovery.

If completion of final corrective actions within 14 days is not feasible, the reason(s) must be documented and a description of steps required and formal schedule for completion, which must be done as soon as practicable after the 14-day timeframe, but not longer than 45 days after discovery. The reasons, steps and schedule for completion must be entered into the CAR database.

If the completion of corrective action will exceed the 45-day timeframe, you make take the minimum additional time necessary, provided that you notify Region 6 of the Environmental Protection Agency:

- of your intent to exceed 45 days,
- your rationale for an extension, and
- a completion date.

To assist the preparation of this notification, as a responsible individual, you must contact the EPC-CP Project Lead at 667-1312 for any corrective action that remains open 35 days or more, and provide a formal status of the progress for each corrective action. By day 40, the DEP must provide the EPC-CP Project Lead the rationale for potentially exceeding the required 45-day timeframe and a proposed completion date for each associated corrective action. The DEP must also amend the rationale and completion date in the CAR database.

An extension request must be submitted to Region 6 of the U.S. Environmental Protection Agency by EPC-CP personnel prior to day 45 for final corrective actions not completed or estimated to be completed within 45 days of discovery.

The responsible individual must ensure compliance with the proposed completion schedule.

These intervals are not considered grace periods, but are defined schedules to ensure the conditions requiring corrective action do not persist indefinitely.

Where corrective actions result in changes to controls or any procedures documented in the facility's Storm Water Pollution Prevention Plan (SWPPP), the DEP must modify the SWPPP accordingly within 14 calendar days of completing corrective action work.

Attachment 5 – Example Outstanding Corrective Action Report

LANL inside

EPC-CP MultiSector General Permit (MSGP)
Corrective Action Report Findings
Final Corrective Actions Not Yet Complete (as of 02/01/2018)

FOD	RAD	MSGP Facility	CA#	Person Identifying Condition	Date Problem Identified	Corrective Action Initiated Date	Days to Take Action	Projected Completion Date	Projected Days until Completion	Days Open (since Discovery)	EPA Notified of Intent to Exceed 45 Days	Problem Description
UI	DOE JOHN	TA-3-38 Carpenter Shop	1298	DOE JANE	01/31/18		!	02/02/18	1	1		Tarp was totally torn off of the stack of metal posts at the southwest corner of the storage yard.
	DOE JOHN	TA-3-38 Metals Fab. Shop	1299	DOE JANE	01/31/18		!	02/02/18	1	1		A pile of gravel (from a torn gravel bag) is directly east of the trench drain.
Total Findings:												2

Legend

!	Action must be taken and documented in CAR.	3	Indicates immediate action was not taken (i.e., <=2 days of discovery)
	Within 14 days of discovery		Between 35 and 44 days of discovery
	Between 15 and 34 days of discovery		45 days of discovery or greater

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

EPC-CP-QP-064	Revision: **1**	
Effective Date: 10/09/2018	Next Review Date: 10/09/2021	

Environment, Safety, 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	9-11-18

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

Name:	Organization:	Signature:	Date:
Jacob Meadows	EPC-CP	Signature on File	9-11-18

Approval Signatures:

Subject Matter Expert:	Organization:	Signature:	Date:
Holly L. Wheeler	EPC-CP	Signature on File	9-11-18
Responsible Line Manager:	Organization:	Signature:	Date:
Terrill W. Lemke	EPC-CP Team Leader	Signature on File	9-12-18
Responsible Line Manager:	Organization:	Signature:	Date:
Taunia S. Van Valkenburg	EPC-CP Group Leader	Signature on File	10-9-18

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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]*
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.
EPC-CP-QP-064, R1	10/09/2018	Removed requirement to conduct visual assessment on filtered samples. Updated form to match text.

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1.0 INTRODUCTION

Los Alamos National Laboratory (LANL) through Environmental Protection and Compliance-Compliance Programs (EPC-CP) conducts stormwater monitoring activities required pursuant to the National Pollutant Discharge Elimination System (NPDES), Multi-Sector General Permit (MSGP). 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 where LANL conducts stormwater monitoring activities under the MSGP.

1.2 Scope

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

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

Assessments 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 document the work.

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 in section 6.1.3 of the MSGP as one "that results in an actual discharge from your site that follows the preceding measurable storm event by at least 72 hours (three 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.** The IWD Part II (2101 Form) will address site-specific requirements and training for Facility Operations Divisions (FODs).

Work 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. Obtain necessary additional paperwork (if required) before conducting this work, including IWD's, and excavation permits.
3. As specified in the IWD, inform (e.g., by e-mail) facility contacts and/or DEP (Deployed Environmental Professional) of the schedule for work and locations up to a week (preferred) before but no later than the day before (for minor changes) so work is added to the appropriate plan of the day.

   Note: For some FODs (e.g., Utilities and Institutional Facilities), 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.
4. The IWD Part II (2101 Form) addresses specific requirements and training for FODs.
5. Gather the required equipment (see Section 3.2) for the work to be done.
6. Using the Safari or Chrome 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. 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.

8. 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 and other facility specific Personal Protective Equipment
- 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.)
- Current copy of this procedure
- Current copy of the IWD(s)
- Current copy of the MSGP Sampling and Analysis Plan
- Site Map(s) (as needed)
- Current electronic work order or paper inspection form
- Government issued electronic tablet 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 and station keys
- Certified 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 will be collected during daylight hours in a wide mouth clear glass or plastic container within 30 minutes of discharge from a storm event.

2. In MC Express, click on the appropriate work order number to open the work order. 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 examples in Attachment 1 and a hard copy example in Attachment 2.

4. Any additional comments not documented in the "Reading" field will be entered in the "Comments" field of the same task line. If the inspector needs more space, additional comments will be entered in the "Labor Report Update" field (see Section 4.3) when the work order is updated to "Complete" status.
5. 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.

4.1 Documenting Sample Information

Each item number listed in red font below corresponds to a red numbered box on both screenshots (Attachment 1) and hard copy format (Attachment 2).

1. Item 1: Document 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, and 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.

2. Item 2: Check 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.

3. Item 3: Check 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.

4. Item 4: Check 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.

5. Item 5: Observe 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.

6. Item 6: Check 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 will constantly be attempting to relate any pollutant that is observed in the sample to a pollutant source on the site.

If there are any potential sources of pollutants on site, document the following, and contact the EPC-CP MSGP Project Lead within 24 hrs. of identification.

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

7. Item 7: Observe 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.

8. Item 8: Observe 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.).

9. Item 9: Observe 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 is 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.

10. Item 10: Observe 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 will 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.

11. Item 11: Observe 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.

12. Item 12: Observe 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 suspended solids observed (e.g., fine, course).

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

13. Item 13: Check 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.

    If it is determined that foam is caused by a pollutant, complete the visual assessment and contact the EPC-CP MSGP Project Leader **immediately** following completion of the assessment. Follow-up action is required within 24 hours.

14. Item 14: Check 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).

    If an oil sheen is present, contact the EPC-CP MSGP Project Leader **immediately** following completion of the visual assessment. Determine the nature of the discharge (rain, snow, hail), the source of the oil 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.

15. Item 15: Check 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.

16. When all task lines have been completed, click the "Back" 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).
2. Click the checkered flag  in the upper right corner of the work order Summary page. The work order will open in the display to the Status Update page.

   MC Express automatically changes the work order status to "Closed" and auto populates the date/time fields.
3. Item 16: 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 **work was completed** and ***not* the date/time the form was filled out**. If work needs to be performed over multiple days, enter the date and time the work began in the Labor Report field. To update the date or time, click the "Date" field and make necessary adjustments using the available timestamp application. Click "Set" to apply changes.
4. Item 17: The inspector enters/prints 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 will be documented in the "Labor Report Update" field.
5. 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.
6. Item 18: 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.
7. Click on the "Save" bar at the bottom of the page to close the "Signature" field.
8. Click on the "Back" button in the upper left hand corner to return to the "My Open Work Orders" page.
9. 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 for screenshot examples of printing from MainConn.
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 19: Obtain a printed name and title, signature, and date on the certification statement (see Attachment 2). The visual assessment 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; Deployed Environmental, Safety, and Health Group Leader; EPC Group Leader, EPC-CP Team Leader). The manager 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 will attempt to identify the pollutant source. Personnel will 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 will evaluate whether or not implementation of additional BMPs are needed in the pollution prevention plan to address the observed contaminant.

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

Refer to EPC-CP-QP-022, *MSGP 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 samplers, single stage stormwater samplers, or by grab sample 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*

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 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 must 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.

Measurable storm event – Precipitation that results in an actual discharge from your site that follows the preceding measurable storm event by at least 72 hours (3 days).

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*.

BMP	Best Management Practice
DEP	Deployed Environmental Professional
EPC-CP	Environmental Protection and Compliance – Compliance Programs
FOD	Facility Operations Division
IWD	Integrated Work Document
LANL	Los Alamos National Laboratory
MC Express	Maintenance Connection MC Express web application
MSGP	Multi-Sector General Permit
NPDES	National Pollutant Discharge Elimination System
SWPPP	Storm Water 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: September 29, 2008, Volume 73, Number 189

P1020-1, Laboratory Records Management

ADESH-AP-006, Records Management Plan

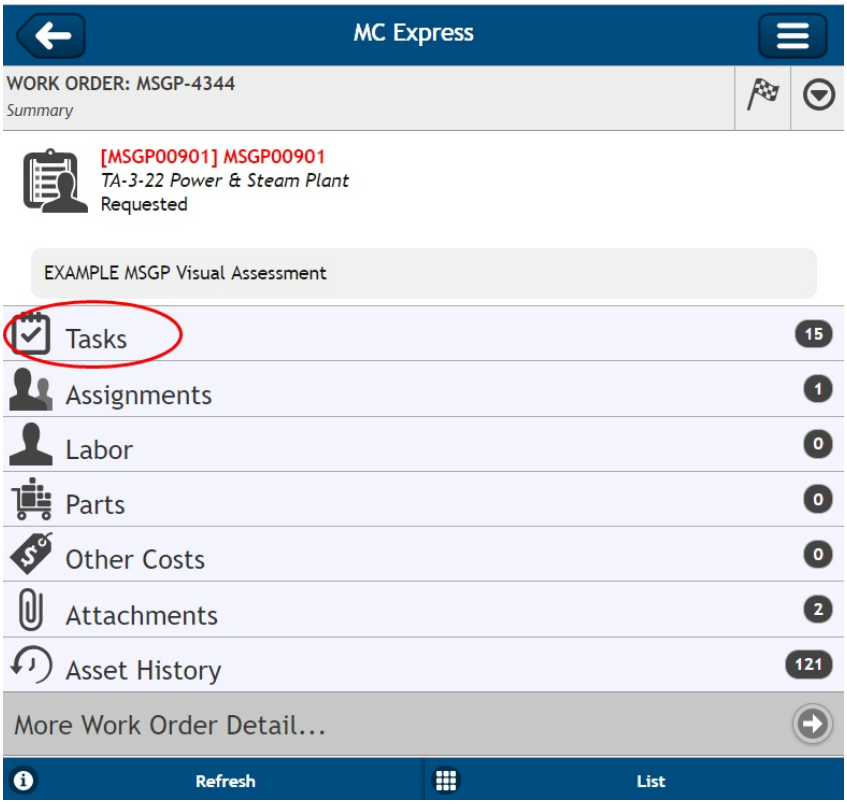
EPC-CP-QP-022, MSGP Corrective Actions

10.0 ATTACHMENTS

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

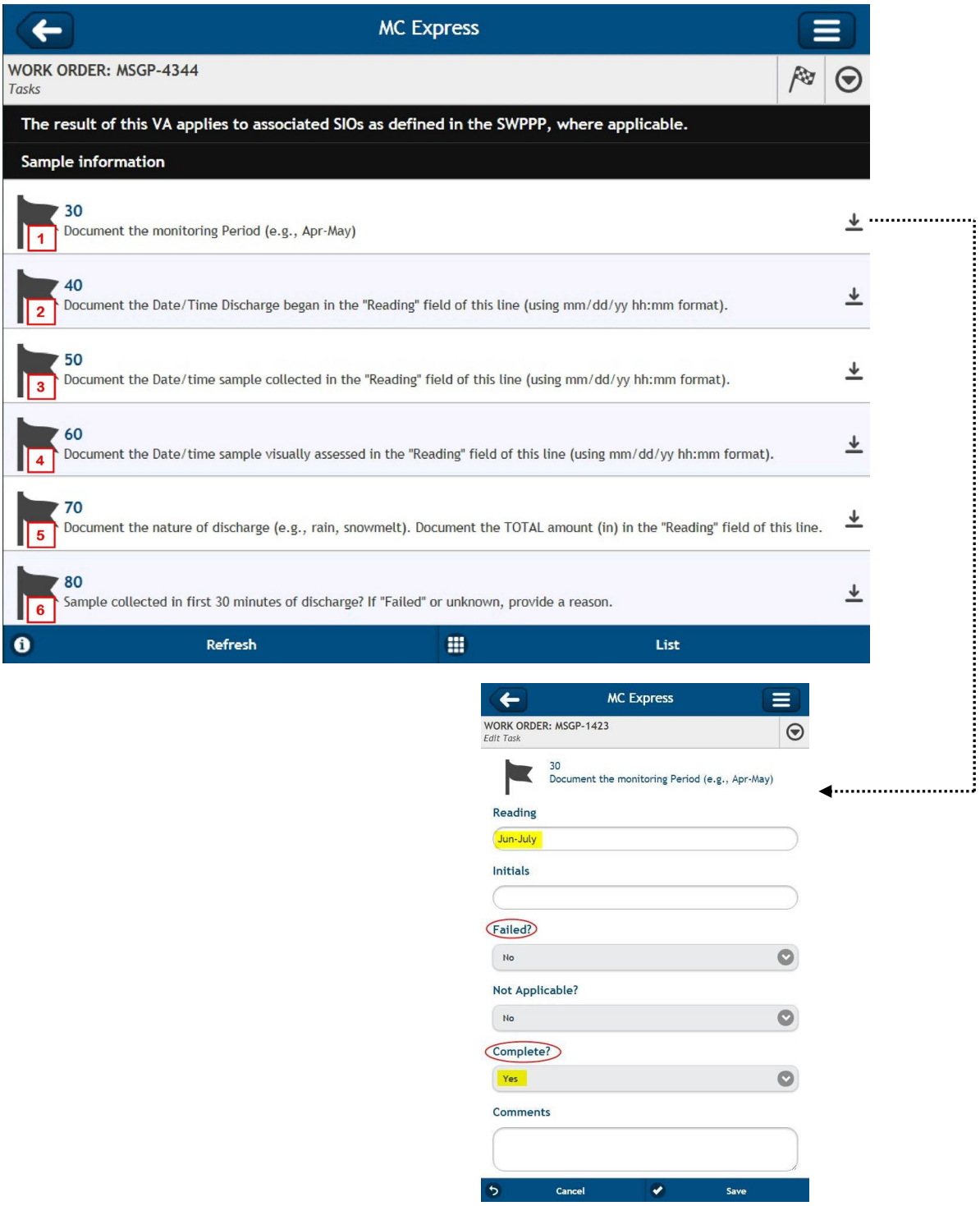
Attachment 1 – Screenshot Examples of EPC-CP-Form-1021 in MC Express

Work Order Summary Page (section 4.0, step 2)



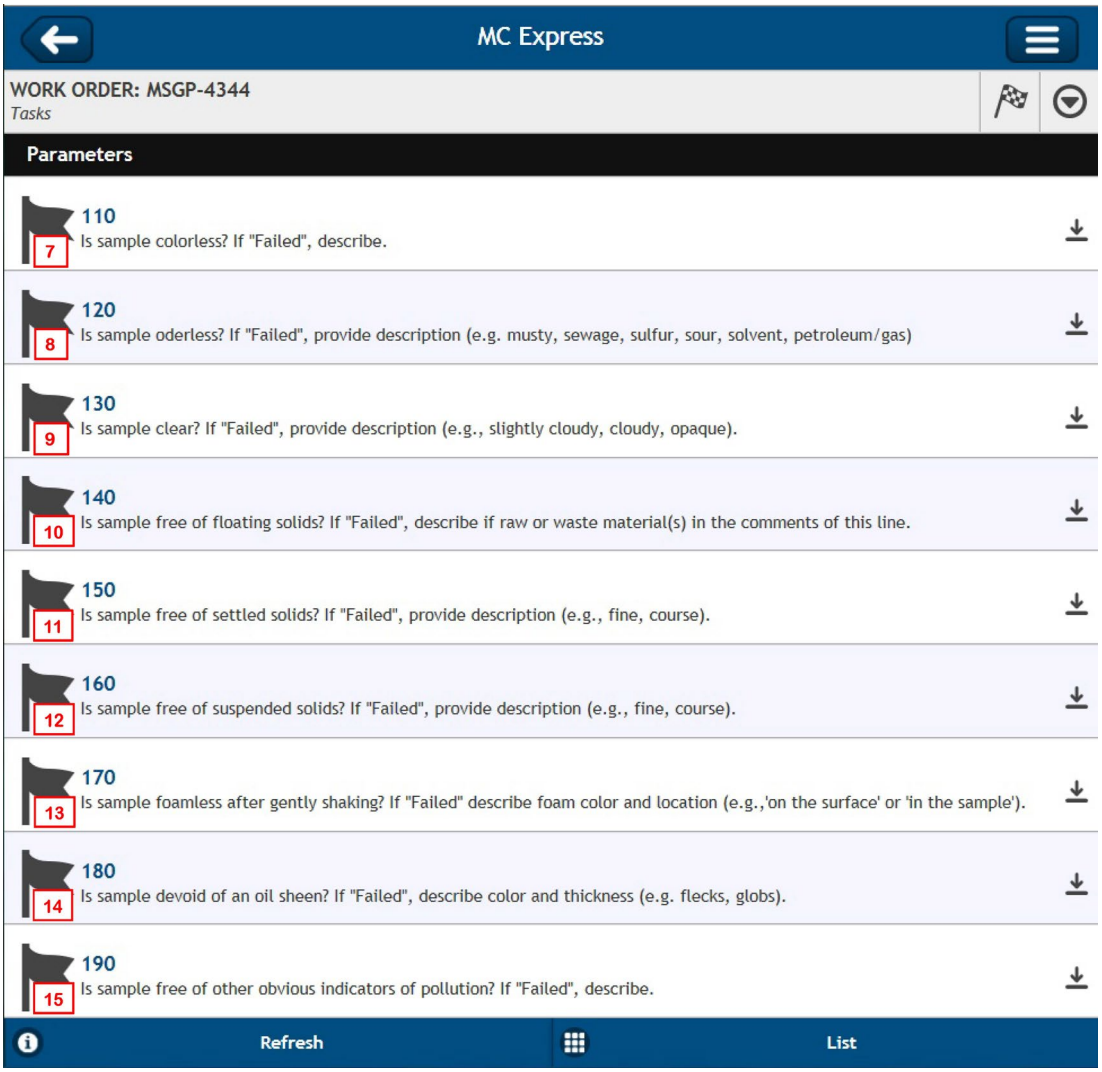
Attachment 1 – Screenshot Examples of EPC-CP-Form-1021 in MC Express

Work Order Tasks Page – Documenting Sample Information (Section 4.0, Step 3)



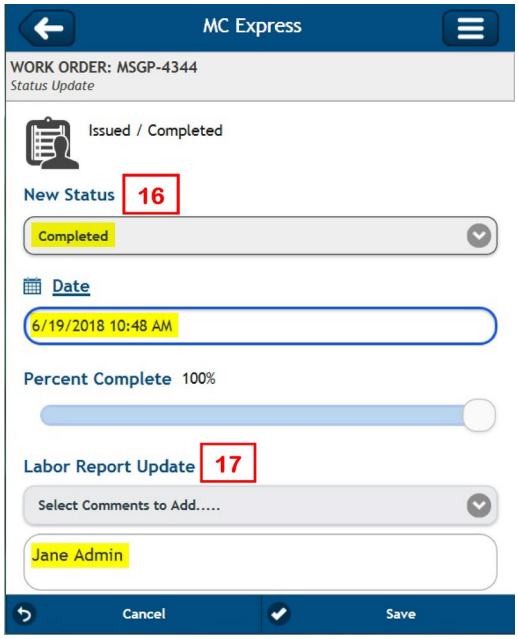
Attachment 1 – Screenshot Examples of EPC-CP-Form-1021 in MC Express (cont.)

Work Order Tasks Page – Assessing Parameters (section 4.2, step 7)

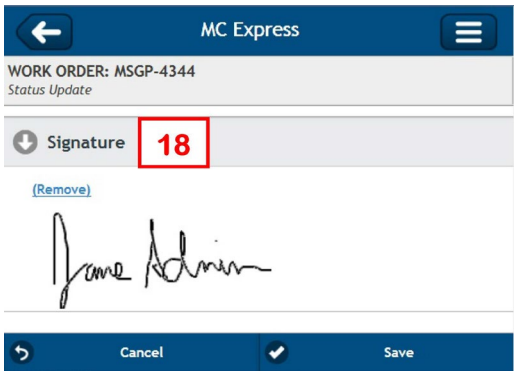


Attachment 1 – Screenshot Examples of EPC-CP-Form-1021 in MC Express (cont.)

Work Order Status Update Page (section 4.3, steps 3 and 4)



Work Order Status Update Page (section 4.3, step 6)



Attachment 2 – EPC-CP-Form-1021 Hard Copy Example

Los Alamos National Lab - ADESH

Work Order MSGP-4344

MSGP Monitoring Stations
Printed 6/19/2018 - 10:55 AM (Duplicate Copy)

Maintenance Details

Requested By: Admin, Jane on 6/7/2018 10:51:00 AM
Procedure: MSGP Quarterly Visual Assessment (EPC-CP-Form-1021.2)
Last PM: 5/5/2010

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

MSGP Program
RG121.9
TA-3-22 Power & Steam Plant
Monitored Outfall (009)
MSGP00901

Contact: Admin, Jane
Phone: 123-4567

Reason: EXAMPLE MSGP Visual Assessment

Special Instructions: NMR053195

Tasks

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

Labor Report

16 **Completed:** 6/19/2018 10:48:00 AM

17 **Report:** Jane Admin

18

Signature / Name	Date	Signature / Name	Date
Jane Admin	6/19/2018		

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

EPC-CP-Form-1021.2 09/2018

Attachment 2 – EPC-CP-Form-1021 Hard Copy Example (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".

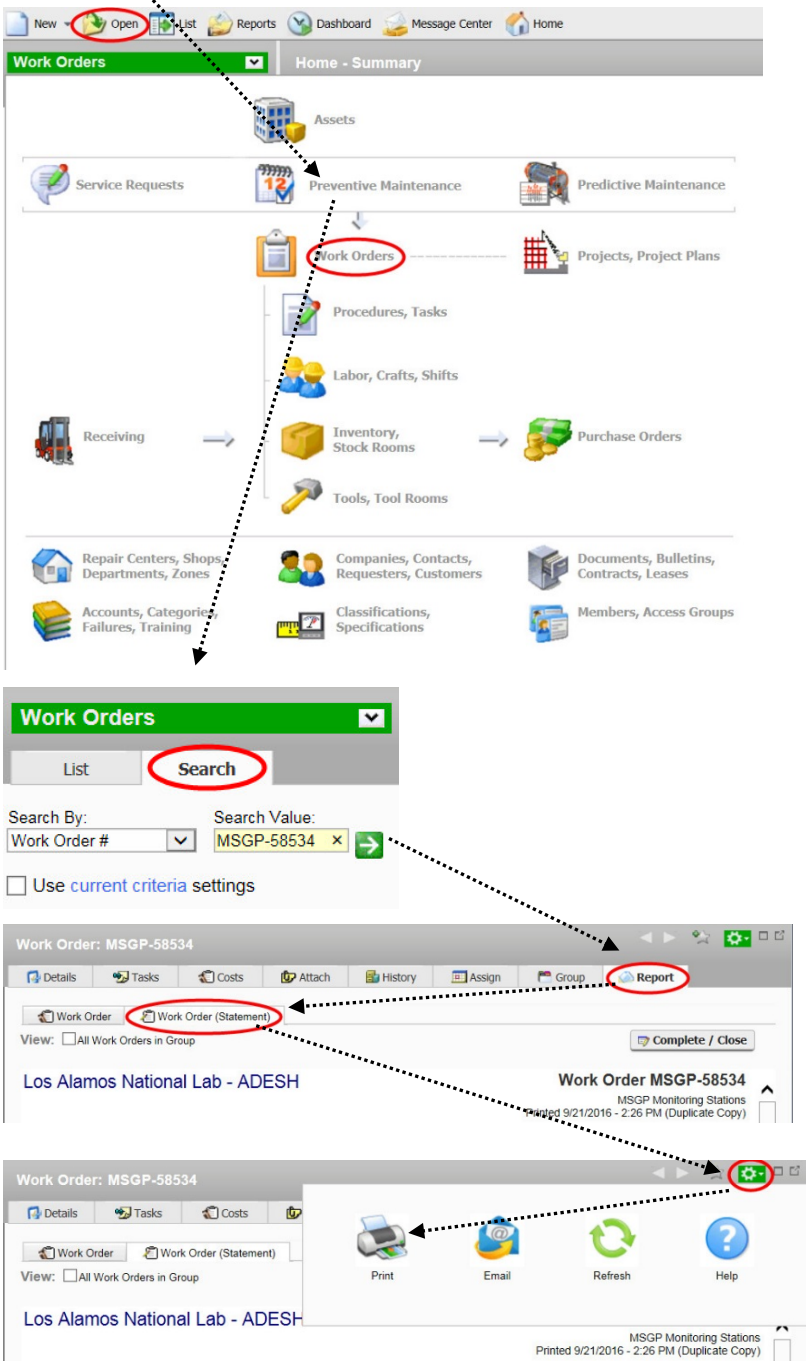
(Signatory must meet definition in Section B.11.A, eg. FOD, Ops Mgr, DESH Group Leader, EPC Group Leader)

19 Print name and title:_____

Signature:_____Date:_____

Attachment 3 – Screenshot Examples of Printing from Maintenance Connection

Maintenance Connection Modules Page (Section 4.4)



ATTACHMENT 19: EPC-CP-TP-2103, *INSPECTING ISCO STORMWATER RUNOFF SAMPLERS AND RETRIEVING SAMPLES*

EPC-CP-TP-2103	Revision: **0**	
Effective Date: 02/24/2020	Next Review Date: 02/24/2023	

Environment, Safety, Health, Quality, Safeguards, and Security Directorate

Environment Protection and Compliance – Compliance Programs Group

Technical Procedure

Inspecting ISCO Stormwater Runoff Samplers and Retrieving Samples

Hazard Grading:	☐ Low	☒ Moderate	☐ High/Complex
Usage Level:	☒ Reference	☐ UET	☐ Mixed: UET Sections: _____
Status:	☐ New	☐ Major Revision	☐ Minor Revision
	☐ Review w/No Changes		☒ Other: New EPC-CP format and numbering system
Safety Basis:	☒ N/A	☐ USQ	☐ USI Number: _____

Document Author/Subject Matter Expert:

Name:	Organization:	Signature:	Date:
Holly L. Wheeler	EPC-CP	Signature on File	02-20-2020

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

Name:	Organization:	Signature:	Date:
Steven E. Wolfel	EPC-CP	Signature on File	02-19-2020

Approval Signatures:

EPC-CP Reviewer:	Organization:	Signature:	Date:
Terrill W. Lemke	EPC-CP	Signature on File	02-19-2020
EPC-CP RLM:	Organization:	Signature:	Date:
Taunia Van Valkenburg	EPC-CP	Signature on File	02-24-2020

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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]*
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. Added crosswalk to electronic form in MC Express.
EPC-CP-TP-2103 R0	02/24/2020	Supersedes EPC-CP-QP-047 R2. Reformat to new EPC-CP template. Re-number procedure and forms to new EPC-CP procedure numbering system. Minor edits.

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1.0 INTRODUCTION

Los Alamos National Laboratory (LANL) through Environmental Protection and Compliance-Compliance Programs (EPC-CP) conducts stormwater monitoring activities required pursuant to the National Pollutant Discharge Elimination System (NPDES), Multi-Sector General Permit (MSGP) at 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 automated samplers and retrieving stormwater runoff samples from outfall locations where LANL conducts stormwater monitoring pursuant to NPDES MSGP requirements. This procedure may also be used for other Associate Laboratory Directorate of Environment, Safety, Health, Quality, Safeguards, and Security (ESHQSS) stormwater monitoring activities as needed.

1.2 Scope

The discharge of stormwater from specified industrial sites at LANL is regulated under the NPDES MSGP. The Laboratory's MSGP requires qualitative and quantitative stormwater monitoring (e.g., sample collection) to evaluate the effectiveness of control measures. Automated ISCO samplers coupled with liquid level actuators are used at MSGP monitoring stations and in support of other stormwater monitoring programs. Refrigerated (Avalanche®) and/or non-refrigerated (Model 3700) samplers are deployed and configured with multi-battery arrays, solar panels, and surge protectors.

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 the MSGP Program Lead.

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.)

1.3 Applicability

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 or other stormwater monitoring programs.

The MSGP Program Lead is primarily responsible for this procedure. EPC-CP personnel are appointed responsibility for a subset of sampling stations. Other stormwater monitoring programs or projects utilizing this procedure will refer to program or project specific roles and responsibilities.

2.0 PRECAUTIONS AND LIMITATIONS

2.1 Precautions

The hazard level of the activities in this procedure is **MODERATE**. Hazards in the work described in this procedure are controlled thorough a site specific Integrated Work Document (IWD) Part I. The IWD Part II (Form 2101) addresses site specific requirements and training by the Facility Operations Division (FOD).

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.

Personnel must wear appropriate clothing (e.g., boots, long pants, etc.) to perform work in the field.

Work 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).

In the event of pest infestation (e.g., wasp or rat nests), do not attempt to remove the pest yourself. Call LANL Pest Control to coordinate the removal of the pest(s).

If conditions prevent field work, document the conditions in the Labor Report Update field on the form and notify the Program Lead or designee within 24 hours. Multiple attempts can be documented on the original form. If the target date cannot be met, the field personnel must contact the Program Lead no less than 24 hours before the target date for guidance.

2.2 Limitations

In MC Express, document responses to each question on a work order by clicking the expand arrow located on the right side of the task line and changing the “Complete” or “Failed” or “N/A” line to “Yes”. When using a hard copy form, mark the appropriate check box.

Throughout this process, the field personnel will document comments and notations in the “Reading” field of the associated task line. Additional comments not documented in a “Reading” field can be entered in the “Comments” field of the same task line. If field personnel need more space, additional comments can be entered in the “Labor Report Update” field (see Section 4.10) when the work order is updated to “Complete” status. When using a hard copy form, document comments on the corresponding task line. If additional space is needed, comments can be entered in the “Labor Report” section at the bottom of the form.

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. 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 (MST) at all times, with no daylight saving time adjustment.
2. 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.
3. Obtain any necessary additional paperwork before conducting this work, including IWD's, and excavation permits (as necessary).
4. As specified in the IWD, inform (e.g., by e-mail) facility contacts and/or Deployed Environmental Professional of the schedule for sampler work and locations up to a week before (preferred), but no later than the day before (for minor changes) so work may be added to the appropriate plan of the day.

   NOTE: For some 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.
5. Gather the required equipment (see Section 3.3) for the work to be done.
6. Using the Safari or Chrome 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 (http://express.maintenanceconnection.com) and confirm that the work order list displayed matches your sites. If the work order lists do not match, contact EPC-CP Data Management personnel for clarification.
8. In MC Express, click on the appropriate work order number to open the work order. The work order will open in the display to the Work Order Summary page.
9. Click on the "Tasks" bar to navigate to the work order Tasks page. See MC Express screen shot examples in Attachment 1.
10. Always log out of MC Express when you have finished work OR if work is interupted.

3.2 Performance Documents

Personnel performing this procedure will be familiar with the most current versions of the following plans and operation manuals if this equipment is utilized. Copies of the following are not required to be on the job site.

- EPC-CP MSGP Sampling and Analysis Plan (SAP) most recent revision for the current monitoring year OR project specific monitoring plan;
- ISCO 3700 Portable Samplers Installation and Operation Guide;
- ISCO Avalanche® Installation and Operation Guide; or
- ISCO 701 pH/Temperature Module Installation and Operation Guide (if equipped at a station).

3.3 Special Tools, Equipment, Parts, and Supplies

Ensure the following equipment is available.

- Safety glasses;
- Sturdy hiking boots or steel toed shoes (as needed) with soles that grip and other required facility specific Personal Protective Equipment;
- Nitrile gloves;
- Leather gloves;
- 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 the IWD;
- EPC-CP MSGP SAP most recent revision for the current monitoring year OR project specific monitoring plan;
- Site Map(s) (as needed);
- Current electronic or paper inspection form EPC-CP-TP-2103 Form 1, *MSGP ISCO Sampler Inspection and Sample Retrieval;*
- Government issued electronic tablet with Safari or Chrome 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);
- Water Sample Collection and Processing Log/Field Chain of Custody (SCPL) (see EPC-CP-QP-2106);
- Access to accurate time measurement;
- Necessary access and station keys;
- Insulated hand tools;
- 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;
- Re-sealable zipper storage bags (e.g., Ziploc®);
- Custody seals; and
- 0.45 micron filter (where applicable).

4.0 INSPECTING THE SAMPLER AND SAMPLE RETRIEVAL

Inspection of ISCO samplers is performed weekly during the sampling season. Samples retrieved are determined at a sampling station based on the current year SAP. See Attachment 1 for screen shot examples of EPC-CP-TP-2103 R0 Form 1, *ISCO Sampler Inspection and Sample Retrieval* in MC Express. See Attachment 2 for an example of the form in hard copy format.

NOTE: Each ITEM number listed in red font below corresponds to a red numbered box on both screenshots (Attachment 1) and hard copy format (Attachment 2).

4.1 Inspecting the Sampler

4.1.1 On Arrival

[1] Remove the top cover from the sampler.

[2] **ITEM 1**: Check and document the sampler is ON and its condition upon arrival. Explain any non-functional status.

[a] IF a sampler has been inactivated (e.g., sample collection completed) prior to this inspection but continues to appear on the inspection form, THEN answer this task line question "N/A."

[b] Subsequent questions regarding the inactive sampler may be left unanswered in this section.

[3] **ITEM 2**: Check and document the ISCO programming displays the following.

[a] ISCO 3700 sampler display should indicate "Sampler Inhibited"

[b] Avalanche sampler display should indicate "Program Disabled"

[c] Document messages other than those in [a] and [b] (e.g., "Done X samples," "sampler off," etc.,).

[4] IF there is no indication of flow and the sampler triggered due to a non-flow event, THEN describe why the sampler triggered (e.g., animal, tumbleweed, etc.,).

[5] **ITEM 3**: Check and document the sampler is set to the correct MST +/- no more than 1 minute. Do **NOT** use Daylight Savings Time.

[a] IF the sampler is set incorrectly,
THEN reprogram for the correct MST.

[b] Describe the work performed and correction applied (e.g., "ISCO clock was X minutes slow").

[6] If the location has more than one sampler, complete Steps 1 through 5 for each sampler.

4.1.2 Water Collection Information

[1] Don nitrile gloves and safety glasses.

[2] Remove the center section from the sampler.

[3] **ITEM 4**: Document evidence of storm water flow at the sampling location by describing the evidence of flow (e.g., sediment or vegetation movement, erosion, standing water).

[a] IF the sampler did not trip but there is evidence of flow,
THEN document the date and time storm water discharge began from the precipitation report.

[b] IF the sampler tripped or collected storm water,
THEN document the date/time stamp from the sampler (or from the precipitation report if the sampler did not record a date/time stamp).

[4] **ITEM 5**: Document that storm water is collected.

[a] Document if the water is taken by grab sample.

[b] Complete the Bottle Information (**ITEM 20**) in Section 4.1.7.

[c] Follow the steps in thru Section 4.2 Step 16 to retrieve samples.

[5] **ITEM 6**: For Avalanche samplers only, record the current refrigerator temperature in degrees Celsius (°C) when water is collected.

[a] IF unable to review the temperature,
THEN check "No" and describe the condition (e.g., dead battery, electrical short).

[6] **ITEM 7**: For Avalanche samplers equipped with an ISCO pH and Temp Module, check and document a pH measurement was taken on the collected water.

[a] Record the pH measurement taken at the time Bottle 1 was filled as "Average:Minimum:Maximum."

[b] IF unable to review the pH,
THEN check "No" and describe the condition (e.g., damaged meter).

4.1.3 Water Retrieval Information

[1] **ITEM 8**: Check and document whether a sample volume was retrieved from the sampler and taken off site.

[a] Record the estimated total volume in liters (L) or milliliters (ml) **taken off site**.

[2] **ITEM 9**: Check and document whether a visual assessment of the water was performed (refer to EPC-CP-QP-2105).

[a] Do **NOT** conduct a visual assessment on a filtered sample. Record "Filtered sample."

4.1.4 On Departure

WARNING
You MUST be trained to LANL electrical safety standards as prescribed in the IWD before performing Steps 2 and 3.

[1] Prepare yourself in accordance with the IWD for electrical work (e.g. wear safety glasses and leather gloves, use insulated tools, no jewelry or anything metal hanging from body, etc.,).

[2] **ITEM 10**: Check that all cable and electrical connections are attached and firmly tightened (not loose) upon departure.

NOTE: 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.

[a] IF the cables require replacement, connections require tightening, or other maintenance performed,
THEN describe the work performed (e.g., "tightened connectors on battery).

[b] 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).

[3] **ITEM 11**: Use a voltage meter to check the power supply.

[a] Record the voltage of the battery(ies) in volts (V).

[b] Document if battery voltage is acceptable upon departure from the site (≥11.7 for non-floating charged batteries at ISCO 3700 samplers and ≥11.0 for floating-charged batteries at Avalanche samplers).

[c] Replace a battery with a charged battery when the voltage is not acceptable.

[d] 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] Contact the program Electrical Safety Officer if any issues with wiring or batteries cannot be resolved on site.

4.1.5 Equipment Specific Tasks

[1] **ITEM 12**: Check and document the sampler passes the diagnostic test. (Refer to EPC-CP-TP-2102 or sampler Operator's Guide for instructions on running a diagnostics test.)

[a] IF a sampler has been inactivated (e.g., sample collection completed) prior to this inspection but continues to appear on the inspection form,

THEN answer this task line question as "N/A." Subsequent questions regarding this sampler may be left unanswered in this section.

CAUTION
Only reset the pump counts after replacing the internal pump tubing.

[2] IF the internal pump tubing has reached or exceeded the preset pump counts (500,000 for ISCO 3700s, 1,000,000 for Avalanches),

THEN replace the pump tubing and reset the pump counts.

[3] **ITEM 13**: Check and document the sample tubing is free or clear of debris.

[a] Clear obstructions as needed and document maintenance performed.

[4] Check the physical condition of sample tubing and vent tubing.

[a] Replace tubing as needed and document maintenance performed.

[5] **ITEM 14**: Check and document the sample tubing has passed a suction test.

[6] **ITEM 15**: Check and document the sampler is ON prior to departing the site.

[7] **ITEM 16**: Check and document the liquid level actuator has been set to "Latch" prior to departing the site.

[a] IF the sampler tripped and requires reset of the sampling program, THEN reset the actuator by toggling the switch to "Reset" and back to "Latch."

[8] **ITEM 17**: Check and document the ISCO programming displays the following.

[a] ISCO 3700 sampler display should indicate "Sampler Inhibited."

[b] Avalanche sampler display should indicate "Program Disabled."

[c] Reprogram the sampler as needed and document maintenance performed.

[9] Replace and secure the sampler top cover and secure the sampler shelter (if sampler is in a shelter).

[10] If the location has more than one sampler, complete Steps 1 through 11 for each sampler.

4.1.6 Maintenance Information

[1] **ITEM 18**: Document maintenance completed while on site that is not documented elsewhere on the work order by describing the work performed.

NOTE: 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.

[2] IF a battery was replaced,
THEN record the voltage of the new battery and the battery identification number.

[a] IF the battery does not have an identification number,
THEN:

- Contact the MSGP Program Lead to have one assigned.
- Paint or write the number in a permanent manner on the battery.

[3] **ITEM 19**: Document if maintenance is needed that was not completed while on site and that is not documented elsewhere on the work order.

[a] Describe on the work order the follow-up maintenance needed.

[b] When the maintenance has been complete, describe the actions taken to complete the work on the original work order.

[c] Record the maintenance completion date and time on the original work order.

4.1.7 Bottle Information

[1] **ITEM 20**: Document water collected by recording 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 (L or ml) of water in the bottle,
- Type of bottle (e.g. G for glass, P for poly),
- Specific ISCO displayed message, if present.

[2] IF the sampler(s) did not trigger,

THEN answer the task line question as "N/A" for Bottle #1 of each sampler and leave the other Bottle task lines unanswered.

[3] IF a sampler has been inactivated (e.g., sample collection completed) prior to this inspection but continues to appear on the inspection form,

THEN answer the task line question as "N/A". Subsequent questions regarding this sampler may be left unanswered in this section.

[4] Proceed to Section 4.4 if no water was collected.

4.2 Retrieving Samples

Refer to the flow diagram in Attachment 3 as an aid in determining sample retrieval.

[1] Don nitrile gloves and safety glasses.

[2] Add up the estimated volume of water collected in the sampler.

[3] Check that the estimated total volume of water in glass and poly matches the required volume for the specific location identified in the MSGP SAP.

NOTE 1: The volume of water required to complete analytical may vary by monitored location.

[a] IF the sample volume is sufficient to fulfill all analytical requirements,

THEN continue to Step 4.

[b] IF the sample volume is sufficient to fulfill part of the analytical requirements,

THEN consult the prioritization order on the MSGP SAP to determine which analytical to fulfill,

OR contact the MSGP Data Manager. Continue to Step 4 but retrieve only the volume needed.

[c] IF the collected sample will NOT fulfill the minimum required volume for any analytical,

THEN:

- Complete a Visual Assessment if the sample is not filtered (refer to EPC-CP-QP-2105),
- Record estimated total volume (L or ml) retrieved as "0" in **ITEM 8**,

- Return all water to the ground at the sampling location,
- Skip to Step 11.

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. Samples do not meet preservation requirements.

[4] Remove filled and partially filled bottles from the carousel one at a time.

[5] For samples to be retrieved,

[a] Immediately place lids onto the sample bottles.

[b] Securely seal the lids.

[c] Place a custody seal on each bottle.

[6] Write the following on each retrieved sample bottle.

- Date and time collected (e.g., recorded by the ISCO sampler)
- Sampler Location number

[7] Conduct a Visual Assessment on a non-filtered sample (refer to EPC-CP-QP-2105).

[8] Record estimated total volume (L or ml) retrieved in **ITEM 8**.

[9] Place retrieved sample bottles in a cooler with blue ice (or equivalent).

[10] Return any excess stormwater collected that exceeded the amount required to the ground at the location collected.

[11] Install new certified clean sample bottles in the carousel to replace retrieved bottles.

[a] The number and type of bottles may vary. Ensure bottles match the configuration specified in the MSGP SAP.

[12] Replace the 0.45-micron filter as needed.

NOTE 2: Consult the most current revision of the MSGP SAP for specifics.

[13] IF the sampler is turned OFF for the quarter but new certified clean sample bottles and/or the filter have not been replaced,
THEN note this as follow-up maintenance required in **ITEM 19**.

[14] Replace and secure the center section of the sampler.

[15] If the location has more than one sampler, complete Section 4.1.7 thru Section 4.2 for each sampler.

[16] Return to Section 4.1.2, Step 5.

4.3 Removing Stormwater Samples from the field

[1] Transport retrieved samples and corresponding SCPL (see EPC-CP-QP-2106) to the EPC-CP Stormwater Program Laboratory at TA-59-1.

[2] Sign and date/time the SCPL and place it with the samples in the refrigerator.

[3] Ensure custody seal is intact on each sample bottle.

[4] Refer to EPC-CP-QP-2106, *Processing MSGP Stormwater Samples* for processing and submitting samples for shipping to the SMO.

[5] Ensure the EPC-CP Stormwater Program Laboratory door is locked upon exit.

4.4 Completing the Inspection Form

See Attachment 1 for completing the form in MC Express and Attachment 2 for a hard copy example.

[1] After 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 to open the Work Order Status Update page. MC Express auto-populates the date and time fields.

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

[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.

[a] Ensure the date and time auto-populated are the date and time the **work was completed** and ***not* the date/time the form was filled out**.

[b] IF work is performed over multiple days,
THEN note the date and time the work began in the Labor Report field.

[c] To update the date or time, click the "Date" field and make necessary adjustments using the available timestamp application. Click "Set" to apply changes.

[d] IF using a hard copy form,
THEN write the date and time the work was completed.

[5] **ITEM 22:** The field personnel must type or write his/her name in the "Labor Report Update" field.

[6] Additional notes, observations, or site conditions not documented in a task line "Reading" or "Comments" field can 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.

[a] **ITEM 23**: Capture an electronic signature by drawing with a finger on the tablet screen.

NOTE: The mouse must be used to sign electronically when using MC Express on a desktop screen (not a tablet).

[b] If using a hard copy form, the field personnel will sign his/her name and date when the form is signed.

[c] The field personnel is certifying that the information submitted is "true, accurate, and complete" by electronically signing work order.

[8] Click on the "Save" bar at the bottom of the page to close the "Signature" field.

[9] IF completing a hard copy,
THEN return the form to the MSGP Program Lead.

5.0 TRAINING

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.

All EPC-CP personnel that execute the activities specified in this procedure must meet the minimum qualification and training requirements for their position as identified EPC-CP-PIP-2101, NPDES Multi-Sector General Permit Program. This will include "self-study" (required reading) for this procedure as assigned and documented in accordance with ADESH-TPP-301, *ADESH Training Program Plan*. Other participating LANL groups may require training documentation pursuant to local procedures.

Contract personnel that execute the activities specified in this procedure will be qualified and trained as required by the Exhibit D and Exhibit F. In addition, contract personnel will be required to complete "self-study" (required reading) of this procedure.

6.0 RECORDS

EPC-CP is the Office of Record for this document and must be maintained in accordance with PD1020, *Document Control and Records Management* and ADESH-AP-006, *Records Management Plan*. Records generated by this document will be submitted to the Records Management designated point of contact or document manager for document management.

Below are records generated as a result of implementing this procedure. Records generated are identified by title and type.

Record Title	QA Record	Non-QA Record
EPC-CP-TP-2103 R0 Form 1, *ISCO Sampler Inspection and Sample Retrieval*	☒	☐

7.0 DEFINITIONS AND ACRONYMS

7.1 Definitions

See LANL *Definition of Terms*.

7.2 Acronyms

See LANL Acronym Master List.

°C	Degrees in Celsius
EPC-CP	Environmental Protection and Compliance-Compliance Programs
FOD	Facility Operations Division
IWD	Integrated Work Document
L	Liter
LANL	Los Alamos National Laboratory
MC Express	Maintenance Connection MC Express web application
ml	Milliliter
MSGP	Multi-Sector General Permit
MST	Mountain Standard Time
NPDES	National Pollutant Discharge Elimination System
SAP	Sampling and Analysis Plan
SCPL	Sample Collection and Processing Log/Field Chain of Custody
V	Volts

8.0 REFERENCES

EPC-CP-QP-2105, MSGP Stormwater Visual Assessments

EPC-CP-QP-2106, Processing MSGP Stormwater Samples

EPC-CP-TP-2102, Installing, Setting Up, and Operating ISCO Samplers

EPC-CP-PIP-2101, NPDES Multi-Sector General Permit Program Implementation Plan

ADESH-TPP-301, ADESH Training Program Plan

ADESH-AP-006, Records Management Plan

PD1020, Document Control and Records Management

9.0 ATTACHMENTS

Attachment 1: Screenshot Examples of EPC-CP-TP-2103 R0 Form 1, *ISCO Sampler Inspection and Sample Retrieval* in MC Express

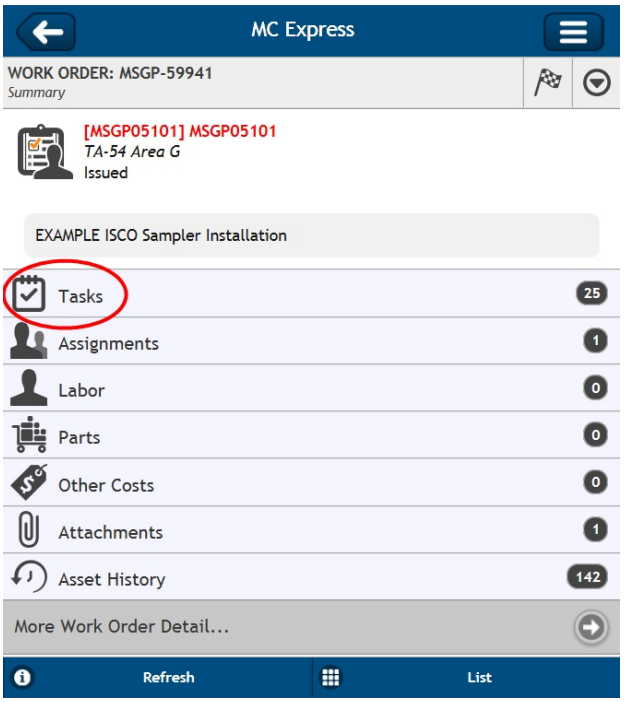
Attachment 2: EPC-CP-TP-2103 R0 Form 1, *ISCO Sampler Inspection and Sample Retrieval* Hard Copy Example

Attachment 3: Sample Retrieval Flow Diagram

Attachment 1: Screenshot Examples of EPC-CP-TP-2103 R0 Form 1, ISCO Sampler Inspection and Sample Retrieval in MC Express

(Page 1 of 6)

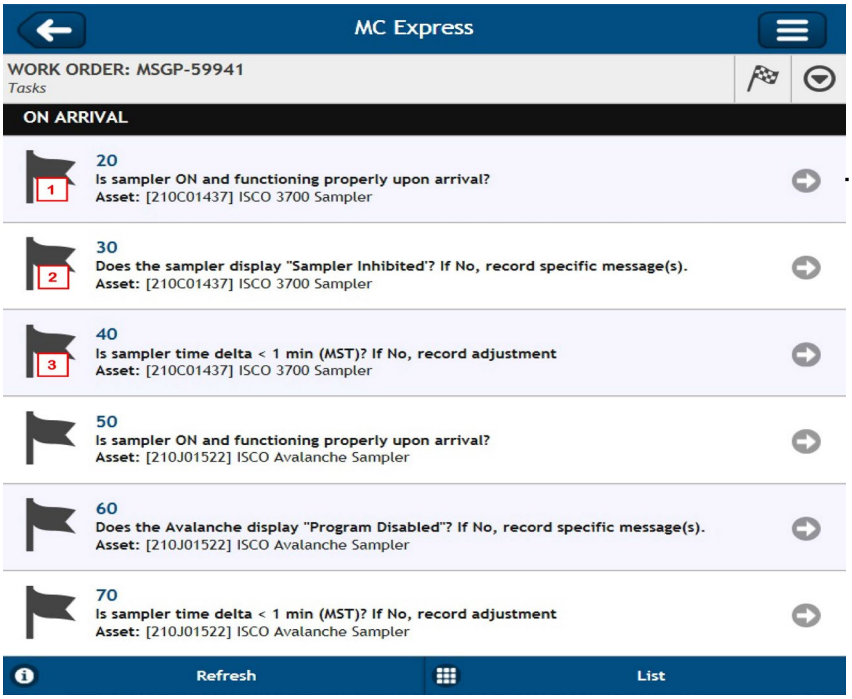
Work Order Summary Page (Section 3.1, Steps 8 and 9)

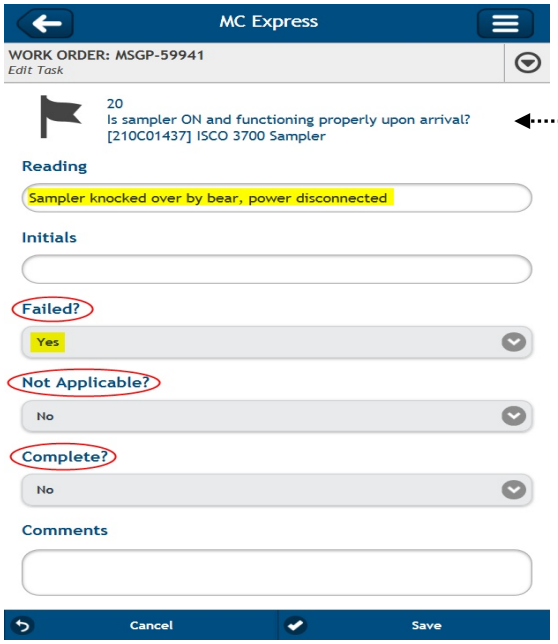


Attachment 1: Screenshot Examples of EPC-CP-TP-2103 R0 Form 1, *ISCO Sampler Inspection and Sample Retrieval* in MC Express (cont.)

(Page 2 of 6)

Work Order Tasks page - On Arrival (Section 4.1.1, Steps 2-5)

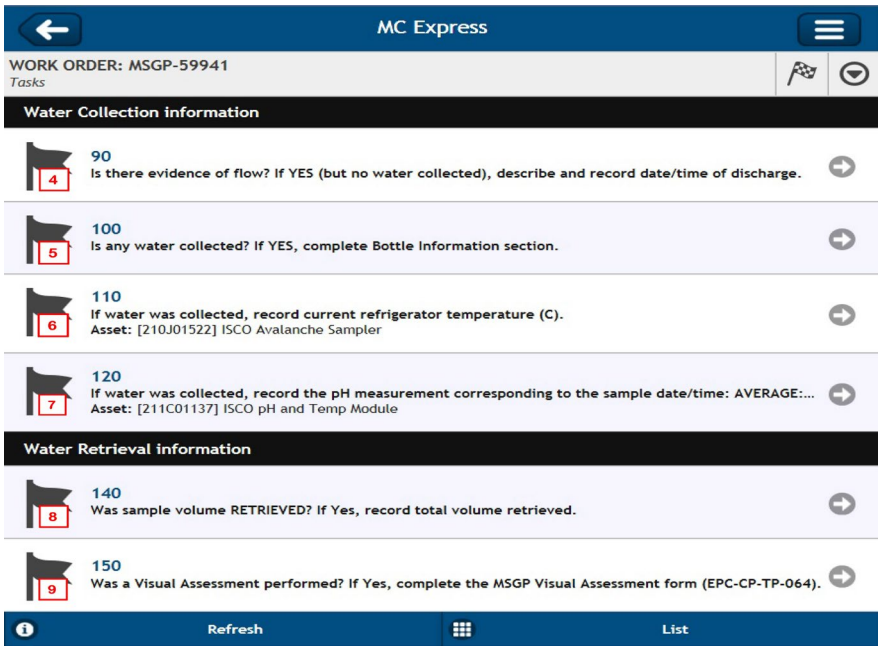




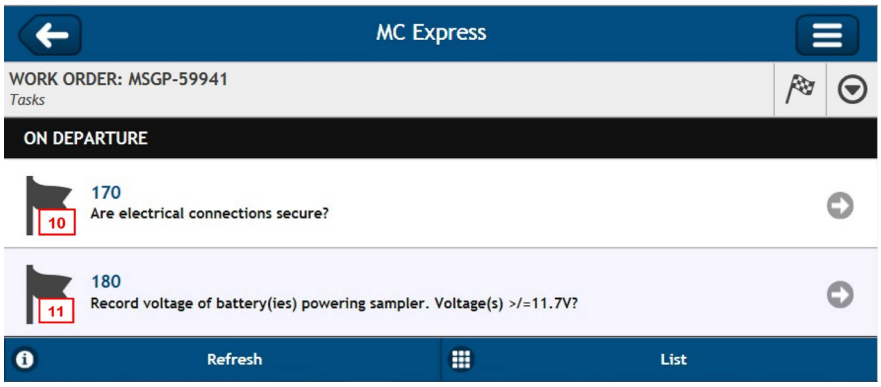
Attachment 1: Screenshot Examples of EPC-CP-TP-2103 R0 Form 1, *ISCO Sampler Inspection and Sample Retrieval* in MC Express (cont.)

(Page 3 of 6)

Work Order Task Page – Water Collection Information and Water Retrieval Information (Sections 4.1.2, Steps 3-6 and 4.1.3, Steps 1 and 2)



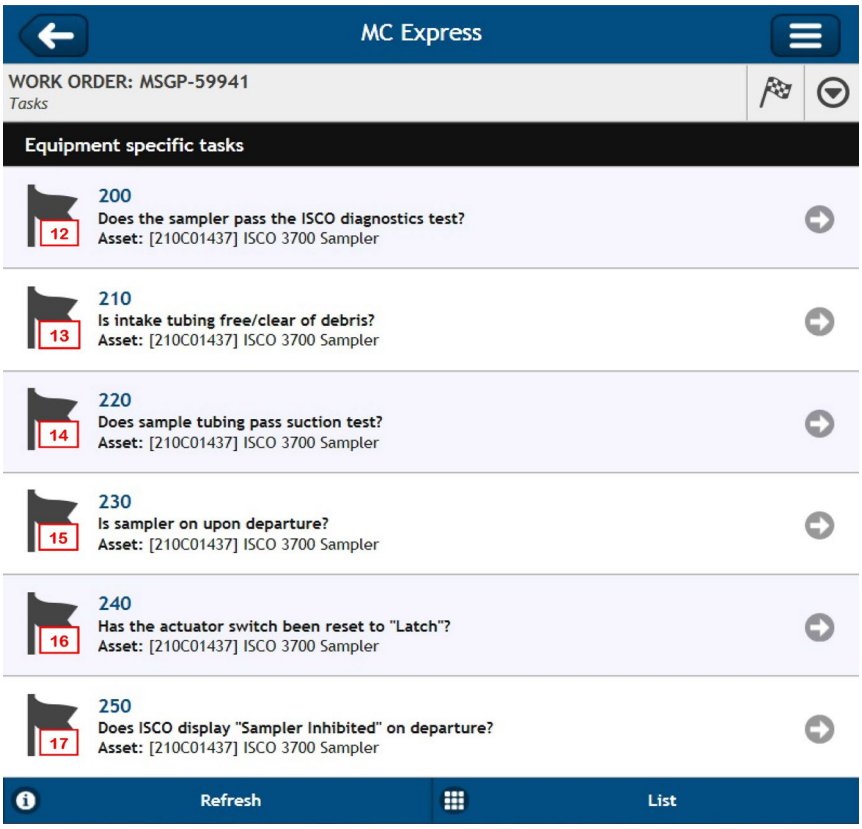
Work Order Task Page – On Departure (Sections 4.1.4, Steps 2 and 3)



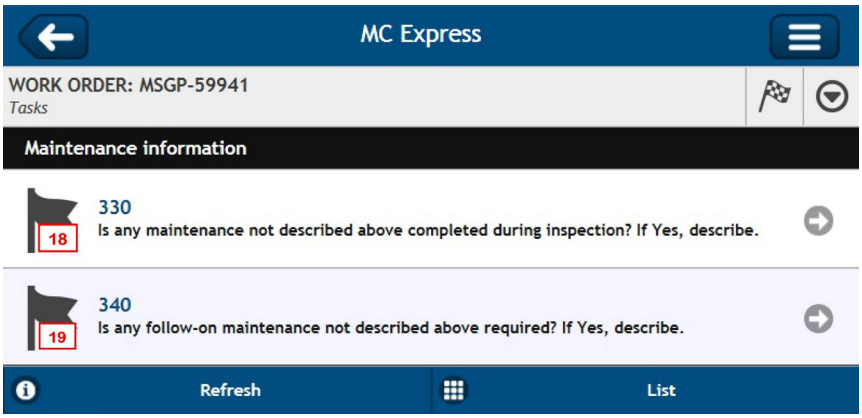
Attachment 1: Screenshot Examples of EPC-CP-TP-2103 R0 Form 1, *ISCO Sampler Inspection and Sample Retrieval* in MC Express (cont.)

(Page 4 of 6)

Work Order Task Page – Equipment Specific Tasks (Sections 4.1.5, Steps 1-8)



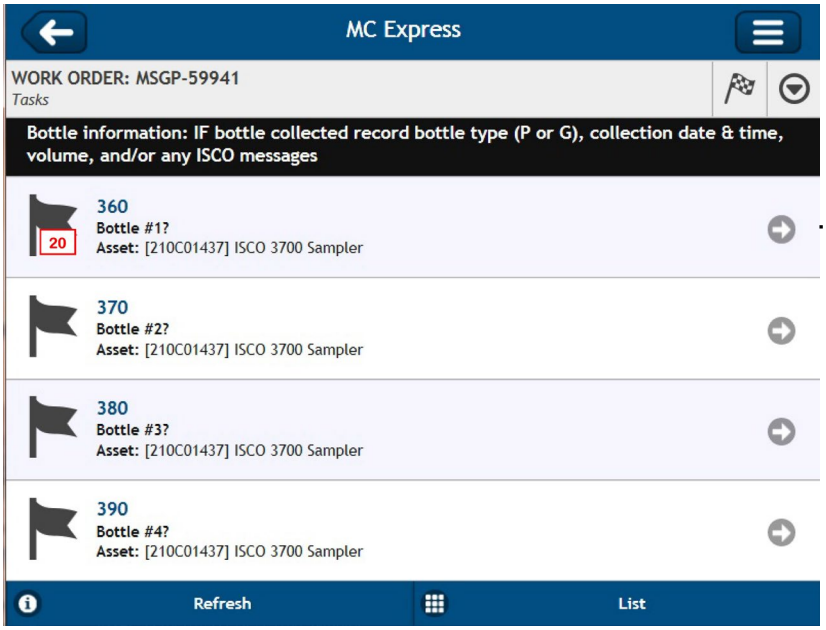
Work Order Task Page – Maintenance Information (Sections 4.1.6, Steps 1-3)

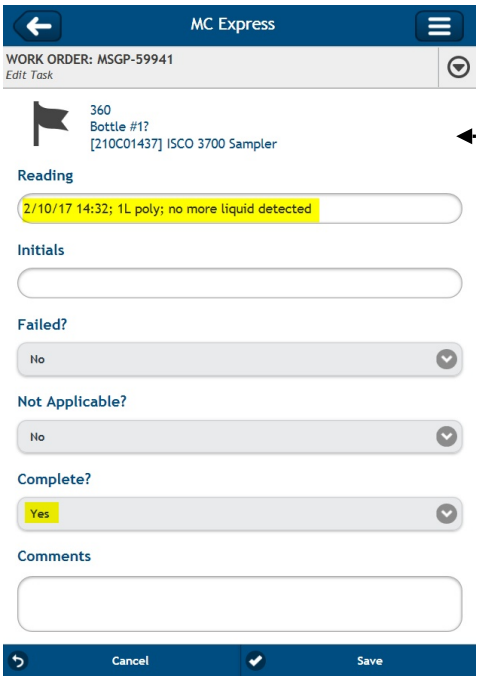


Attachment 1: Screenshot Examples of EPC-CP-TP-2103 R0 Form 1, ISCO Sampler Inspection and Sample Retrieval in MC Express (cont.)

(Page 5 of 6)

Work Order Task Page – Bottle Information (Sections 4.1.7, Step 1)

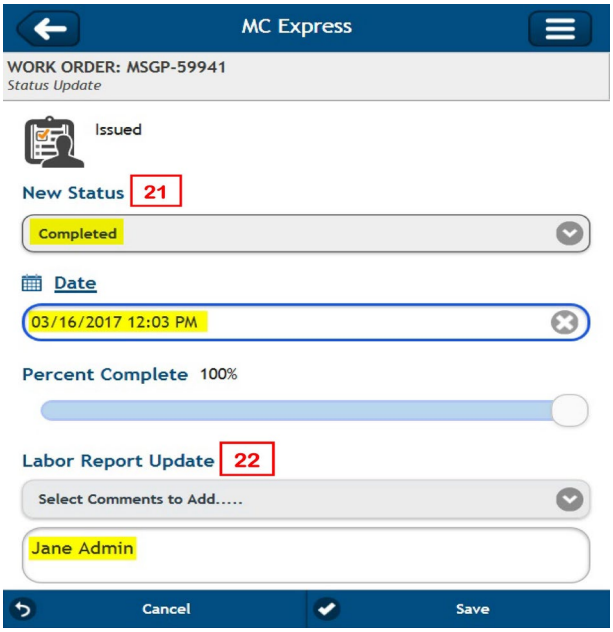




Attachment 1: Screenshot Examples of EPC-CP-TP-2103 R0 Form 1, *ISCO Sampler Inspection and Sample Retrieval* in MC Express (cont.)

(Page 6 of 6)

Work Order Status Update Page (Section 4.4, Steps 4 and 5)



Work Order Status Update Page (Section 4.4, Step 7)



Attachment 2: EPC-CP-TP-2103 R0 Form 1, *ISCO Sampler Inspection and Sample Retrieval* Hard Copy Example

(Page 1 of 2)

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 8/10/2019 11:23:00 AM
Procedure: MSGP ISCO Sampler Inspection and Sample Retrieval (EPC-CP-TP-2103 R0 Form 1
Last PM: 7/20/2019
Project:

Target:12/31/2019
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: Example 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 [21 1C01137] 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-QP-2105).		☐	☐	☐
		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?		☐	☐	☐

EPC-CP-TP-2103 R0 Form 1

Attachment 2: EPC-CP-TP-2103 R0 Form 1, *ISCO Sampler Inspection and Sample Retrieval* Hard Copy Example (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

21 **Completed:** 5/30/2019 4:44:00 PM

22 **Report:** Jane Admin

23 Jane Admin — Signature / Name: 5/30/2019 — Date: _____ Signature / Name: _____ Date: _____

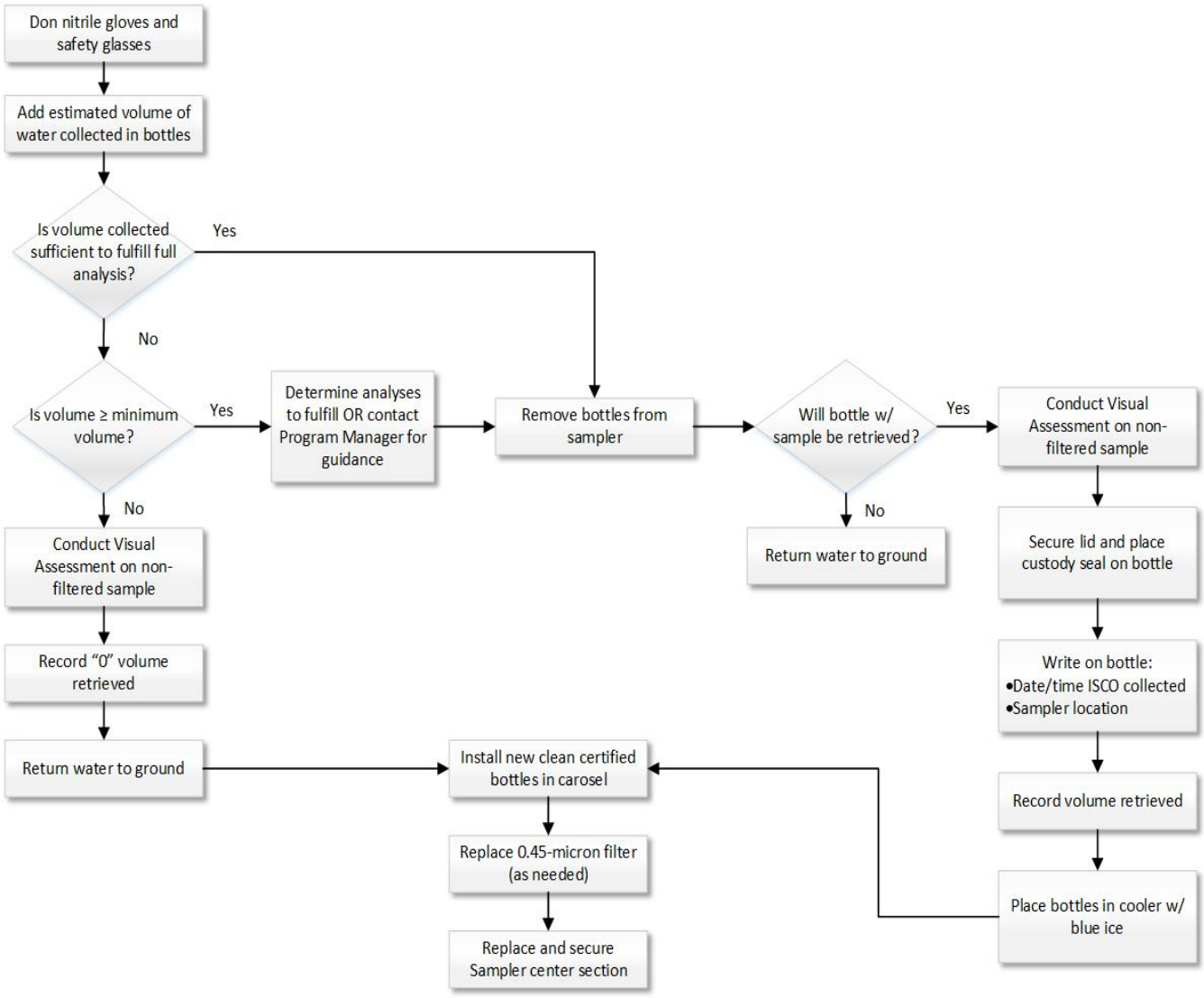
I confirm the information as recorded is true, accurate and complete.

EXAMPLE

EPC-CP-TP-2103 R0 Form 1

Attachment 3: Sample Retrieval Flow Diagram

(Page 1 of 1)



ATTACHMENT 20: ENV-CP-QP-2106, *PROCESSING MSGP STORMWATER SAMPLES*

EPC-CP-QP-2106	Revision: **0**	Los Alamos NATIONAL LABORATORY EST.1943
Effective Date: 10/18/2019	Next Review Date: 10/18/2022	

Environment, Safety, Health, Quality, Safeguards, and Security Directorate

Environment Protection and Compliance – Compliance Programs Group

Quality Procedure

Processing MSGP Stormwater Samples

Hazard Grading: ☒ Low ☐ Moderate ☐ High/Complex

Usage Level: ☒ Reference ☐ UET ☐ Mixed: UET Sections: _____

Status: ☐ New ☐ Major Revision ☐ Minor Revision

☐ Review w/No Changes ☒ Other: New EPC-CP format and numbering system

Safety Basis: ☒ N/A ☐ USQ ☐ USI Number: _____

Document Author/Subject Matter Expert:

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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]*
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 a step describing evidence of flow, and added section for addressing excess stormwater material.
EPC-CP-QP-048 R4	01/31/2019	Sample Collection Log form and associated text updated. Added text for collecting quality control samples.
EPC-CP-QP-2106 R0	10/18/2019	Supersedes EPC-CP-QP-048 R4. New EPC-CP procedure format and numbering system. Minor editorial updates.

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1.0 INTRODUCTION

Triad LLC, the operator for Los Alamos National Laboratory (LANL or the Laboratory), conducts stormwater monitoring activities pursuant to the National Pollutant Discharge Elimination System (NPDES), Multi-Sector General Permit (MSGP). As part of this monitoring, Environmental Protection and Compliance, Compliance Programs (EPC-CP) personnel collect stormwater discharge samples from outfalls at industrial sites and prepare them for analysis.

1.1 Purpose

This procedure describes the process for filtering, preserving and preparing stormwater samples for shipment to an analytical laboratory from locations where EPC-CP conducts stormwater monitoring activities required pursuant to the NPDES MSGP. This procedure may also be used for other Associate Laboratory Directorate for Environment, Safety, Health, Quality, Safeguards, and Security (ALDESHQSS) stormwater monitoring activities as needed.

1.2 Scope

Stormwater samples are collected in the field with either a refrigerated Avalanche® or ISCO 3700 automated sampler, single stage sampler, or by hand. When in-line filtration is not possible, sample filtration, along with chemical preservation (as required) is 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 Environmental Protection Agency (EPA) and New Mexico Water Quality Control Commission guidelines. MSGP monitoring samples are collected and analyzed according to test procedures approved under Title 40 of the Code of Federal Regulations Part 136 unless other test procedures have been specified in the MSGP. Quantitation limits associated with these test procedures are sufficiently sensitive to meet MSGP limits.

1.3 Applicability

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

The MSGP Program Lead is the primary person responsible for this procedure. EPC-CP personnel are appointed responsibility for a subset of sampling stations. Other stormwater monitoring programs or projects utilizing this procedure will refer to program or project specific roles and responsibilities.

2.0 PRECAUTIONS AND LIMITATIONS

The hazard level for the activities in this procedure is **LOW.** An Integrated Work Document Part II (2101 Form) will address any site-specific requirements and training for Facility Operations Divisions (FOD) if required by the FOD.

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

Refer to the most current revision of the MSGP or program/project specific Sampling and Analysis Plan (SAP) to determine the need for collecting quality control samples. Collect the types and quantities of quality control samples at the locations specified.

Schedule and complete stormwater processing to meet the analytical holding time requirements identified in the MSGP SAP or as requested by the MSGP Program Lead. Other stormwater monitoring programs or projects utilizing this procedure will refer to their program or project specific SAP.

The MSGP Data Manager will generate Water Sample Collection and Processing Log/Field Chain of Custody (SCPL) 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 will be obtained from the EPC-CP Sample Management Office (SMO).

3.2 Performance Documents

Personnel performing this procedure will be familiar with the most current versions of the following documents if the equipment or chemicals are utilized.

- Peristaltic Pump User Manual (e.g., GeoTech)
- Material Safety Data Sheet or Safety Data Sheet for preservation chemicals

3.3 Special Tools, Equipment, Parts and Supplies

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)
- Water SCPL form
- Chain of Custody/Analysis Request
- EPC-CP MSGP SAP most recent revision for the current monitoring year OR project specific monitoring 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 (µm) and/or 0.10 µm cartridge filters (where applicable)
- Deionized water (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
- 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.

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 is transferred (as necessary) during processing and shipped to the analytical laboratory.

***NOTE*:** Prior to performing any of the steps in the following sub-sections, ensure that you are wearing the proper clothing. Don nitrile gloves, safety glasses with side shields, and a lab coat. Confirm that the eyewash station is operational prior to processing samples.

4.1 Preparation for Processing Samples

Sample Retriever

[1] Arrange sample collection bottles on the workbench in order by MSGP sampling location, ensuring to distinguish bottles collected via in-line filtration from non-filtered bottles, where applicable.

CAUTION

Process only one sample set (i.e., samples listed on one SCPL form or samples from one location) at a time to ensure stormwater from different locations is not co-mingled.

[2] Cross-check the Location ID (e.g., MSGP00201) on the sample bottles with the LOCATION ID on the SCPL form (see example in Attachment 1).

[3] Ensure the pre-populated information on the SCPL form is correct. Document any changes [e.g., change FIELD MATRIX code from rain (WT) to snowmelt (WM)].

[4] Write the following information on the SCPL.

[a] Sampler Inspection and Sample Retrieval form (refer to EPC-CP-QP-2103) identification number (e.g., Work Order: MSGP-xxxx);

[b] Date/time the sample was collected in the field (e.g., date/time automated sampler filled sample bottles or a grab sample was taken);

[c] Date/time the sample was retrieved from the field;

[d] "Not Applicable" (N/A) in the LOCATION SYNONYM(S) field unless the information is required by the SAP;

[e] N/A in the PRIORITY box if box is not pre-populated;

[f] Any pertinent information regarding sample collection and/or retrieval in the SAMPLE COMMENTS field (e.g., grab sample collected by hand, recent erosion observed up-gradient of sampler) or N/A;

[g] N/A for FIELD PARAMETER Sample Time (this is documented at the top of the form as COLLECTION TIME);

[h] pH measurement taken at the time the sample was collected in the field (if applicable) or N/A;

[i] Indicate if a visual assessment was performed.

- IF a visual assessment **WAS NOT** performed,
  THEN write N or No in the Visual Inspection space.
- IF a visual assessment **WAS** performed,
  THEN write Y or Yes in the Visual Inspection space and the identification number from the MSGP Visual Assessment form (refer to EPC-CP-QP-2105) (e.g., MSGP-xxxx).

[j] The printed name and signature of the person who retrieved the sample in the COLLECTED BY box and date/time the sample was retrieved from field

[5] IF the person who retrieved the sample is processing,
THEN write N/A in the first RELINQUISHED BY and RECEIVED BY boxes.

[6] IF the person who retrieved the sample is NOT processing,
THEN

[a] He/she will print and sign his/her name and the date/time samples are relinquished to the processor in the RELINQUISHED BY box.

[b] The processor will print and sign his/her name and the date/time samples are received in the first RECEIVED BY box.

Sample Processor

[7] Ensure the following information is correct for the analysis requested on the SCPL.

[a] Sample container volume and type [e.g., 500 milliliter (mL) POLY].

[b] Preservation type (e.g., ICE, HNO_3).

[c] Note any deviation from the planned sample container volume, type, or preservation on the SCPL.

[8] Determine which samples require filtration and chemical preservation as requested on the SCPL.

[a] Mark each container lid with the 3-digit outfall ID, required analysis, filtration requirement, and preservative requirement.

***NOTE 2*:** Requirements are also identified in the most current SAP revision.

[9] For split samples, follow these steps:

[a] Turn the sample collection bottle upside down multiple times to ensure sediment is loose from the bottom of the bottle.

[b] Pour sample into sample containers ensuring the sample remains homogenized throughout the transfer.

[10] Refer to Section 4.2 Filtering Samples, Section 4.3 Preserving Unfiltered and Filtered Samples, and Section 4.4 Quality Control Samples as needed.

[11] Indicate if each sample on the SCL was collected by writing Y for Yes or N for No in the COLLECTED Y/N box.

[12] IF the SPECIAL INSTRUCTIONS box is not pre-populated,
THEN write N/A in the box.

[13] Document any other deviations from the planned sample processing on the SCPL (e.g., turbid sample required extra filtration step, used standard deionized water in lieu of ultrapure water for field blank) under PROCESSING COMMENTS or SAMPLING COMMENTS,

OR write N/A.

[14] IF no further processing is required (e.g., chemical preservation),
THEN apply a chain-of-custody seal/tape around the bottle and lid and sign and date the seal/tape.

[15] The person processing the sample will print and sign his/her name and indicate the date/time samples were processed in the PROCESSED BY box.

[16] Proceed to Section 4.5.

4.2 Filtering Samples

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

[1] Select the appropriate sized cartridge filter (e.g., 0.10µm or 0.45µm).

[2] Set up the filter assembly.

[a] Attach an appropriate amount of silicone tubing to both ends of the cartridge filter.

[b] Place the filter upstream of the peristaltic pump to prevent over-pressurization.

[c] IF the sample contains a significant amount of sediment,
THEN a pre-filter of the same size or larger micron capacity may be used.

[3] For split filtered samples, follow these steps:

[a] Move the intake tube up and down through the sample during filtration.

NOTE 1: A sample collected solely for filtration can be filtered without being homogenized by gently shaking.

[4] Replace the filter if any of the following conditions occur:

- flow diminishes,
- the pump begins to make a grinding sound, or
- the tubing is forced off the filter by backpressure.

[5] Place the lid on the container.

[a] Ensure the lid is securely affixed to the container.

[b] Add a check mark next to the filtered requirement previously marked on the lid to indicate that filtration has been completed.

[c] Clean and dry the exterior of sample container.

[d] Check sample container for leakage and breakage.

[6] Remove and dispose of filter and tubing when filtration of one sample set (location) has been completed.

***NOTE 2*:** A new filter must be used with each new sample set.

[7] Return to Section 4.1, Step 11.

4.3 Preserving Unfiltered and Filtered Samples

Preservation entails the addition of acid or base to a sample. Acids currently used include hydrochloric acid (HCl), nitric acid (HNO_3), and sulfuric acid (H_2SO_4). Bases currently used in preservation include sodium hydroxide (NaOH). Review the appropriate Material Safety Data Sheet or Safety Data Sheet for specific guidelines prior to preserving samples. Specific acids/bases used

depend on the required monitored parameters and are subject to change (e.g., biennial Clean Water Act §303(d)/305(b) Integrated Report updates).

WARNING
Preservatives are strong acids and bases that can cause severe burns. Take extreme care when using these acids and bases.

[1] Review the analysis requested on the SCPL or SAP.

[2] Select the pre-measured preservative type and size that matches the sample container size.

[a] IF you only have one size pre-measured preservative that does not match the sample container size,
THEN you will use more than one. For example, if you have a 1-liter sample container and 500 mL pre-measured preservative vial, you will need to add two preservative vials to the sample container.

***NOTE*:** 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). Error in measurement precision may lead to a risk of violating Department of Transportation shipping requirements.

[3] Add the preservative (acid or base) to the sample.

[a] Securely affix the lid to the container.

[b] Agitate the preserved sample by turning the container upside down two to three times.

[4] Add a check mark next to the preservation type previously marked on the lid to indicate that preservation has been completed.

[a] Clean and dry the exterior of sample container.

[b] Check sample container for leakage and breakage.

[5] Return to Section 4.1, Step 11.

4.4 Quality Control Samples

Refer to the SCPL or the program specific SAP for the types and quantities of quality control samples and the locations where these samples will be collected.

4.4.1 Field Blank Samples

[1] Review the analysis requested on the SCPL or SAP.

[a] Ensure the sample container volume, type, and preservation type is correct for the analysis requested (e.g., 500 mL POLY, HNO_3).

[b] Note any deviation from the planned sample container volume or type on the SCPL.

CAUTION

DO NOT use tap, distilled, or drinking water purchased from a local store. These sources may not meet the water quality standards specified in the New Mexico Administrative Code (Title 20, Chapter 6, Part 4)**.**

[2] Obtain analyte free water (e.g., High Performance Liquid Chromatography grade ultrapure in amber glass) in sealed bottle(s) in sufficient quantity to fulfill the analysis requested.

[3] Select another empty sample container(s) of the same type and volume for the analysis requested.

[4] Mark the bottle and container lids with the 3-digit outfall ID and "Field Blank".

[5] Transport both the field blank bottle(s) and container(s) to the sampling location.

[6] During retrieval of samples, open the field blank bottle(s) and pour the analyte free water into the field blank sample container(s).

[7] Securely affix the lid(s) to the container(s).

[8] Replace the lid on the analyte free water bottle.

[a] IF 500 mL or greater remain in the bottle,
THEN replace lid and mark the bottle with the date it was opened and "For Decon Use Only".

[b] IF less than 500 mL remain in the bottle,
THEN dispose of water in the EPC-CP Stormwater Laboratory sink and dispose of the bottle.

[9] Return the field blank containers with retrieved samples to the EPC-CP Stormwater Laboratory (TA-59-01) for any further required processing.

[10] Return to Section 4.1, Step 11 to complete sample processing.

4.4.2 Field Duplicate Samples

[1] Review the analysis requested on the SCPL or SAP.

[a] Ensure the sample container volume, type, and preservation type is correct for the analysis requested (e.g., 500 mL POLY, HNO_3).

[b] Note any deviation from the planned sample container volume, type, or preservation on the SCPL.

[2] Field duplicate samples must be samples collected from the same location, at the same time, and in the same manner:

- Select two sample collection bottles next to each other in the automated sampler carousel.

OR

- Select one sample collection bottle to split into separate sample containers

[3] For split samples, follow these steps:

[a] Turn the sample collection bottle upside down multiple times to ensure sediment is loose from the bottom of the bottle.

[b] Pour sample into sample containers ensuring the sample remains homogenized throughout the transfer.

[4] Return to Section 4.1, Step 11 to complete sample processing.

4.5 Handling Excess Stormwater

Minimize the amount of stormwater sample brought into the EPC-CP Stormwater Laboratory. Field personnel will attempt to retrieve only the volumes needed to fulfill the requested analyses from the current MSGP SAP or program/project specific SAP.

[1] IF any excess stormwater sample exists after processing has been completed, THEN perform the following steps.

Sample Processor

[a] Ensure the container is labeled with the site of origin, date and time sample was collected, and "Return to Site."

[b] Place the container in the designated storage location in the EPC-CP Stormwater Laboratory.

EPC-CP technical staff

[c] Return the sample to the site of origin as soon as possible.

[d] Discharge at the sampler location.

[2] IF the excess stormwater has been altered (e.g., tap water or preservative added), THEN contact the TA-59-0001 Waste Management Coordinator for further instruction.

4.6 Submit Samples for Shipping to Offsite Analytical Laboratory

Sample Processor

[1] Deliver completed SCPL(s) to the MSGP Data Manager.

MSGP Data Manager

[2] Process the sample information in the EIM system.

[a] Capture any documented deviations from planned conditions (as noted on the SCPLs).

[b] Generate Chain of Custody/Analysis Request (COC) form(s) and sample container labels to reflect the processed samples (see examples in Attachments 2 and 3).

Sample Processor

[3] Ensure the sample containers are securely sealed and wiped dry.

[4] Cross-check to ensure the Sample ID on the SCPL matches the Field Sample ID on the COC.

[5] Compare the information from the SCPL and lid of each container and apply the correct labels to the sample containers.

[6] IF the person who processed the sample is NOT submitting the samples to the SMO, THEN

[a] He/she will print and sign his/her name and the date/time samples are relinquished to the submitter in the second RELINQUISHED BY box.

[b] The submitter will print and sign his/her name and the date/time samples are received in the second RECEIVED BY box.

EPC-CP technical staff

[7] Place the sample(s) in a cooler with sufficient Blue Ice® (or equivalent) to maintain the required preservation temperature (≤4° C).

***NOTE*:** Cushioning material (e.g., bubble wrap) may be used to separate containers to avoid breakage during transport

[8] Place the SCPL(s) and COC(s) in a zip lock type bag, seal, and place in the cooler with samples.

[9] Transport samples to the SMO.

[a] Deliver samples during SMO business hours by 2pm for same day shipping.

[b] Coordinate with the SMO for delivery during other times or for delivery of samples that have limited holding times.

[c] If delivery of samples to the SMO will be delayed, place sample containers with SCPL(s) in the EPC-CP Stormwater Laboratory refrigerator and ensure the refrigerator is locked.

[10] Complete the COC form as follows:

[a] On the Relinquished By line, the person submitting the sample(s) will sign and print his/her name and date/time samples are relinquished to the SMO.

[b] The SMO personnel accepts the sample(s) by signing and printing his/her name and recording the date/time on the Received By line.

[11] Complete the SCPL form as follows:

[a] Ensure all fields are filled out with sample information or N/A. Do not leave blank fields.

[b] In the RELINQUISHED BY box, the person submitting the sample(s) will sign and print his/her name. Sign and print your name on the SCPL in the "Relinquished By" box.

[c] Record the date/time that matches the data and time RELINQUISHED BY on the COC.

[d] Record the COC number (e.g., 2017-xxxx) in the RECEIVED BY box.

[12] Ensure the following steps are taken:

[a] SMO makes a copy of the SCPL(s) to accompany the COC and samples.

[b] Keep the original SCPL(s) for the MSGP program.

[c] Make a copy of the signed Chain of Custody/Analysis Request.

[13] Deliver the copy of the signed COC and original SCPL(s) to the MSGP Data Manager for record keeping.

5.0 TRAINING

All EPC-CP personnel that execute the activities specified in this procedure must meet the minimum qualification and training requirements for their position as identified EPC-CP-PIP-2101, NPDES Multi-Sector General Permit Program. This will include “self-study” (required reading) for this procedure as assigned and documented in accordance with ENV-DO-QP-115, *Personnel Training*. Other participating LANL groups may require training documentation pursuant to local procedures.

Contract personnel that execute the activities specified in this procedure will be qualified and trained as required by the Exhibit D and Exhibit F. In addition, contract personnel will be required to complete “self-study” (required reading) of this procedure.

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

- EPC-CP MSGP SAP for the current monitoring year
- EPC-CP-QP-2103 Inspecting Stormwater Runoff Samplers and Retrieving Samples for the MSGP

6.0 RECORDS

EPC-CP is the Office of Record for this document and must be maintained in accordance with PD1020, *Document Control and Records Management* and ADESH-AP-006, *Records Management*

Plan. Records generated by this document will be submitted to the Records Management designated point of contact or document manager for document management.

Below are records generated as a result of implementing this procedure. Records generated are identified by title and type.

Record Title	QA Record	Non-QA Record
*Water Sample Collection and Processing Log/Field Chain of Custody	☒	☐
*Chain of Custody/Analysis Request	☒	☐
Copy of log book entry(s) (if a log book is used)	☒	☐
Other pertinent field or lab notes (if additional notes are required)	☒	☐

*The original document is part of the data package QA records for the SMO. MSGP retains a copy for tracking purposes only.

7.0 DEFINITIONS AND ACRONYMS

7.1 Definitions

See LANL *Definition of Terms*.

7.2 Acronyms

See LANL Acronym Master List.

COC	Chain of Custody/Analysis Request
EIM	Environmental Information Management
EPA	Environmental Protection Agency
EPC-CP	Environmental Protection and Compliance – Compliance Programs
LANL	Los Alamos National Laboratory
µm	Micron
mL	Milliliter
MSGP	Multi-Sector General Permit
N/A	Not Applicable
NPDES	National Pollutant Discharge Elimination System
SAP	Sample Analysis Plan
SCPL	Water Sample Collection and Processing Log/Field Chain of Custody
SMO	Sample Management Office

8.0 REFERENCES

None.

9.0 ATTACHMENTS

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

Attachment 1: Water Sample Collection and Processing Log/Field Chain of Custody Example

(Page 1 of 1)

Los Alamos National Laboratory

WATER SAMPLE COLLECTION AND PROCESSING LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 11743 **EVENT NAME:** MSGP 2018

SAMPLE ID: MSGP-18-153015 **WORK ORDER:** MSGP-12345

COLLECTION DATE/TIME: 07/01/18 16:03 **RETRIEVAL DATE/TIME:** 07/03/18 09:25

LOCATION ID: MSGP04301 **SAMPLER TYPE:** APS-R

LOCATION TYPE: WCS **SAMPLE PREP:** UF

LOCATION SYNONYM(S): N/A **FIELD QC TYPE:** REG

FIELD MATRIX: WT **SAMPLE USAGE:** COMP

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS	PROCESSING COMMENTS
N/A	MSGP-TSS	~~500~~ 250 ML POLY	1	ICE	X	N/A	N/A

SAMPLE COMMENTS: N/A

FIELD PARAMETERS:

Sample Time N/A HH:MM pH 6.2 SU Visual Inspection Y SU

Visual Inspection WO# MSGP-67890

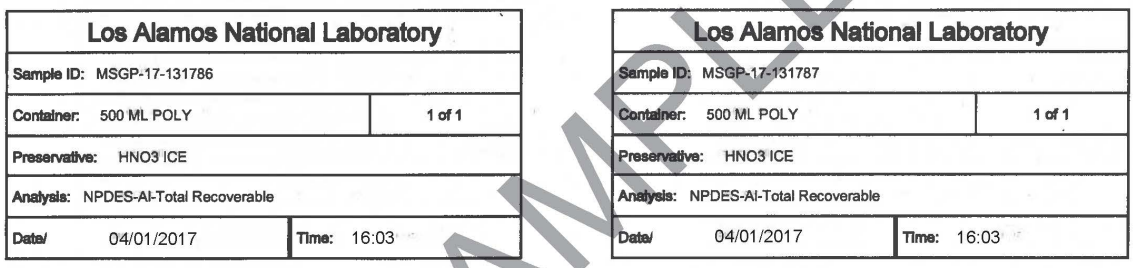
COLLECTED BY (Printed Name) (Signature)	Jane Doe	Date/Time 07/03/18 09:25			
RELINQUISHED BY (Printed Name) (Signature)	Jane Doe	Date/Time 07/03/18 10:05	RECEIVED BY (Printed Name) (Signature)	John Smith	Date/Time 07/03/18 10:05
PROCESSED BY (Printed Name) (Signature)	John Smith	Date/Time 07/03/18 13:00			
RELINQUISHED BY (Printed Name) (Signature)	John Smith	Date/Time 07/04/18 08:35	RECEIVED BY (Printed Name) (Signature)	See COC# 2017-1326	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	N/A	Date/Time	RECEIVED BY (Printed Name) (Signature)	N/A	Date/Time

Report Date: 08/01/2018

EXAMPLE

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

EXAMPLE

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

ATTACHMENT 21: EPC-DO-QP-101, *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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	EPC-CP, Group Leader	Signature on File	8-3-17
Responsible Line Manager	Organization	Signature:	Date:
	EPC-DO, Division Leader	Signature on File	8-7-17

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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.

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1.0 INTRODUCTION

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

1.1 Purpose

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

1.2 Applicability

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

2.0 PRECAUTIONS AND LIMITATIONS

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

3.0 RESPONSIBILITIES

The following personnel require training before implementing this procedure:

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

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

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

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

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

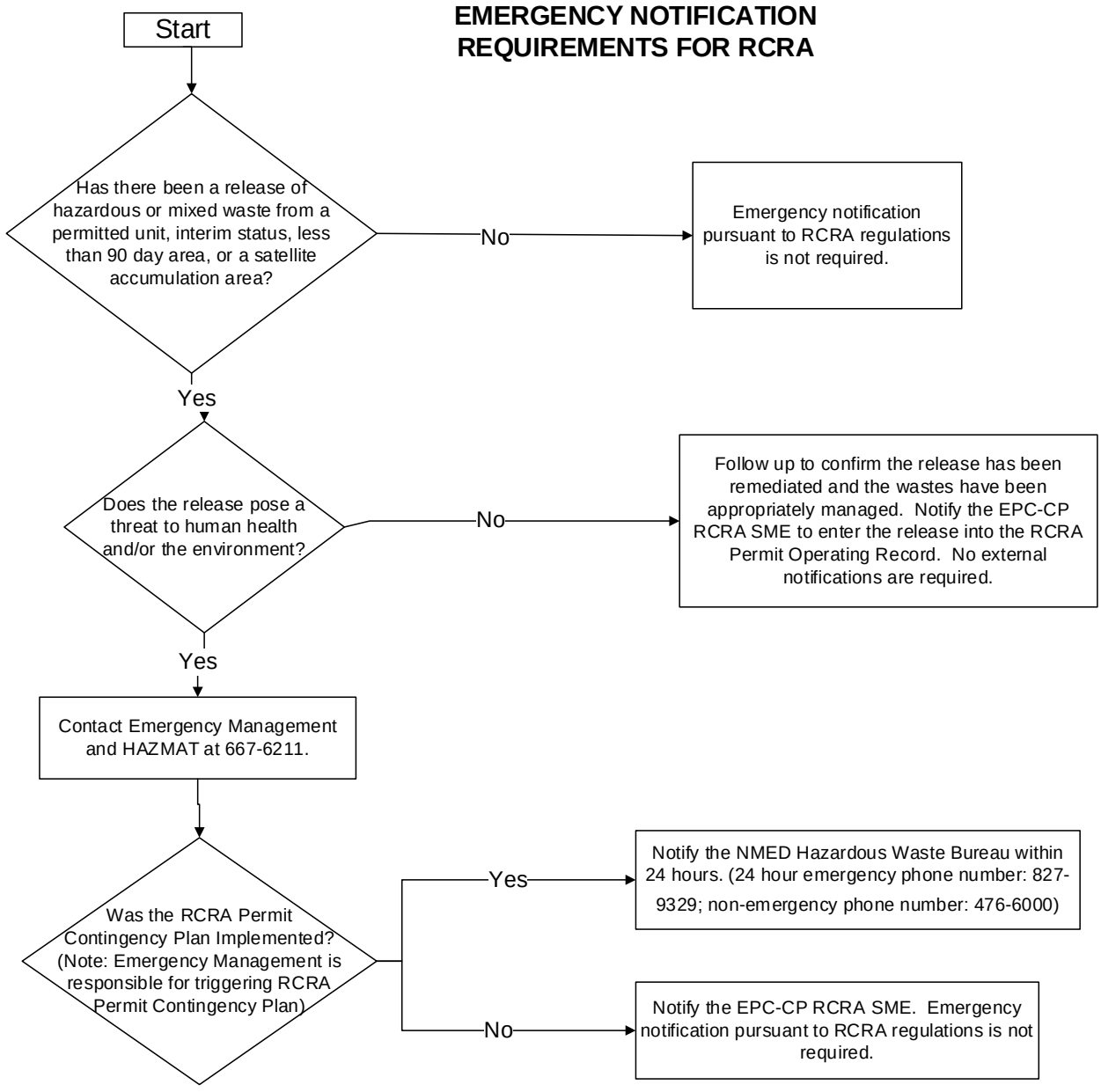
- National Response Center (NRC) Web Site: http://www.nrc.uscg.mil/
- NMWQCC Regulations, 20.6.2 NMAC, dated December 1, 2001
- P407, Water Quality
- P1020-1, Laboratory Records Management
- ADESH-AP-006, Records Management Plan

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 22: ENV-CP-QP-007, *SPILL INVESTIGATIONS*

ENV-CP-QP-007	Revision: 10	Los Alamos NATIONAL LABORATORY EST. 1943
Effective Date: 09/30/15	Next Review Date: 09/30/18	

Environment, Safety, Health Directorate

Environmental Protection – Compliance Programs

Quality Procedure

Spill Investigations

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History of Revisions

Document Number *[Include revision number, beginning with Revision 0]*	**Effective Date** *[Document Control Coordinator inserts effective date]*	**Description of Changes** *[List specific changes made since the previous revision]*
0	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.

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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
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 23: **EPC-CP-QP-2110, *MSGP STORMWATER POLLUTION PREVENTION PLAN PREPARATION AND MAINTENANCE***

EPC-CP-QP-2110	Revision: **0**	Los Alamos NATIONAL LABORATORY EST.1943
Effective Date: 01/07/2020	Next Review Date: 01/07/2023	

Environment, Safety, Health, Quality, Safeguards, and Security Directorate

Environment Protection and Compliance – Compliance Programs Group

Quality Procedure

MSGP Stormwater Pollution Prevention Plan Preparation and Maintenance

Hazard Grading: ☒ Low ☐ Moderate ☐ High/Complex

Usage Level: ☒ Reference ☐ UET ☐ Mixed: UET Sections: _____

Status: ☒ New ☐ Major Revision ☐ Minor Revision

☐ Review w/No Changes ☐ Other: _____

Safety Basis: ☒ N/A ☐ USQ ☐ USI Number: _____

Document Author/Subject Matter Expert:

Name:	Organization:	Signature:	Date:
Holly L. Wheeler	EPC-CP	Signature on File	1-6-2020

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

Name:	Organization:	Signature:	Date:
Steven E. Wolfel	EPC-CP	Signature on File	1-6-2020

Approval Signatures:

EPC-CP Reviewer:	Organization:	Signature:	Date:
Terrill W. Lemke, Team Leader	EPC-CP	Signature on File	1-7-2020
EPC-CP RLM:	Organization:	Signature:	Date:
Taunia Van Valkenburg, Group Leader	EPC-CP	Signature on File	1-7-2020

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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]*
EPC-CP-QP-2110, Rev. 0	01/07/2020	New document

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1.0 INTRODUCTION

The Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP), also referred to as the Permit, contains specific requirements for industrial activities of Los Alamos National Laboratory (LANL) covered by the permit. One requirement is the preparation, maintenance, and routine revision of a Stormwater Pollution Prevention Plan (SWPPP).

1.1 Purpose

Active MSGP facilities must be included in a SWPPP. The SWPPP is intended to document the selection, design, and installation of control measures to meet permit effluent limits. Additional documentation required by the Permit is to be kept with the SWPPP (including inspection maintenance, monitoring, and corrective action) and is intended to document the implementation of permit requirements.

1.2 Scope

This procedure contains information and specific steps for preparing a SWPPP, and identifying and documenting conditions in order to meet Permit requirements. Part 5 of the Permit contains specific requirements for developing, maintaining, and revising a SWPPP for facilities with stormwater discharge associated with industrial activities permitted under an MSGP. Part 5.5 describes the additional documentation required to be kept with the SWPPP.

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 develop and maintain SWPPPs at MSGP regulated LANL facilities operated by Triad, LLC.

2.0 PRECAUTIONS AND LIMITATIONS

The hazard rating for the activities described in this procedure is **LOW** and does not require an Integrated Work Document.

3.0 PREPARING AN MSGP STORMWATER POLLUTION PREVENTION PLAN

Part 5 of the Permit contains the specific requirements for developing, maintaining, and revising a SWPPP. At a minimum, the SWPPP must contain the following elements:

- Stormwater pollution prevention team (Stormwater PPT);
- Site description (including a site map);
- Summary of potential pollutant sources;
- Description of control measures;

- Schedules and procedures;
- Documentation to support eligibility considerations under other federal laws; and
- Signature requirements.

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

The template provided in Attachment 1, EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* contains the elements required in a LANL MSGP SWPPP. Contact the MSGP Program Lead for questions regarding content.

3.1 Gathering Information for the SWPPP

SWPPP Preparer

[1] Contact the MSGP Program Lead for a copy of the most current SWPPP template.

[2] Obtain a copy of the previous year's SWPPP for reference (if one is available).

[3] Review the SWPPP template.

[a] Identify information that will need to be included in the SWPPP (e.g., MSGP sector, operational areas, Pollution Prevention Team member names, etc.).

[b] Identify documents that will need to be attached to the SWPPP (e.g., certifications, memorandums, maps, data summaries, endangered species reports, etc.).

[4] Identify documents and/or reports that are provided by EPC-CP.

[a] Contact the MSGP Program Lead with a request for needed information.

[5] Obtain maps as specified in the SWPPP template.

[a] Request a new map or update to existing map from the MSGP Program Lead.

[b] Provide a draft or map markup with information as required in the Permit.

3.2 Preparing the SWPPP

SWPPP Preparer

[1] Use a copy of the most current SWPPP template.

[2] Add information to the relevant sections.

[3] Text highlighted in yellow indicate areas to be replaced with facility specific information.

[a] IF text is part of an instruction (e.g., Insert site description text here.)
THEN delete the entire line and replace with the appropriate information.

[b] IF text is embedded as part of the line,
THEN replace just the yellow highlighted text with appropriate information (e.g., delete *Sector XX-(Insert Sector Title)* and replace with *Sector P – Land Transportation & Warehousing)*.

[4] Delete attachments that are not applicable to the active facility specific SWPPP.

[5] Attach other documentation (e.g., Spill Prevention, Control and Countermeasure Plan, Environmental Management System, copies of relevant portions of documents) as necessary.

[6] Send the draft SWPPP to the EPC-CP MSGP Program Lead and request a review.

NOTE 1: The EPC-CP MSGP Program Lead may delegate the review to personnel in the Storm Water Permitting/Compliance Team.

MSGP Program Lead or Designee

[7] Review the SWPPP to ensure information required by the Permit is included.

[a] Encourage the use of the *MSGP SWPPP Review Guidance Checklist* as a best management practice to cross-check SWPPP content with the Permit. See checklist example in Attachment 2.

[b] Provide comments to the SWPPP Preparer.

SWPPP Preparer

[8] The Preparer must resolve review comments with the MSGP Program Lead.

[9] Obtain the signature of a duly authorized representative (refer to Appendix B, Subsection 11 of the Permit) on the certification statements associated with the SWPPP and attachments (refer to Attachment 9 of the *MSGP SWPPP Template* Example).

NOTE 2: The Review & Approval System for Scientific and Technical Information (RASSTI) system requires upload of only PDF documents. It is highly recommended that all final certifications obtained contain a written signature rather than electronic signature. The RASSTI system adds a cover page to the document containing the LA-UR number, which obviates all electronic signatures due to the document change.

4.0 MAINTAINING THE MSGP SWPPP

4.1 Availability of the MSGP SWPPP

A complete copy of the current SWPPP is required to be kept at the active facility in an accessible format. The SWPPP must be immediately available to facility employees, EPA, and other entities identified in the Permit. The SWPPP must also be made available to the public. LANL meets this requirement by posting SWPPPs to the Public Reading Room internet web page. Refer to Part 5.4 of the Permit for more information.

SWPPP Preparer

[1] Submit the final certified SWPPP in PDF format to the RASSTI system at *rassti.lanl.gov*.

[a] The SWPPP must be identified as Los Alamos Unlimited Release, or LA-UR, to be posted to the Public Reading Room.

[b] Identify a derivative classifier to review the document.

[c] Identify the document for a **full classification review**. The Designated Unclassified Subject Area, or DUSA, system may **NOT** be used.

[d] Identify a line manager for an approval signature.

[e] Identify the document for release to Public Reading Room.

[2] Add the cover page containing the LA-UR number generated by the RASSTI system to the SWPPP.

[3] Contact the RASSTI staff for questions and assistance using this system.

4.2 Additional Documentation Requirements

The Permit requires additional documentation to be kept with the SWPPP that together keep records complete and up-to-date, and demonstrate full compliance with the conditions of the Permit. Some documents may be generated when a SWPPP is first written (e.g., copy of the permit). Other documents may be generated on an ongoing basis throughout a calendar year (e.g., inspections). Refer to Part 5.5 of the Permit for additional information.

SWPPP Preparer or Owner

[1] IF any of the following documents are generated,

THEN add the document to the facility SWPPP as soon as the document is generated and finalized (i.e., all signatures have been obtained).

- A copy of the Notice of Intent to Discharge (NOI) submitted to EPA and correspondence exchanged between Triad, LLC and EPA specific to coverage under the permit;

NOTE: There may be several modifications to the NOI during a permit term. Ensure you coordinate with the MSGP Program Lead to confirm all modifications are included in the SWPPP.

- A copy of the acknowledgement received from the EPA assigning the NPDES permit identification number
- A copy of the permit;
- Documentation of maintenance and repairs of control measures (refer to Part 2.1.2.3 of the Permit);
- All inspections, including Routine Facility Inspections and Quarterly Visual Assessments (refer to Parts 3.1.2 and 3.2.2 of the Permit);
- Description of any deviations from the schedule for visual assessments and/or monitoring, and the reason for the deviations (refer to Parts 3.2.3 and 6.1.5 of the Permit);
- Corrective action documentation (refer to Part 4.4 of the Permit);
- Documentation of any benchmark exceedances and the type of response to the exceedance employed;
- Documentation to support any determination that pollutants of concern are not expected to be present above natural background levels if stormwater is discharged directly to impaired waters; and
- Documentation to support any claim that the facility has changed its status from active to inactive and unstaffed.

5.0 REVISING THE MSGP SWPPP

The Permit specifies conditions that trigger a SWPPP review to ensure numeric and non-numeric effluent limits are met and to determine if modifications to stormwater controls are necessary (refer to Parts 4.1 and 4.2 of the Permit).

The SWPPP must also be modified based on corrective actions and deadlines required under Part 4.3 of the Permit, and documented in accordance with Part 4.4 of the Permit.

At a minimum, the SWPPP must be reviewed and revised once per calendar year, and no later than 45 days after conducting the final routine facility inspection for the year.

SWPPP Preparer or Owner

[1] The Stormwater PPT will review the SWPPP for the following at a minimum.

- The selection, design, installation, and implementation of control measures.
- Sources of pollution.

- Spill and leak procedures.
- Non-stormwater discharges (as applicable).

[2] IF any of the following conditions occur or are detected during an inspection, monitoring or other means,

THEN the Stormwater PPT must **immediately** review the SWPPP as specified above.

- Unauthorized release or discharge (e.g., spill, leak, discharge of non-stormwater not authorized by the permit);
- A discharge violates a numeric effluent limit (refer to Table 2-1 of the Permit);
- Controls measures are not stringent enough for discharge to meet applicable water quality standards or the non-numeric effluent limits in the permit;
- A required control measure was never installed, installed incorrectly, or not in accordance with Parts 2 and/or 8, or is not properly operated or maintained;
- Whenever a visual assessment shows evidence of stormwater pollution (e.g., foam, oil sheen, etc.).
- Construction or a change in design, operation, or maintenance at the facility that significantly changes the nature of pollutants discharged in stormwater from the facility , or significantly increases the quantity of pollutants discharged;

  NOTE 1: Changes include building removal or replacement, BMP removal or installation, outfall removal or creating a new outfall, changing drainage pathways or the path of stormwater flow.

- The average of four quarterly sampling results exceeds an applicable benchmark.

  NOTE 2: If less than four benchmark samples have been taken, but the results are such that an exceedance of the four quarter average is mathematically certain this is considered a benchmark exceedance.

[3] The Stormwater PPT must determine the modification(s) to be made to implement or maintain control measures and/or take corrective action.

[4] The revision/modification(s) will be implemented at the facility.

[5] The SWPPP will be revised/modified within 14 days of completion of a modification or corrective action to reflect the modification(s) made.

[6] Obtain a signature and date from a duly authorized representative on all SWPPP revisions/modifications in accordance with Appendix B, Subsection 11 of the Permit.

6.0 TRAINING

The following personnel require training before implementing this procedure.

- Deployed Environment, Safety, and Health Group and Team Leaders
- EPC-CP MSGP stormwater compliance personnel
- DEPs
- Other LANL or subcontract personnel identified as being required to prepare and maintain MSGP SWPPPs as part of their job duties

All EPC-CP personnel that execute the activities specified in this procedure must meet the minimum qualification and training requirements for their position as identified EPC-CP-PIP-2101, NPDES Multi-Sector General Permit Program. This will include "self-study" (required reading) for this procedure as assigned and documented in accordance with ADSH-TPP-301, *ADESH Training Program Plan*. Other participating LANL groups may require training documentation pursuant to local procedures.

Contract personnel that execute the activities specified in this procedure will be qualified and trained as required by the Exhibit D and Exhibit F. In addition, contract personnel will be required to complete "self-study" (required reading) of this procedure.

7.0 RECORDS

MSGP SWPPPs are signed and certified by a duly authorized representative of the individual facilities. These completed documents are maintained at the permitted facility, managed by the facility's Records Management designated point-of-contact or document manager, and posted to the LANL public reading room. The MSGP team may retain a copy for reference purposes.

Below, are records generated as a result of implementing this procedure. Records generated are identified by title and type.

Record Title	QA Record	Non-QA Record
Stormwater Pollution Prevention Plan	☒	☐
MSGP SWPPP Review Guidance Checklist	N/A	N/A

8.0 DEFINITIONS AND ACRONYMS

8.1 Definitions

See LANL *Definition of Terms*.

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.

EPA	Environmental Protection Agency
EPC-CP	Environmental Protection and Compliance-Compliance Programs
DEP	Deployed Environmental Professional
DUSA	Designated Unclassified Subject Area
LANL or the Laboratory	Los Alamos National Laboratory
LA UR	Los Alamos Unlimited Release
MSGP or Permit	Multi-Sector General Permit
NPDES	National Pollutant Discharge Elimination System
NOI	Notice of Intent to Discharge
SWPPP	Stormwater Pollution Prevention Plan
PDF	Portable Document Format
PPT	Pollution Prevention Team

9.0 REFERENCES

Unites States Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit for Stormwater Discharges Associated With Industrial Activity (MSGP)

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

Clean Water Act, Title 33 U.S.C. 1251

10.0 ATTACHMENTS

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template* Example
Attachment 2: *MSGP SWPPP Review Guidance Checklist* Example

Attachment 1: EPC-CP-QP-2110 R0 Form 1, MSGP SWPPP Template Example
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MSGP Stormwater Pollution Prevention Plan

Insert Facility Name

Triad National Security, LLC
Los Alamos National Laboratory

XX/XX/XXXX

Revision X

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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EXAMPLE

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EXAMPLE

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EXAMPLE

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EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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Insert Name of Facility
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. The SWPPP uses the industry specific permit requirements for *Sector XX-(Insert Sector Title)* as a guide. The applicable stormwater discharge permit is EPA General Permit Identification Tracking 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 (List the operational areas) 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 (Insert facility name). The current MSGP expires at midnight on June 4, 2020.

EXAMPLE

1.0 FACILITY DESCRIPTION

1.1 Facility Information

Name of Facility: (Insert facility name e.g., TA-3-22 Power and Steam Plant)		
Street: P.O. Box 1663		
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): SIC XXXX, Sector X, Subsector XX		
Estimated area of industrial activity at site exposed to stormwater: XX acres		
Discharge Information		
Name(s) of surface water(s)/segment that receives stormwater from your facility: Sandia Canyon (Sigma Canyon to NPDES outfall 001). Note: For Roads and Grounds also add "and Mortandad Canyon (within LANL)". Note: For Asphalt Batch Plant alone, delete Sandia Canyon information and insert only "Mortandad Canyon (within LANL)."		
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: (Insert pollutants: list can be found in the Triad Notice of Intent (NOI)		

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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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? (Note: Asphalt Batch Plant is subject to ELGs) Not applicable.

1.2 Stormwater Pollution Prevention Team (PPT)

Insert a description of the team

The specific duties of individual team members of the PPT are listed in the table below.

Staff Names	Individual Responsibilities
Group Leader: Name Title, Organization	Responsible for the management of all environmental, safety, health, and quality programs for the yards, buildings and facilities 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 problems noted during inspections are corrected. The Group Leader must also ensure adequate resources are obtained to ensure compliance requirements of the MSGP and this SWPPP are met.
Deployed Environmental Professional (DEP): Name Title, Organization	Responsible for the management of all environmental programs and issues for the yards, buildings and facilities listed within this Plan. The DEP is responsible for training, recordkeeping, and SWPPP revision. The DEP ensures documentation of inspections 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 and operations personnel regarding implementation of the MSGP and this SWPPP. Lastly, the DEP conducts routine facility inspections and if necessary, visual assessments, in accordance with the Permit. Identified conditions requiring corrective actions from routine facility inspections are entered into the Environmental Protection and Compliance-Compliance Programs (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.
Facility Operations Division (FOD) Manager: Name Title, Organization	Responsible for managing the maintenance and operation of all aspects of the yards, buildings and facilities listed within this Plan. The manager shall provide review and ensure coordination with core personnel and the PPT, as appropriate, when tenants within

EXAMPLE

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	the FOD propose new processes, operations, features, or a new site that may be subject to the MSGP.
EPC Core: Name Title, Organization	The MSGP Program Lead is responsible for managing and administering the MSGP Program for all industrial facilities operated by Triad within Los Alamos National Laboratory. The MSGP Program Lead advises and provides guidance to facility or operations personnel on NPDES MSGP regulations/requirements. The Program Lead also acts as the institutional point of contact for all interactions with the regulatory authority (EPA) and supervises personnel implementing stormwater monitoring requirements for the facility.
Operations Manager(s): Name Title, Organization	Responsible for day-to-day operations at the facility. Assists the DEP and EPC with inspections; spill reporting; implementing, installing and maintaining storm water controls (also known as Best Management Practices) (BMPs); and providing documentation as requested by other team members. The Operations Manager is key to ensuring adequate communication and coordination of issues regarding implementation of the MSGP and this Plan. Operations Managers also assist the DEP/EPC with SWPPP training and/or briefings, as requested.

1.3 Site Description

Insert text with site description. Include information on type of operation(s), industrial operating equipment (associated with the Asphalt Batch Plant and the TA-3-22 Power and Steam Plant), main structures, activities, outfalls, and substantially identical outfalls.

1.4 General Location Map

The general location map for the facility can be found in Figure A. Figure B-X (if you have more than one site map, list them all here) contains all site maps and identifies all receiving waters associated with stormwater discharges from the facility. X percent of the site flows to (Insert canyon name). The canyon at this location is a (Insert stream type e.g., perennial, ephemeral, intermittent) and eventually flows to the Rio Grande approximately X miles southeast of the site.

1.5 Site Map

The site map is provided as Figure B-X (if you have more than one site map, list them all here) and illustrates the facility's activities: including facility boundary, structures, impervious surfaces, industrial activity areas, spills, operational areas, drainage patterns, stormwater controls, monitoring locations, outfalls and nearby receiving streams.

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

- **Site boundaries and acreage.** The site covers approximately X acres.
- **Significant structures and impervious surfaces.** The site is X percent impervious, primarily structures and paved lots.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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- **Direction of stormwater flow and site drainage.** Direction of flow is indicated with arrows.
- **Locations of stormwater control measures.**
- **Locations of all receiving waters.** In the immediate vicinity of the facility, (Indicate if any of the waters are Impaired and, if so, whether the waters have TMDLs established for them. See paragraph below this list). Also, indicate if the receiving water includes a wetland. A map of nearby receiving waters is provided as Figure B-X.
- **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 005, 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 (Insert "no areas" or a number of areas) in the direct vicinity of the facility. However, a map for threatened and endangered species within LANL property is included as Figure B-X.
- Locations of the following activities where such activities are exposed to precipitation:
  - Insert all facility activities exposed to stormwater (e.g., fueling locations; loading/unloading areas; locations used for the treatment, storage, or disposal of wastes; liquid storage tanks; processing and storage areas; machinery; location and sources of run-on to the site; transfer areas for substances in bulk; immediate access roads used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; and vehicle and equipment maintenance and/or cleaning areas. Only include the activity areas specific to the facility (for example, if you do not refuel within the active facility boundary, do not include "fueling locations" in this bulleted list). Use a secondary bullet list level in this section.

EXAMPLE

2.0 POTENTIAL POLLUTANT SOURCES

Industrial activities that could potentially result in releases to the environment are summarized in 2.1 below. The site map for the facility is provided in Figure B-1.

Insert text describing structures and industrial activities that could potentially result in a release to the environment. Include information on location (e.g. inside, outside), associated containment, protection (e.g., roofed areas or coverings), and other devices or practices to prevent or contain spills, prevent run-on and run-off.

2.1 Potential Pollutants Associated with Industrial Activity

List specific areas and activities that could potentially result is a release to the environment and the constituents that may be released. Include a list of any Solid Waste Management Units and Areas of Concern (also known as Consent Order Sites or Potential Release Sites) with a description of each and associated potential pollutants/contaminants.

2.2 Spills and Leaks

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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Insert information on spill and leak history at the facility, if any. Text may be in table format as shown below.

Date	Description	Outfall(s) Affected

Insert information on areas where spills and leaks could occur at the facility. Text may be in table format as shown below.

Specific Equipment/Industrial Activity Areas and Location	Outfall(s) Affected

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. In addition, spills within MSGP facility boundaries will be entered as conditions requiring corrective action in the MSGP CAR database and will be updated as corrective action occurs, in accordance with EPC-CP-QP-022, *MSGP Corrective Actions*.

The probability of spills or releases at the facility is minimized by (Insert information on how the facility will minimize spills and leaks).

2.3 Unauthorized Non-Stormwater Discharges

Insert information describing any NPDES permitted non-stormwater discharges, unpermitted outfalls, or unauthorized discharges associated with the facility. Describe any potential sources of non-stormwater discharges (e.g., testing of fire hydrants) and where wastewater drains to. Include a reference to the "Non-Stormwater Discharge Assessment and Certification" and indicate that it is provided in Attachment 3.

2.4 Salt Storage

Insert text describing salt storage areas at the facility, if present. If none exists, state salt is not stored at the facility.

2.5 Historical Data Summary

The following tables provide monitoring data at the facility for the past X years.

Permitted Facility: (insert facility name)

Calendar Year XXXX

Contact MSGP Program Lead to obtain this information formatted for insertion.

Note: This information will be updated every year during the annual SWPPP update, to include the 3 most current years of monitoring data.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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3.0 STORMWATER CONTROL MEASURES

Control measures at the facility are designed to minimize the potential release of pollutants that could adversely affect water quality. Insert text with stormwater control measure information.

3.1 Non-Numeric Technology-Based Effluent Limits

Insert text with non-numeric technology-based effluent limits information. Note: This is specific to Sectors A, AA, N, O and P.

3.1.1 Minimize Exposure

Insert text describing all structural controls (structures or covers) or practices used to minimize the exposure of industrial activities to precipitation. The SWPPP must describe where the controls or practices are being implemented at the facility. Examples of exposure-minimizing control measures include: location and extent of grading, berms, curbs used to contain contaminated stormwater or divert it around areas of industrial activity, materials stored within secondary containment, location of spill cleanup kits, schedule for employee spill abatement and cleanup training, procedure or practices for storage of leaky vehicles and equipment.

3.1.2 Good Housekeeping

Good housekeeping practices specifically applicable to the prevention of stormwater contamination include the following measures: Insert text describing any practices implemented to keep exposed areas at the facility clean. Describe where each practice is being implemented at the facility. Examples of good housekeeping control measures include how workspaces are maintained; routine inspections of heavy equipment, other equipment and waste containers; inspections of material storage areas; identifying specific personnel/positions responsible for empting drip pans, etc. Refer to Section 4.1 of this document for specific schedules for waste and recyclable material pickup and sweeping.

All site areas exposed to precipitation are walked down during daily operations and monthly routine facility inspections to ensure that the grounds are kept in an orderly condition. The outdoor metal storage areas are inspected to ensure all piping and metal raw material is off the ground on storage racks and covered, or stored inside buildings, sheds or transportable containers. Vehicle and forklift parking areas are inspected for leaks or spills as well as storage areas containing oil-filled equipment. The entire site, including loading areas and outfalls, are inspected for floatable debris, garbage, waste and all other potential pollutants. All dumpsters and roll-off bins are inspected to ensure they are closed.

3.1.3 Maintenance

Control measures at the facility will be kept in effective operating condition by the implementation of scheduled preventive maintenance, standard operating procedures (SOPs), engineering guidance, and manufacturer's specifications as applicable. If control measures need to be replaced or repaired to maintain compliance with the 2015 MSGP, necessary modifications will be made according to the timelines specified in the *Corrective Action and Deadlines* requirements of Section 6.0 of this SWPPP.

Deficient items identified during routine facility inspections, walk-downs, or by any other means of identification, will be documented on the routine facility inspection forms and entered into the MSGP CAR database. The condition requiring corrective action will remain open until proper maintenance or

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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corrective action has been completed. CAR information, along with documentation of maintenance/repair of control measures, is in Attachment 9 of the SWPPP.

Insert text identifying how industrial equipment is maintained to avoid leaks or other releases. Also, include information on how site-specific control measures are maintained to ensure effective operating condition.

3.1.4 Spill Prevention and Response

Spills, leaks, or other releases will be prevented and minimized by (insert information on how the facility prevents and minimizes unauthorized releases).

Insert text describing the general facility approach to spill cleanup.

All spills or releases are reported to EPC-CP by using the spills pager (505) 664-7722. Although incidental spills may be cleaned up by facility personnel, all emergency spills or releases are reported to Emergency Management Division-Emergency Response (EMD-ER) and/or the Facility Duty Officer by calling 667-2400. If fire or explosion is present, or if the potential for such exists, the situation must be reported by dialing 911 from a non-cellular phone or by activating a fire pull box. In the event of a spill, EMD-ER will coordinate appropriate cleanup procedures and EPC-CP will notify the individuals or organizations responsible for completing spill reports and providing information needed to fulfill regulatory reporting requirements.

Unauthorized releases or discharges within industrial facility boundaries are entered into the MSGP Corrective Action Reporting database in accordance with EPC-CP-QP-022, *MSGP Corrective Actions*. In addition, the completion of an Unplanned Release Report is required in the event of a spill. The 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 and/or written notification to the National Response Center, Environmental Protection Agency Region VI, or the New Mexico Environment Department (NMED). EMD-ER, the FOD and EPC-CP, in accordance with Laboratory and DOE policies and federal and state regulatory reporting requirements, will make the determination for the type of reporting required. EPC-DO-QP-101, *Environmental Reporting Requirements for Releases or Events* is used for this purpose (see Attachment 21).

Copies of internal spill reports are maintained by the responsible organization and in the EPC-CP database. The EPC-CP procedure for spill reporting and response, ENV-CP-QP-007, *Spill Investigations*, can be found in Attachment 22 of this SWPPP.

3.1.5 Erosion and Sediment Control

Insert text describing how erosion at the facility and sediment transport off the facility is prevented/minimized. Erosion control measures that prevent soil or sediment from becoming mobilized should be used as the primary line of defense. Sediment control measures that trap, infiltrate, or settle out mobilized sediments, should be used to back-up the erosion control measures.

3.1.6 Management of Runoff

Insert text describing how the facility manages stormwater runoff. This will include a description of controls used to divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff. Installed or utilized control measures may be listed with a description of their function at the facility.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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3.1.7 Salt Storage Piles or Piles Containing Salt

Insert text describing how the facility manages salt storage piles or piles containing salt. Offloading operations should occur within contained areas with appropriate measures in place to prevent off-site migration or track out of salt from the contained area. Installed or utilized control measures may be listed with a description of their function at the facility. If none exists, state salt is not stored at the facility.

3.1.8 Dust Generation and Vehicle Tracking of Industrial Materials

Insert text describing how the facility manages dust generation and vehicle tracking.

3.2 Numeric Effluent Limitations Based on Effluent Limitations Guidelines

Insert information identifying the facility as meeting or not meeting the industrial category requirements for effluent monitoring as listed in Part 2.1.3 (*Table 2-1 Applicable Effluent Limitation Guidelines*) of the 2015 MSGP and if benchmark monitoring is or is not required.

If the permit does identify sector-specific requirements for the facility, insert a description of specific controls implemented at the facility to ensure numeric effluent limits are met.

3.3 Water Quality-Based Effluent Limitations and Water Quality Standards

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

Stormwater from (insert facility name) discharges to (insert canyon name). Insert information on canyon reaches identified as impaired waters, pollutants causing the impairment, and approved or established TMDLs for the canyon. Also, insert specific information relative to the controls measures used to ensure discharges from industrial activities meet the water quality standards.

Refer to Section 4.7 for specific actions that will be taken when a water quality standard is exceeded.

4.0 SCHEDULES AND PROCEDURES

Preventative maintenance of control measures used to comply with the Permit effluent limits can avoid situations that result in discharges to the environment. Part 5.2.5 of the 2015 MSGP specifies control measures will have a schedule or frequency for maintenance and procedures specifying how maintenance is conducted. Part 5.5 requires documentation of maintenance and repairs including the date(s) of regular maintenance. See Attachment 10 for the Scheduled Maintenance Log.

4.1 Good Housekeeping

Insert a schedule for housekeeping activities such as waste and recyclable material (scrap metal, wood tires) pickup, street sweeping, etc. and identify any procedures used to ensure this occurs.

4.2 Maintenance

Insert a discussion of and schedule for preventative or regular maintenance of equipment such as oil/water separators, culvert clean outs, other control measures, etc. Note: Industrial equipment will be

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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maintained so that leaks and other releases are avoided. All control measures will be maintained in effective operation condition.

4.3 Spill Prevention and Response

Insert a discussion of and schedule for preventing and responding to spills and leaks such as regular maintenance of equipment, placing pans under heavy equipment, and maintaining spill kits. Also, specify cleanup equipment, procedures and spill logs, and identify how often employees are trained in spill response procedures, as appropriate.

4.4 Erosion and Sediment Control

Insert a discussion of and schedule for preventative or regular maintenance of erosion, sediment and velocity control measures. If polymers and/or other chemical treatments are used as erosion or sediment control measures, identify them and include a regular schedule for reapplication. Also, include a schedule for restocking these materials to ensure the facility does not run out.

4.5 Employee Training

Employee training is essential for effective implementation of the SWPPP and MSGP requirements. The goals for the training program are to ensure that employees: (1) are aware of what happens when pollutants come in contact with stormwater; (2) are familiar with and will implement the requirements of this SWPPP; (3) are capable of preventing spills; (4) respond safely and effectively to an accident when one occurs; (5) recognize when there is an issue with a control measure; (6) recognize when additional control measure are necessary; and (7) identify situations that could lead to stormwater contamination.

Per Part 2.1.2.8 of the 2015 MSGP, training relevant to the SWPPP and MSGP is required for all workers at the facility that work in areas where industrial materials or activities are exposed to stormwater (MSGP sites); workers, 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 is designed to ensure these personnel understand the MSGP and SWPPP requirements, as well as their specific responsibilities regarding these requirements.

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 will be conducted at least annually. The DEP, Deployed Environment Safety and Health (DESH) Group Leader and Pollution Prevention Team members are responsible for ensuring all appropriate personnel receive this training. It is suggested to add a list of job titles per facility that require training (e.g., Mechanics, Heavy Equipment Operators, PPT members, Operations Manager(s), etc.).

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 Attachment 11 of this SWPPP.

The topics in this SWPPP that are covered in the latest version of the facility-specific annual MSGP training (see Attachment 11) include the following:

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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- Overview of the SWPPP contents;
- 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 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

Routine inspections at this facility are conducted and documented monthly in accordance with EPC-CP-QP-023, *MSGP Routine Facility Inspections* (Attachment 16).

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

4.6.1 Routine Facility Inspections

At least once each calendar year, the routine facility inspection is conducted during a period when a stormwater discharge is occurring. A qualified member of the PPT (typically the DEP, a representative from the EPC-CP Storm Water Permitting/Compliance Team or EPC-CP Program Lead) performs the inspection. 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/Substantially Identical 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 Section 2.1.

During routine inspections, the following must be examined and looked 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 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 maintenance, repairs or replacement.

Inspections performed by the PPT member are documented by completing the routine facility inspection form, which identifies all conditions requiring corrective action and other potential stormwater pollution issues that were encountered. All conditions requiring corrective actions identified during the inspection are 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 (walk downs)

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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between monthly routine inspections to ensure compliance with the SWPPP and MSGP. Completed routine facility inspection forms are provided in Attachment 7 of this SWPPP and meet the requirements listed in the 2015 MSGP (Part 3.1.2.).

4.6.2 Quarterly Visual Assessments

Once each quarter, (April 1-May 31, June 1-July 31, August 1-September 30, October 1-November 30) a stormwater sample is obtained and visual assessment performed at each outfall, if a measureable storm event occurred. A qualified member of the PPT (DEP, EPC-CP field team member or MSGP Program Lead) conducts the visual assessment. The visual assessment will 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 practicable thereafter. Alternatively, document why it was not possible to collect the sample within the first 30 minutes (i.e. adverse conditions, not enough flow, etc.); and
- Conducted at least 72 hours since the last storm event; or document that the 72-hour period is representative of local storm events during the sampling period.

Note: Snowmelt samples need only be collected during a period of measurable discharge.

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 snowmelt discharge (taken during a measurable discharge from the site).

For facilities with substantially 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 substantially identical outfall.

The PPT member performing the visual assessment documents potential stormwater pollution problems that were observed during the assessment on the quarterly visual assessment form. Any required corrective actions identified during the assessment are addressed in accordance with Section 6.0 *Corrective Actions and Deadlines* of this plan. Completed quarterly visual assessments are provided in Attachment 8 of this SWPPP and meet the requirements listed in the 2015 MSGP (Part 3.2.2).

4.7 Monitoring

Analytical monitoring comprised of Impaired Waters [insert Effluent Limitation Guideline monitoring for industrial activity identified in Tables 1-1 and 6-1 of the 2015 MSGP (for example the Asphalt Batch Plant)] monitoring is performed annually on stormwater discharges from the site. Benchmark constituents are monitored quarterly. Monitoring occurs when storm events result in an actual discharge from the site and follow the preceding measurable storm event by at least 72 hours (3 days), unless documented that the storm event is representative of local storm events during the sampling

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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period. For runoff from snowmelt, the monitoring is performed at a time when a measurable discharge from the site occurs.

Monitoring is conducted according to test procedures approved under 40 CFR Part 136. Runoff samples are collected by taking a minimum of one grab sample from a discharge, collected within the first 30 minutes of a measurable storm event. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample is collected as soon as practicable after the first 30 minutes and documentation is kept with the SWPPP explaining why it was not possible.

LANL is located in a high elevation, semi-arid climate where the majority of rainfall occurs during a period between July and September. Freezing conditions that would prevent runoff from occurring for extended periods may also occur during the winter months. If adverse weather conditions prevent the collection of a sample according to the relevant monitoring schedule, a sample will be collected during the next qualifying storm event or as soon as practicable.

Monitoring occurs at automated sampling station **[insert automated sampler identifier (e.g., MSGP07501)]** as identified in Section 1.5. Discharge from the facility is (insert cardinal direction) to (insert canyon name) (impaired waters), which is a tributary of the Rio Grande located approximately X miles east of the facility.

Outfall (insert substantially identical outfall identification number) is "substantially identical" to Outfall (insert monitored outfall identification number) based on (insert the following information: industrial activities conducted in the drainage area, description of control measures implemented in the drainage area of each outfall, description of exposed material located in the drainage area of each outfall that are likely to be significant contributors of pollutants to stormwater discharges, and an estimate of the runoff coefficient of the drainage areas). Outfall locations are shown on the site map provided in Figure B-1. Note: Delete this paragraph if the facility has no substantially identical outfalls. If the facility has multiple maps, reference them all.

Monitoring will continue annually for constituents associated with impaired waters until a constituent is no longer detected in stormwater samples.

If the impaired water or benchmark constituent value exceeds the New Mexico Water Quality criterion (insert or ELG value is exceeded, if applicable), the Pollution Prevention Team will:

- Review the selection, design, installation, and implementation of control measures to determine if modifications are necessary to meet the effluent limits;
- Implement the necessary modifications within the timeframe specified for corrective action; and
- Continue benchmark or annual monitoring of the constituent (as required by Part 6.2 of the 2015 MSGP);
- If an ELG is exceeded, follow-up monitoring within 30 calendar days (or during the next qualifying runoff event) of implementing corrective action(s) is required. When follow-up monitoring exceeds the applicable effluent limitation, an exceedance report is submitted to EPA and monitoring continues at least quarterly, until the discharge complies with the effluent limit.

For each monitoring event, except snowmelt monitoring, the following information will be recorded and maintained through work orders, LANL database systems, and Discharge Monitoring Records:

- The date, exact place, and time of sampling or measurements;
- The date and duration (in hours) of the rainfall event
- Rainfall total (in inches) for that rainfall event

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- The individual(s) who performed the sampling or measurements;
- The date(s) analyses were performed
- The individual(s) who performed the analyses;
- The analytical techniques or methods used; and
- The results of such analyses.

All records of monitoring information, including all calibration and maintenance records are maintained for a minimum period of at least three years from the date the permit expires.

Insert information on quarterly benchmark and annual Impaired Waters or Effluent Limitation Guideline monitoring required for facility and benchmark pollutants to be sampled.

LANL's applicable stormwater monitoring procedures can be found in the following Attachments:

- EPC-CP-QP-047, *Inspecting Stormwater Runoff Samplers and Retrieving Samples for the MSGP* (Attachment 19)
- EPC-CP-QP-2106, *Processing MSGP Stormwater Samples* (Attachment 20).

The table on the following page lists the current Summary of Monitoring Requirements. The monitoring values have been modified to reflect New Mexico water quality standards and are based on the most protective water quality standards from the Standards for Interstate and Intrastate Surface Waters (effective on February 28, 2018), 20.6.4.900 NMAC; and as set forth in Part 9.6.2.1 of the 2015 MSGP.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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Summary of Monitoring Requirements

Outfalls: (insert outfall numbers)

Contact MSGP Program Lead to obtain this information formatted for insertion.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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5.0 DOCUMENTATION FOR ELIGIBILITY CONSIDERATIONS UNDER OTHER FEDERAL LAWS

5.1 Endangered Species

The Final Site-Wide Environmental Impact Statement (EIS) 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 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.

Part 5.2.2 of the 2015 MSGP requires areas of designated critical habitat for endangered or threatened species, as applicable, be included in the SWPPP. The *Threatened and Endangered Species Habitat Management Plan for Los Alamos National Laboratory* (LA-UR-17-29454) was last updated in October 2017 (see Attachment 13). This document provides a management strategy for the protection of threatened and endangered species and their habitats on LANL property. The MSGP IPaC Trust Resource Report (see Attachment 14) is also attached for informational purposes.

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) is reviewed and

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

(Page 21 of 50)

revised (as appropriate). The purpose is to ensure 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-stormwater 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.

When any of the following conditions occur, a review of the selection, design, installation, and implementation of control measures is performed to determine if modifications are necessary to meet the effluent limits in this permit:

- Construction or a change in design, operation, or maintenance at the facility significantly changes the nature of pollutants discharged in stormwater from the facility, or significantly increases the quantity of pollutants discharged; or
- The average of 4 quarterly sampling results exceeds an applicable benchmark. If less than 4 benchmark samples have been taken, but the results are such that an exceedance of the 4 quarter average is mathematically certain (i.e., if the sum of quarterly sample results to date is more than 4 times the benchmark level) this is considered a benchmark exceedance, triggering this review (see Section 4.7); or
- If an impaired water constituent exceeds the NM Water Quality criterion (see Section 4.7).

When the review identifies the need to modify the SWPPP, it will be revised within 14 calendar days of completion of the associated condition requiring corrective action.

6.1 Immediate Actions

When a condition requiring corrective action is identified, all reasonable steps necessary to minimize or prevent the discharge of pollutants are immediately taken (i.e. spill clean-up, scheduling repairs) until a permanent solution (if needed) can be implemented. Immediate action means all reasonable steps are taken the same workday or no later than the following workday (when it is too late in the day to take corrective action).

6.2 Subsequent Actions

When additional corrective actions are required (e.g. installing or making operational a new or modified control, completing repairs, ordering BMPs) they will be completed by the next storm event, if possible, or within 14 calendar days (from initial discovery). When it is determined that it is infeasible to complete corrective actions within 14 days, documentation of infeasibility and a schedule for completion of the work is documented in the CAR database, which will be completed no later than 45 days (from initial discovery). When it is determined that corrective actions will exceed 45 days, EPA is notified and provided justification of why actions will exceed the timeframe; and a minimal amount of additional time to complete the work may be approved.

6.3 Corrective Action Documentation

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

(Page 22 of 50)

Upon discovery, conditions requiring corrective action are documented by the DEP or EPC-CP on a Routine Facility Inspection Form and/or entered into the CAR database. The action will be kept open in the database until the issue has been resolved. Documentation of maintenance and repairs of stormwater control measures (BMPs) will be kept in Attachment 10 of this SWPPP. Where corrective actions result in changes to procedures or controls documented in this SWPPP, modifications to the SWPPP are made accordingly within 14 calendar days of completing the corrective action(s). LANL procedure EPC-CP-QP-022, *MSGP Corrective Actions* can be found in Attachment 17.

7.0 ACRONYMS

BMP	Best Management Practice
CAR	Corrective Action Report
DEP	Deployed Environmental Professional
DESH	Deployed Environmental Safety and Health
DOE	Department of Energy
EIS	Environmental Impact Statement
ELG	Effluent Limitation Guidelines
EMD-ER	Emergency Management Division-Emergency Response
EPA	Environmental Protection Agency
EPC-CP	Environmental Protection and Compliance – Compliance Programs
FOD	Facility Operations Division
IPaC	Information for Planning and Consultation
LANL or the Laboratory	Los Alamos National Laboratory
MSGP or Permit	Multi-Sector General Permit
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
PPT	Pollution Prevention Team
SWPPP	Stormwater Pollution Prevention Plan
URL	Uniform Resource Locator

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

(Page 23 of 50)

8.0 SWPPP CERTIFICATION

STORMWATER POLLUTION PREVENTION PLAN
(Insert Facility Name)
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_____ Date_____
(Insert Printed Name)
(Insert Title)

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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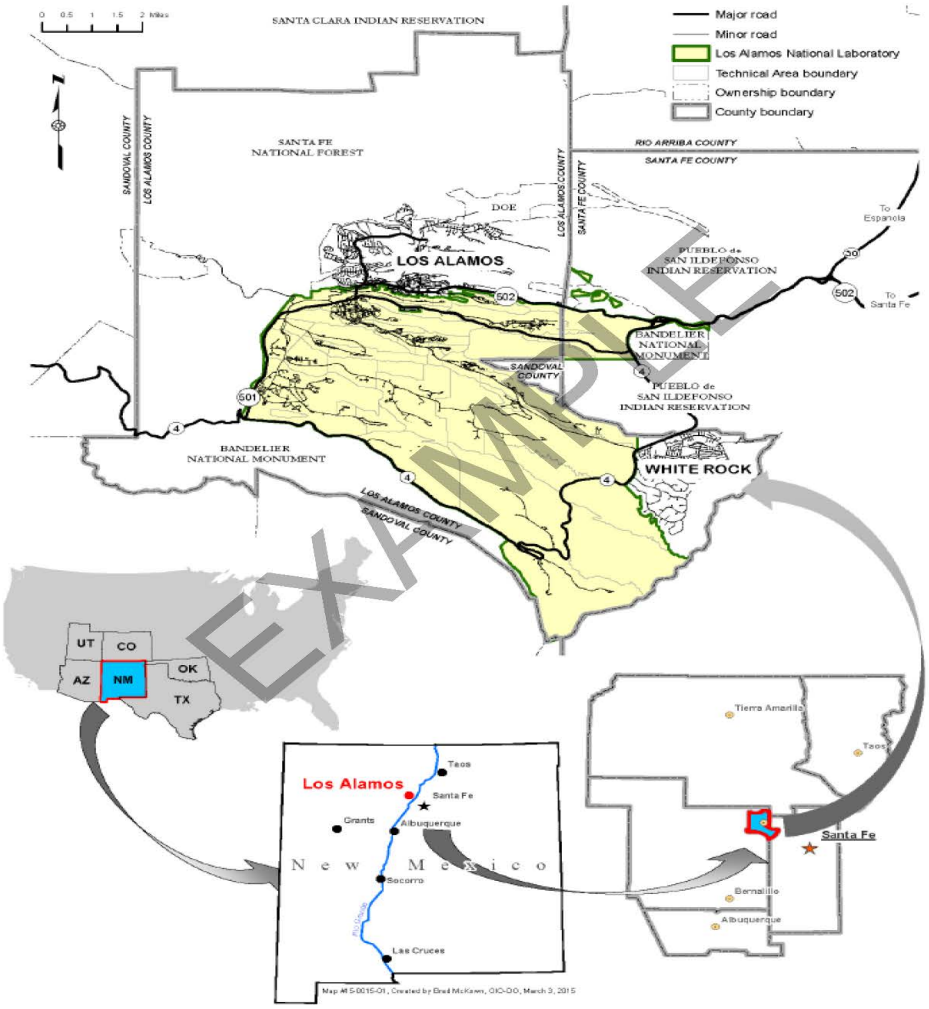
FIGURE A: GENERAL LOCATION MAP



Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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FIGURE B: MAP(S)

Label the figures as Figure B-1, Figure B-2, etc.

Insert maps in the following order:

- Facility specific site map(s),
- Receiving waters maps, and
- Threatened Endangered Species Map.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

(Page 26 of 50)

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

Insert the appropriate attachment. Note: There may be several "Change NOIs" submitted to EPA within a permit term. Contact the MSGP Program Lead to ensure all are included in this attachment.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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ATTACHMENT 2: SWPPP AMENDMENTS

Insert text documenting all changes or updates made to the SWPPP. Text may be in table format as shown below.

Date	Plan Section	Reason for Amendment	Amendment

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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ATTACHMENT 3: CERTIFICATION OF NO UNAUTHORIZED STORMWATER DISCHARGES

Insert the appropriate attachment.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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ATTACHMENT 4: DULY AUTHORIZED SIGNATORY MEMORANDUM

Insert the appropriate attachment.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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ATTACHMENT 5: DISCHARGE MONITORING REPORTS

Insert the discharge monitoring reports.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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ATTACHMENT 6: ANNUAL REPORTS

Insert the annual reports. The MSGP Program Lead provides these.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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ATTACHMENT 7: ROUTINE FACILITY INSPECTIONS

Insert completed Routine Facility Inspection forms.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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ATTACHMENT 8: QUARTERLY VISUAL ASSESSMENTS

Insert completed Quarterly Visual Assessment forms. EPC-CP provides these by memorandum as they are produced.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

(Page 34 of 50)

ATTACHMENT 9: CORRECTIVE ACTION DOCUMENTATION AND CERTIFICATION

Contact the EPC-CP MSGP Program Lead for an excel spreadsheet of all corrective actions and a certification statement for signature.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

(Page 35 of 50)

Insert Facility Name
MSGP Stormwater Pollution Prevention Plan
Document Reference Number
Revision X, Date

ATTACHMENT 10: SCHEDULED MAINTENANCE LOG

SCHEDULED MAINTENANCE LOG

Date	Control Measure or Equipment Description (include location where appropriate)	Action Taken/Comments	Action Taken By (printed name & Z no.)

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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ATTACHMENT 11: TRAINING DOCUMENTATION

Insert the appropriate documentation.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

(Page 37 of 50)

ATTACHMENT 12: MSGP (OR ACTIVE URL)

Either insert a copy of the most current Permit, or insert the URL address (see example below).

A copy of the 2015 MSGP is kept on file with the SWPPP in hard copy.

The active URL for the permit is https://www.epa.gov/npdes/final-2015-msgp-documents

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

(Page 38 of 50)

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

Insert the most current revision of the management plan for LANL.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

(Page 39 of 50)

ATTACHMENT 14: MSGP IPAC TRUST RESOURCES REPORT

Contact the EPC-CP MSGP Program Lead for this information formatted for insertion.

NOTE: The Permit requires this information. However, LANL EPC-ES has completed consultation with U.S. Fish and Wildlife Service. Letters of Consultation are contained in the NOI (see Attachment 1). Refer to Attachment 13 for the species habitat management plan.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

(Page 40 of 50)

Insert Facility Name
MSGP Stormwater Pollution Prevention Plan
Document Reference Number
Revision X, Date

ATTACHMENT 15: EPC-CP-PIP-2101, *NPDES MULTI-SECTOR GENERAL PERMIT*

Insert the appropriate plan into this SWPPP. Ensure the most current revision of this plan is inserted.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

(Page 41 of 50)

Insert Facility Name
MSGP Stormwater Pollution Prevention Plan
Document Reference Number
Revision X, Date

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

Insert the appropriate procedure or parts of the procedure that pertain to this SWPPP. Ensure the most current revision of this procedure is inserted.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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

Insert the appropriate procedure or parts of the procedure that pertain to this SWPPP. Ensure the most current revision of this procedure is inserted.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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

Insert the appropriate procedure or parts of the procedure that pertain to this SWPPP. Ensure the most current revision of this procedure is inserted.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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Insert Facility Name
MSGP Stormwater Pollution Prevention Plan
Document Reference Number
Revision X, Date

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

Insert the appropriate procedure or parts of the procedure that pertain to this SWPPP. Ensure the most current revision of this procedure is inserted.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

(Page 45 of 50)

ATTACHMENT 20: EPC-CP-QP-2106, *PROCESSING MSGP STORMWATER SAMPLES*

Insert the appropriate procedure or parts of the procedure that pertain to this SWPPP. Ensure the most current revision of this procedure is inserted.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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ATTACHMENT 21: **EPC-DO-QP-101, *ENVIRONMENTAL REPORTING REQUIREMENTS FOR RELEASES OR EVENTS***

Insert the appropriate procedure or parts of the procedure that pertain to this SWPPP. Ensure the most current revision of this procedure is inserted.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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ATTACHMENT 22: EPC-CP-QP-007, *SPILL INVESTIGATIONS*

Insert the appropriate procedure or parts of the procedure that pertain to this SWPPP. Ensure the most current revision of this procedure is inserted.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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ATTACHMENT 23: **EPC-CP-QP-2110, *MSGP STORMWATER POLLUTION PREVENTION PLAN PREPARATION AND MAINTENANCE***

Insert the appropriate procedure or parts of the procedure that pertain to this SWPPP. Ensure the most current revision of this procedure is inserted.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

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ATTACHMENT 24: LOCAL PROCEDURE

Insert the appropriate procedure or parts of the procedure that pertain to this SWPPP. If this section is used, ensure the most current revision of the attached procedure is inserted. Delete section if not needed.

EXAMPLE

Attachment 1: EPC-CP-QP-2110 R0 Form 1, *MSGP SWPPP Template Example* (cont.)

(Page 50 of 50)

ATTACHMENT 25: LOCAL PROCEDURE

Insert the appropriate procedure or parts of the procedure that pertain to this SWPPP. If this section is used, ensure the most current revision of the attached procedure is inserted. Delete section if not needed.

EXAMPLE

Attachment 2: MSGP SWPPP Review Guidance Checklist Example

(Page 1 of 11)

SWPPP Title

MSGP SWPPP Review Guidance Checklist

REQUIREMENT	YES/NO	NOTES
Stormwater Pollution Prevention Team		
Is the SWPPP being developed or updated by a qualified person?		
Does the SWPPP list Stormwater Pollution Prevention Team members (by name or title) and each individual's responsibilities?		
Is a copy of the SWPPP immediately available at the site and on-line?		
Contents of the SWPPP		
If the SWPPP refers to procedures or other documents, are copies of the relevant portions of these procedures or documents present in the SWPPP?		
Site Description		
Does the SWPPP include the following information?		
• Identify a description of the nature of the industrial activities at the site		
Provide a general location map (e.g., U.S. Geological Survey (USGS) quadrangle map) with enough detail to identify the location of the site and all receiving waters for industrial stormwater discharges.		
Site map showing the following:		
• Boundaries of the property and size of the property in acres		
• Location and extent of significant structures and impervious surfaces		
• Direction(s) of stormwater flow (using arrows)		
• Locations of **all** stormwater control measures		
• Locations of all receiving waters, including wetlands, in the immediate vicinity of the site. Indicate which water bodies are listed as impaired and which are identified as Tier 2, Tier 2.5, or Tier 3 waters (for LANL, none)		
• Locations of all stormwater conveyances including ditches, pipes, and swales		
• Locations of potential pollutant sources associated with each industrial activity (see Part 5.2.3.2) that could be exposed to rainfall or snowmelt and could be discharged from the site.		
• Locations where significant spills or leaks have occurred (see Part 5.2.3.3)		
• Location(s) of all stormwater monitoring points		
• Location of each stormwater inlet and outfall, with a unique identification code for each outfall (i.e., 001, 002, 003, etc.), indicating if you are treating one or more outfalls as "substantially identical" (see Parts 3.2.3, 5.2.5.3, and 6.1.1)		
• If applicable, location of the MS4 and where your stormwater discharges to it. ***NOTE:*** Although LANL does not currently have an MS4, EPA has published a draft permit.		
• Areas of designated critical habitat for endangered or threatened species		
• Locations of the following activities where such activities are exposed to precipitation:		

EXAMPLE

Attachment 2: *MSGP SWPPP Review Guidance Checklist* Example (cont.)

(Page 2 of 11)

MSGP SWPPP Review Guidance Checklist

REQUIREMENT	YES/NO	NOTES
- Fueling station(s)		
- Vehicle and equipment maintenance and/or cleaning area		
- Loading/unloading areas		
- Locations used for the treatment, storage, or disposal of wastes		
- Liquid storage tanks		
- Processing and storage areas		
- Immediate access roads used by carriers of raw materials, manufactured products, waste material, or by-products used or created by the site		
- Transfer areas for substances in bulk		
- Machinery		
- Locations and sources of run-on to the site from adjacent property that contains significant quantities of pollutants		
Potential Pollutant Sources		
Are areas described in the SWPPP where industrial material or activities are exposed to stormwater or from which allowable non-stormwater discharges originate? ***NOTE 1:*** *Industrial material or activities* include material handling equipment or activities; industrial machinery; raw material; industrial production and processes; and intermediate products; by-products; final products, and waste products. *Material handling activities* include the storage, loading and unloading, transportation, disposal or conveyance of any raw material, intermediate product, final product or waste product.		
Are all pollutants or pollutant constituents (e.g., zinc, sulfuric acid, cleaning solvents, motor oil, diesel, gasoline, brake fluid, etc.) associated with each activity identified? ***NOTE 2:*** The list must include all pollutants/materials that have been handled, treated, stored, or disposed and that have been exposed to stormwater in the three years prior to the date the SWPPP is prepared or amended.		
Are areas where **potential** spills and leaks could occur that could contribute pollutants to stormwater discharges and the corresponding outfall(s) that would be affected by such spills and leaks identified in the SWPPP?		
Are all significant spills and leaks of oil or toxic or hazardous substances identified that **actually occurred** at exposed areas, or that drained to a stormwater conveyance, in the three years prior to the date the SWPPP was prepared or amended?		
Has an evaluation for the presence of unauthorized non-stormwater discharges (see Part 1.1.3) been done and does it include the following information?		
• Date of the evaluation		
• A description of the evaluation criteria used		
• A list of the outfall or onsite drainages points that were directly observed during the evaluation		

EXAMPLE

Attachment 2: *MSGP SWPPP Review Guidance Checklist* Example (cont.)

(Page 3 of 11)

MSGP SWPPP Review Guidance Checklist

REQUIREMENT	YES/NO	NOTES
• The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), or documentation that a floor drain was sealed, re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge.		
Is there documentation of the location of any salt storage piles used for deicing or other commercial or industrial purposes?		
Is all stormwater discharge sampling data collected at the site during the precious permit term summarized in a narrative description? This may include data tables and figures.		
Control Measures to Meet Effluent Limits		
Does the SWPPP indicate whether the following control measure selection and design criteria were considered?		
• Preventing stormwater from coming into contact with polluting materials is generally more effective, and less costly, than trying to remove pollutants from stormwater		
• Using control measures in combination which may be more effective than using control measures in isolation for minimizing pollutants in stormwater discharge		
• Assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit		
• Minimizing impervious areas at the facility and infiltrating runoff onsite (including bio-retention cells, green roofs, and impervious pavement, among other approaches) can reduce runoff and improve ground water recharge and stream base flows in local streams, although care must be taken to avoid ground water contamination		
• Attenuating flow using open vegetated swales and natural depressions can reduce in-stream impacts of erosive flows		
• Conserving and/or restoring riparian buffers will help protect streams from stormwater runoff and improve water quality		
• Using treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.		
Does the SWPPP indicate how the control measure addresses the potential pollutant sources?		
Are the selection and design considerations for control measures to meet the following non-numeric technology-based effluent limits (see Part 2.1.2) identified in the SWPPP?		
• **Minimize Exposure:** All manufacturing, processing and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) must have controls that minimize exposure to pollutant discharges by either locating these industrial materials and activities inside or protecting them with storm resistant coverings.		
- Use grading, berming or curbing to prevent runoff of contaminated flows and divert run-on away from these areas;		

EXAMPLE

Attachment 2: *MSGP SWPPP Review Guidance Checklist* Example (cont.)

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MSGP SWPPP Review Guidance Checklist

REQUIREMENT	YES/NO	NOTES
- Locate materials, equipment, and activities so that potential leaks and spills are contained or able to be contained or diverted before discharge;		
- Clean up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants;		
- Store leaky vehicles and equipment indoors or, if stored outdoors, use drip pans and absorbents;		
- Use spill overflow protection equipment;		
- Perform all vehicle and/or equipment cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray; and		
- Drain fluids from equipment and vehicles that will be decommissioned, and, for any equipment and vehicles that will remain unused for extended periods of time, inspect at least monthly for leaks.		
• **Good housekeeping** (all areas where potential pollutants are exposed to stormwater must be kept clean).		
- Sweep or vacuum at regular intervals or wash down the area and collect and/or treat and properly dispose of the wash down water.		
- Store materials in appropriate containers.		
- Keep all dumpster lids closed when not in use. For dumpsters and roll off boxes that do not have lids and could leak, ensure that discharges have a control (e.g., secondary containment). Part 1.1.3 of the permit does not authorize dry weather discharges from dumpsters or roll off boxes.*		
* You may include extra information, or you may just "cut-and-paste" the effluent limits verbatim into the SWPPP w/out providing additional documentation.		
- Minimize the potential for waste, garbage, and floatable debris to be discharged by keeping exposed areas free of such materials.		
• **Maintenance** (All industrial equipment, systems and control measures must be maintained in effective operating condition in order to minimize pollutant discharges).		
Perform inspections and preventive maintenance of stormwater drainage, source controls, treatment systems, and plant equipment and systems that could fail and result in contamination of stormwater.		
- Diligently maintain non-structural control measures (e.g., keep spill response supplies available, and personnel appropriately trained).		
- Inspect and maintain baghouses at least quarterly to prevent the escape of dust from the system and immediately removing any accumulated dust at the base of the exterior baghouse.*		
- Cleaning catch basins when the depth of debris reached two thirds (2/3) of the sump depth and keeping the debris surface at least six inches below the lowest outlet pipe.*		
Does the SWPPP contain language indicating immediate action must be taken to minimize pollutant discharges if control measures need routine maintenance?		
Is there language in the SWPPP indicating in instances where control measures need repair or replacement that the facility (or associated representatives thereof) must immediately take all		

EXAMPLE

Attachment 2: *MSGP SWPPP Review Guidance Checklist* Example (cont.)

(Page 5 of 11)

MSGP SWPPP Review Guidance Checklist

REQUIREMENT	YES/NO	NOTES
reasonable steps (see Part 4.3.1 for definition) to prevent or minimize the discharge of pollutants until the final repair or replacement is implemented, including cleaning up any contaminated surfaces so that the material will not be discharged during subsequent storm events. Final repairs/replacement of stormwater controls should be completed as soon as feasible but must be no later than the timeframes established in Part 4.3 for corrective actions, i.e., within 14 days or, if that is infeasible, within 45 days.		
Is there language in the SWPPP indicating corrective action must be taken (in accordance with Part 4.0) if a control measure was never installed, was installed incorrectly or not in accordance with Parts 2 and/or 8, or isn't being properly operated or maintained?		
• **Spill Prevention and Response** - The potential for leaks, spills, and other release must be minimized by the development of plans for effective response to such spills if or when they occur in order to minimize pollutant discharges.		
- Plainly label containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides") that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur:*		
- Implement procedures for material storage and handling including use of secondary containment and barriers between material storage and traffic areas.		
- Develop training on the procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases as soon as possible.		
- Keep spill kits on-site, located near areas where spills may occur or where a rapid response can be made		
- Notify appropriate facility personnel when a leak, spill, or other release occurs. Where a leak, spill or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR part 302, occurs during a 24-hour period, you must notify the National Response Center (NRC) at (800) 424-8802 in accordance with the above referenced requirements as soon as you have knowledge of the discharge.		
- In the event of a spill, does the SWPPP indicate where the contact information is so that it is readily accessible and available?		
• **Erosion and Sediment Controls**		
- Does the SWPPP identify how exposed soils will be stabilized to minimize pollutant discharges?		
- Does the SWPPP identify flow velocity dissipation devices placed at discharge locations to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points?		
- Does the SWPPP identify structural and non-structural control measure to minimize the discharge of sediment?		

EXAMPLE

Attachment 2: *MSGP SWPPP Review Guidance Checklist* Example (cont.)

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MSGP SWPPP Review Guidance Checklist

REQUIREMENT	YES/NO	NOTES
- If polymers and/or other chemical treatments are used for dust control or stabilization, does the SWPPP must identify the polymers and/or chemicals used and the purpose?		
• **Management of Runoff** - Does the SWPPP identify how stormwater runoff is diverted, infiltrated, reused, contained, or otherwise reduced to minimize pollutants in the discharge?		
• **Salt Storage Piles or Piles Containing Salt** - Does the SWPPP identify how salt piles are enclosed or covered?		
- Are controls in place to minimize exposure to stormwater resulting from adding to or removing materials from the salt pile?		
• **Non-Stormwater Discharges** - Does the SWPPP indicate that personnel will evaluate the site for non-stormwater discharges not explicitly authorized in Part 1.1.3 or covered by another NPDES permit and eliminate the discharge?)		
• **Dust Generation and Vehicle Tracking of Industrial Materials** - Does the SWPPP indicate dust generation and off-site tracking of raw, final, or waste materials must be minimized in order to minimize pollutant discharges?)		
Control Measures to Meet Numeric Effluent Limitations Guidelines-Based Limits (see Part 2.1.3 and Part 8)		
Are effluent limitations identified for the Sector D facility (Asphalt Paving) (see Part 8.D.4)?		
Are effluent limitations identified for the Sector A facility (Timber Products) (see Part 8.A.7)?		
Control Measures to Meet Water Quality Based Effluent Limits (see Part 2.2 and Part 9.6.2)		
Are the benchmark values (i.e., the Lowest New Mexico Water Quality Standard) listed in MSGP Section 9.6.2.1 identified in the SWPPP?		
Schedules and Procedures - Control Measures		
Does the SWPPP contain a schedule or convention used for determining when pickup or disposal of waste materials occurs?		
Are preventative maintenance procedures (including regular inspections, testing, maintenance and repair) for all control measures included in the SWPPP to avoid situations that may result in leaks, spills, and other releases?		
Are backup practices in place should a runoff event occur while a control measure is off line?		
Is there a schedule or frequency for maintaining all control measures?		
Are procedures included in the SWPPP for preventing and responding to spills and leaks, including notification procedures?		
Are control measures for material handling and storage identified?		
Are clean-up equipment, procedures and spill logs (i.e., reportable and non-reportable spill reports and the MSGP Corrective Action Reporting database) identified?		
Schedules and Procedures - Employee Training		
Are the following employees identified as requiring training?		

EXAMPLE

Attachment 2: *MSGP SWPPP Review Guidance Checklist* Example (cont.)

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MSGP SWPPP Review Guidance Checklist

REQUIREMENT	YES/NO	NOTES
• Personnel who are responsible for the design, installation, maintenance and/or repair of controls (including pollution prevention measures)		
• Personnel responsible for the storage and handling of chemicals and materials that could become contaminants in stormwater discharges		
• Personnel who are responsible for conducting and documenting monitoring and inspections		
• Personnel who are responsible for taking and documenting corrective actions.		
Are the following identified as elements of required training?		
• An overview of what is in the SWPPP		
• Spill response procedures, good housekeeping, maintenance requirements, and material management practices		
• The location of all controls on the site required by this permit and how they are to be maintained		
• The proper procedures to follow with respect to the permit's pollution prevention requirements		
• When and how to conduct inspections, record applicable findings, and take corrective actions		
Are the following elements of the training plan documented in the SWPPP?		
• Content of the training		
• Frequency/schedule of training		
Are records of completed training kept in the SWPPP?		
Schedules and Procedures - Inspections and Assessments		
Is the procedure identified for conducting routine facility inspections?		
Is the procedure identified for conducting visual assessments?		
For each type of inspection performed (i.e., routine inspection and visual assessments) does the SWPPP identify the person (s) or positions of person(s) responsible for the inspection?		
Does the SWPPP contain an alternative schedule for conducting visual assessments in climates with irregular stormwater runoff discharges (see Part 3.2.3)?		
Are specific items to be covered by the inspection, including schedules for specific outfalls identified in the SWPPP?		
Is the facility claiming an exception as an inactive and unstaffed site? If yes, the facility must include information in the SWPPP that supports this claim as required by Parts 3.1.1, 3.2.3, 6.2.1.3 and 6.2.4.2. That is, the SWPPP must contain a signed certification indicating that there are no industrial materials or activities exposed to precipitation at the site and the NOI must be modified and re-certified.		
Schedules and Procedures - Monitoring		
Does the SWPPP contain documentation of procedures used to conduct benchmark, effluent limitations guidelines and impaired waters monitoring?		
Are locations where samples are collected, including any determination that two or more outfalls are substantially identical, in the SWPPP?		
Are parameters for sampling and the frequency of sampling for each parameter listed?		

EXAMPLE

Attachment 2: *MSGP SWPPP Review Guidance Checklist* Example (cont.)

(Page 8 of 11)

MSGP SWPPP Review Guidance Checklist

REQUIREMENT	YES/NO	NOTES
Does the SWPPP contain schedules for monitoring at the facility, including a schedule for alternate monitoring periods for climates with irregular stormwater runoff (see Part 6.1.6)?		
Are numeric control values (benchmark, effluent limitations guidelines, water quality standards) applicable to discharges from each outfall identified?		
Does the SWPPP list procedures for gathering storm event data (see Part 6.1)?		
Schedules and Procedures - Substantially Identical Outfalls (SIOs)		
Does the SWPPP contain the following relative to SIOs?		
• Location of each of the substantially identical outfalls		
• Description of the general industrial activities conducted in the drainage area of each outfall		
• Description of the control measures implemented in the drainage area of each outfall		
• Description of the exposed material located in the drainage area of each outfall that are likely to be significant contributors of pollutants to stormwater discharges		
• An estimate of the runoff coefficient of the drainage areas (low = under 40%, medium = 40% to 65%, high = above 65%		
• Justification as to why the outfalls are expected to discharge substantially identical effluents		
Do Substantially Identical Outfalls identified on the SWPPP map match those identified in MDMRs?		
Is there language indicating quarterly visual assessments of substantially identical outfalls will be performed on a rotating basis throughout the permit term?		
Is there language indicating quarterly visual assessment of the discharge at one SIO will also apply to the other SIOs?		
Corrective Action Documentation - If an event triggering corrective action is associated with an SIO, did the review of the need for action encompass all related substantially identical outfalls?		
Documentation		
Does the SWPPP contain the following up-to-date and complete inspection, monitoring, and certification records?		
• Copy of NOI submitted to EPA along with any correspondence exchanged between the facility and EPA specific to coverage under this permit.		
• Copy of the acknowledgement you receive from the EPA assigning your NPDES ID.		
• Copy of the MSGP Permit (an electronic copy easily available to SWPPP personnel is also acceptable).		
• Documentation of maintenance and repairs of control measures, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair/replacement, and for repairs, date(s) that the control measure(s) returned to full function, and the justification for any extended maintenance/repair schedules (See Part 2.1.2.3).		
• All inspection reports, including the Routine Facility Inspection Reports (see Part 3.1.2) and Quarterly Visual Assessment Reports (see Part 3.2.2).		

EXAMPLE

Attachment 2: *MSGP SWPPP Review Guidance Checklist* Example (cont.)

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MSGP SWPPP Review Guidance Checklist

REQUIREMENT	YES/NO	NOTES
• Description of any deviations from the schedule for visual assessments and/or monitoring, and the reason for the deviations (e.g., adverse weather or it was impracticable to collect samples within the first 30 minutes of a measurable storm event) (see Parts 3.2.3 and 6.1.5)		
• Corrective action documentation (see Part 4.4)		
• Documentation of any benchmark exceedances and the type of response to the exceedance employed including the following:		
- The corrective action taken;		
- A finding that the exceedance was due to natural background pollutant levels;		
- A determination from EPA that benchmark monitoring can be discontinued because the exceedance was due to run-on; **OR**		
- A finding that no further pollutant reductions were technologically available and economically practicable and achievable in light of best industry practice consistent with Part 6.2.1.2.		
• Documentation to support any determination that pollutants of concern are not expected to be present above natural background levels if you discharge directly to impaired waters and that such pollutants were not detected in your discharge or were solely attributable to natural background sources. (see Part 6.2.4.1)		
• Documentation supporting that stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities are not likely to adversely affect any species that are federally listed as endangered or threatened ("listed") and are not likely to adversely affect habitat that is designated as "critical habitat" under the Endangered Species Act (see Part 1.1.4.5).		
• Documentation supporting the determination that stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities meet one of the eligibility criteria for historic property preservation (Criterion A, B, C or D) (see Part 1.1.4.6).		
• All Discharge Monitoring Reports and Annual Reports		
• Support for claim that facility has changed its status from active to inactive and is unstaffed with respect to the requirements to conduct routine facility inspections, quarterly visual assessments, benchmark monitoring, and/or impaired waters monitoring.		
Is the SWPPP signed and dated by a duly authorized representative (per Part B.11)?		
Is the Annual Report signed by a duly authorized representative (per Part B.11)?		
SWPPP Modifications		
Where a corrective action triggers a change in any of the control measures or procedures, has the SWPPP been updated within 14 calendar days of completing the corrective action (see Part 4.4)?		
Are SWPPP modifications signed and dated by a duly authorized representative?		
Has the SWPPP been reviewed and does documentation exist as to the modifications made or why none were needed under the following circumstances?		

EXAMPLE

Attachment 2: *MSGP SWPPP Review Guidance Checklist* Example (cont.)

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MSGP SWPPP Review Guidance Checklist

REQUIREMENT	YES/NO	NOTES
• An unauthorized release or discharge (e.g., spill leak, or discharge of non-stormwater not authorized by this or another NPDES permit to a water of the U.S.) occurs at your facility.		
• A discharge violates a numeric effluent limit listed in Table 2-1 and in the sector specific requirements.		
• The control measures are not stringent enough for the discharge to meet applicable water quality standards or the non-numeric effluent limits in this permit.		
• A required control measure was never installed, was installed incorrectly, or not in accordance with Parts 2 and/or 8, or is not being properly operated or maintained.		
• Whenever a visual assessment shows evidence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam).		
• Construction or a change in design, operation, or maintenance at your facility that significantly changes the nature of pollutants discharged in stormwater from the facility, or significantly increases the quantity of pollutants discharged.		
• The average of four quarterly sampling results exceeds an applicable benchmark (see Part 6.2.1.2), If less than four benchmark samples have been taken, but the results are such that an exceedance of the four quarter average is mathematically certain (i.e., the sum of quarterly sample results to date is more than four times the benchmark level) this is considered a benchmark exceedance.		
Public Accessibility of SWPPP		
Is your SWPPP uploaded to the URL provided in the NOI?		
Are subsequent SWPPP modifications (updates), records and all other reporting elements required for the previous year updated no later than 45 days after conducting the final routine facility inspection for the year?		
If you did not upload your SWPPPs to a URL, was the following information provided in the NOI and documented in the SWPPP?		
• Onsite industrial activities exposed to stormwater, including potential spill and leak areas (see Parts 5.2.3.1, 5.2.3.3 and 5.2.3.5);		
• Pollutants or pollutant constituents associated with each industrial activity exposed to stormwater that could be discharged in stormwater and/or any authorized non-stormwater discharges listed in Part 1.1.3 (see Part 5.2.3.2)		
• Stormwater control measures employed 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. If polymers and/or other chemical treatments are used as controls, these must be identified and the purpose explained.		
• The schedule for good housekeeping, maintenance, and schedule for all inspections required in Part 3.		

EXAMPLE

Attachment 2: *MSGP SWPPP Review Guidance Checklist* Example (cont.)

(Page 11 of 11)

MSGP SWPPP Review Guidance Checklist

REQUIREMENT	YES/NO	NOTES
Are modifications to the SWPPP information required in the four bullets above submitted on a "Change NOI" form no later than 45 days after conducting the final routine facility inspection for the year?		
Corrective Actions		
Are corrective actions documented within 24 hours of becoming aware of such condition?		
Is the condition triggering the need for the corrective action identified?		
Is the date the corrective action was identified captured?		
Was immediate action taken to minimize or prevent the discharge of pollutants?		
In the case of leaks and spills, were response actions, date/time of clean up, notification, etc. documented?		

EXAMPLE

ATTACHMENT 24: WFO-IWD-00016, *SPILL RESPONSE AND CLEAN UP IN WEAPONS FACILITIES OPERATIONS (WFO) AREAS*

WEAPONS FACILITIES OPERATIONS
LOS ALAMOS NATIONAL LABORATORY

Document Number:	WFO-IWD-0016
Revision:	F

Spill Response and Clean Up in Weapons ~~Facility~~ Facilities Operations (WFO) Areas

Effective Date: 10/02/2019		**Expiration Date** *(Maximum 3 years)*: 09/30/2020	
Hazard Category	☐ High/Complex	☒ Moderate	☐ Low
Standing IWD?	☒ Yes *(one Pre-Job Brief. If High/Complex hazard, Pre-Job brief required for each evolution)*		☐ No
R&D IWDs Only **Annual REVIEW DUE DATE**		**DATE ANNUAL REVIEW CONDUCTED:**	

Reviewed and Approved for Use By:

	Printed Name	Z#	Org	Signature	Date
Person in Charge (PIC)	Kelkenny Bileen	178009	DESH-WFO		09/27/19
Peer Reviewer	Janice Salazar	113633	DESH-WFO		9/30/19
Responsible Line Manager	Robert Stokes	100844	DESH-WFO		9/30/19
Operations Manager *(Acting)*	John Branch	232120	WFO-HE		10/1/19

The Facility Operations Director (FOD) approval indicates that the work is appropriate to be conducted in the facility, the work is bounded by the facility authorization basis, that facility safety basis, aggregate hazards, and co-located hazards will be managed, and that the facility entry, training and coordination requirements are fully captured within this document. Unless otherwise indicated, approval indicates work release (i.e., no signature required on Part 3).

☐ If Checked, FOD Signature is Required on Part 3

	Printed Name	Z#	Org	Signature	Date
Facility Operations Director (FOD)	Brian L. Watkins	206831	WFO-DO		10/2/19

For Document Control Team Reference:

☒ USQ *(applicable to WETF)* ☒ USI *(applicable to DARHT)* ☐ N/A

Users are responsible for verifying that they are working to the most current revision of a document

Revision	Effective Date	Action	Description
A (0)	11/19/2008	New Procedure	Initial release.
A	11/20/2014	EXT1	60-day extension to allow time to review and revise.
B	02/25/2015	Minor Revision	Minor revision. Added TA-49 to list of applicable buildings, updated references. Renumbered document from IWD-WFO-99-999-999-0016 to WFO-IWD-0016 to reflect current WFO numbering convention. This document supersedes IWD-WFO-99-999-999-0016, Rev A; this is not a new document but a revision to an existing document; revision starts at B as document type did not change.
C	12/21/2016	Minor Revision	Minor revision: • Updated approvals on cover page • Updated SMEs and Alternate PICs on Page 6 • Added Course # 22956 for HAZCOM Training on Page 7 through 9 • Updated reference documents on Page 13 • Updated POC from Brian Watkins to Thomas Sisneros on Pages 13 and 14. Replaced 2102 forms with 2101 forms.
C	11/30/2017	EXT1	60-day extension to allow time to review and revise.
D	02/28/2018	Major Revision	Major revision. Updated cover page format. Updated approvals on cover page. Added Note in Section 1.3 to clarify that EPC-CP must be notified of all spills (inside or outside). Replaced 2101 and 2103 forms. Added 2102 form.
D	05/22/2018	RAC	RAC. Added new page 47 with additional worker signature (Paul Gonzales, Z# 169004) to Form 2103, Part 3 Validation and Work Release.
D	10/01/2018	EXT1	30-day extension to review and revise.
E	10/15/2018	Minor Revision	Minor revision. Inserted 2101s for WETF, DARHT and 2102s for WFO BOP with updated expiration dates for CY 2019. Updated acronym EO to read SEO throughout. Updated references to organization ENV-CP to EPC-CP throughout.
E	09/27/2019	EXT1	30-day extension until 10/30/2019 requested to allow time for final signatures and USQ/USI reviews for Revision F.
F	10/02/2019	Major Revision	Updated acronym SEO to read EOSC and updated phone number from 667-6211 to 667-2400 in Sections 1.1, 1.2, 1.3 and 1.6. Attachment A: Removed references to WFO-PLAN-035 and replaced with WFO-BEP-378. Removed references to WFO-PRO-FI-1084 and WFO-PRO-FI-1086 and replaced with WFO-AP-263.

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1.0 Introduction

1.1 Purpose

This procedure describes clean up of spills following notification to the Duty Officer. The objective of this task is spill response and the cleanup of spills deemed a non-emergency by EOSC or EPC-CP.

1.2 Scope

This IWD is to be implemented for the clean up of spills following notification to the Duty Officer. The objective of this task is spill response and the cleanup of spills deemed a non-emergency by EOSC or EPC-CP. These spills could occur at or within any WFO-FOD facility including TAs,6, 8, -9, 11, 14, 15, 16, 22, 36, 37, 39, 40, and 49. Depending on the location of the spill, additional contaminants such as heavy metals, beryllium, trace amounts of or nonhazardous amounts of HE or DU could also exist in the soil and therefore the waste stream. WFO's waste management coordinators will make waste determinations and manage the wastes per P409, *Waste Management.*

Note: In the event that an item is encountered within an HE area that cannot be immediately identified as normal firing site debris work shall be paused and an explosives SME will be contacted to identify the item in question.

Note: In active HE areas a person with site specific knowledge will be consulted to identify any hazards prior to the start of work"

1.3 Applicability

This document applies to WFO workers at TAs,6, 8, 9, 11, 14, 15, 16, 22, 36, 37, 39, 40, and 49.who are performing spill clean up activities as described in 1.2 Scope. There are two types of spills:

- simple spills (incidental release), which can be cleaned up by knowledgeable chemical workers (workers with knowledge of the chemical, appropriate training, materials and PPE needed to clean the spill). A simple spill shall be defined as one that:
    1. Does not spread rapidly
    2. Does not endanger people or property (except by direct contact)
    3. Does not endanger the environment
    4. Does not involve fire or an explosive condition or the potential for such. All others are complex spills.
- complex spills (significant spills), which require outside assistance (Emergency Operations Support Center(EOSC)).

NOTE: All spills (both outside or indoors) must be reported to EPC-CP to ensure each incident is evaluated, documented and remediated. EPC-CP is responsible for fulfilling any required external notifications associated with the release. Contact the EPC-CP Spills Pager (664-7722) to promptly notify EPC-CP of any spills. Contact EOSC (667-2400) in the event of an emergency.

1.4 Definitions and Acronyms

None.

1.5 Hazard Analysis

Hazard Analysis (HA) Method Used: ☐ Brainstorming ☒ Other:
List Names of HA Team (Attach sheet if necessary): DESHF-WFO Industrial Hygiene Team Date HA Performed: 11/03/2014.

1.6 Site Emergency Contacts

- Weapons Duty Officer: 664-2926
- Trit-HE Duty Operation Page; 664-6679
- WETF On-Call pager: 664-3426
- EOSC 667-2400
- EPC-CP Spills Pager:664-7722

2.0 Procedural Steps

See procedural steps, hazards, and controls in Attachment A.

3.0 Forms

Number	Title
2100	Integrated Work Document (IWD) Part 1, Activity Specific Information
2101	Integrated Work Document (IWD) Part 2, FOD Requirements and Approval for Entry and Area Hazards and Controls, Non-Tenant Activity Form
2102	Integrated Work Document (IWD) Part 2, FOD Requirements and Approval for Entry and Area Hazards and Controls, Tenant Activity Form
2103	Integrated Work Document (IWD) Part 3, Validation and Work Release
2104	Integrated Work Document (IWD) Part 4, Post Job Review

4.0 Attachments

Forms 2100, 2101, 2102, 2103, 2104.

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

Work Tasks/Steps Identify work steps/tasks in sequence when such sequencing contributes to safety, security, and/or environmental protection.	**Hazards, Concerns, and Potential Accidents/Incidents** Identify both activity and work-area hazards for each task/step.	**Controls, Preventive Measures, and Bounding Conditions** Specify preventive measures, controls for each hazard (e.g., lockout/tagout points, specific Personal Protective Equipment [PPE], Tamper Indicating Devices [TIDs], alarms, safes, recycle, waste minimization).	**Reference Documents** List permits, operating manuals, security plans, and other reference procedures.	**Training** List training and qualification requirements. (P300, Integrated Work Management, Section 6.1)
Spill Response				
Assess site for hazards	Previously unknown hazards or changed conditions	• Perform windshield survey of the area • Interview workers knowledgeable of the spill • Identify hazards • Determine source, type and quantity of spilled material • Walk down site prior to activity • Communicate hazards to other workers	WFO-BEP-378, *WFO Building Emergency Plan*	HAZCOM, Course 22956 Item # 27205, *WFO (FOD-3 Building Emergency Plan*
	Slips, trips and falls	• Avoid stepping in spilled material • Be aware of footing and surroundings at all times. Identify hazards prior to initiating work. • Use caution and be observant while moving in areas with potential slip, trip or fall hazards. • Implement good housekeeping practices. • No open-toed shoes	None	None
Control site Access	Previously unknown hazards or changed conditions	• Administratively control area • Barriers: tape, rope	None	HAZCOM, Course 22956

Attachment A
Integrated Work Document (IWD) Part 1 Activity Specific Information (cont'd)

Work Tasks/Steps Identify work steps/tasks in sequence when such sequencing contributes to safety, security, and/or environmental protection.	**Hazards, Concerns, and Potential Accidents/Incidents** Identify both activity and work-area hazards for each task/step.	**Controls, Preventive Measures, and Bounding Conditions** Specify preventive measures, controls for each hazard (e.g., lockout/tagout points, specific Personal Protective Equipment [PPE], Tamper Indicating Devices [TIDs], alarms, safes, recycle, waste minimization).	**Reference Documents** List permits, operating manuals, security plans, and other reference procedures.	**Training** List training and qualification requirements. (P300, Integrated Work Management, Section 6.1)
Deploy Spill control measures (loose absorbents, pads and booms)	Incompatible materials	• Determine type of spilled material • Select proper spill control material	• Manufacturer instructions • MSDS	HAZCOM, Course 22956
	Inhalation hazards	• Minimize time in the vicinity of the spilled material • Position personnel up wind of plume	• Manufacturer instructions • MSDS	HAZCOM, Course 22956
	Contact with spilled material	• Proper PPE **Hands:** Compatible gloves. **Eyes:** Safety glasses with side shields for all operations **Body:** Long pants and sleeved shirt • When caustics are present, ensure the availability of eyewash station within 100 feet or 10 seconds with unobstructed access	• Consult with the WFO Industrial Hygienist (IH), • MSDS	HAZCOM, Course 22956

Attachment A
Integrated Work Document (IWD) Part 1 Activity Specific Information (cont'd)

Work Tasks/Steps Identify work steps/tasks in sequence when such sequencing contributes to safety, security, and/or environmental protection.	**Hazards, Concerns, and Potential Accidents/Incidents** Identify both activity and work-area hazards for each task/step.	**Controls, Preventive Measures, and Bounding Conditions** Specify preventive measures, controls for each hazard (e.g., lockout/tagout points, specific Personal Protective Equipment [PPE], Tamper Indicating Devices [TIDs], alarms, safes, recycle, waste minimization).	**Reference Documents** List permits, operating manuals, security plans, and other reference procedures.	**Training** List training and qualification requirements. (P300, Integrated Work Management, Section 6.1)
Clean up of absorbent material (loose absorbents, pads and booms)	Inhalation hazards	• Minimize generation of dust or splash • Minimize time in the vicinity of the spilled material • Position personnel up wind of spill	• Manufacturer instructions • MSDS	HAZCOM, Course 22956
	Contact with spilled material	• Proper PPE **Hands:** Compatible gloves. **Eyes:** Safety glasses with side shields for all operations. spills **Body:** Long pants and sleeved shirt • When caustics are present, ensure the availability of eyewash station within 100 feet or 10 seconds with unobstructed access	• Consult with the WFO Industrial Hygienist (IH), • MSDS	HAZCOM, Course 22956
Application of Micro Blaze Emergency Liquid Spill Control.	Contact with Micro Blaze	• Proper PPE: • **Eyes:** Safety glasses with side shields for all operations • Do not direct spray towards personnel	• Manufacturer instructions • MSDS	HAZCOM, Course 22956
	Low pressure (<100 psi)	• Follow sprayer manufacturers instructions	• Manufacturer instructions	None
	Slippery surfaces (when applied to asphalt or concrete)	• Avoid stepping in treated area • If necessary, spray treated area with clean water after 15 minutes	• None	None

Attachment A
Integrated Work Document (IWD) Part 1 Activity Specific Information (cont'd)

Work Tasks/Steps Identify work steps/tasks in sequence when such sequencing contributes to safety, security, and/or environmental protection.	**Hazards, Concerns, and Potential Accidents/Incidents** Identify both activity and work-area hazards for each task/step.	**Controls, Preventive Measures, and Bounding Conditions** Specify preventive measures, controls for each hazard (e.g., lockout/tagout points, specific Personal Protective Equipment [PPE], Tamper Indicating Devices [TIDs], alarms, safes, recycle, waste minimization).	**Reference Documents** List permits, operating manuals, security plans, and other reference procedures.	**Training** List training and qualification requirements. (P300, Integrated Work Management, Section 6.1)
Recharge of sprayer with Micro Blaze Emergency Liquid Spill Control	Contact with Micro Blaze	• Proper PPE Eyes: Safety glasses with side shields for all operations.	• MSDS	HAZCOM, Course 22956
	Compressed Air: Low pressure (<100 psi)	• Follow manufactures instructions • Proper PPE: **Eyes:** Safety glasses with side shields for all operations • Hand tighten nozzle assembly onto canister • Do not charge sprayer over 100 psi	• Manufacturer Instructions	None

Attachment A
Integrated Work Document (IWD) Part 1 Activity Specific Information (cont'd)

Work Tasks/Steps Identify work steps/tasks in sequence when such sequencing contributes to safety, security, and/or environmental protection.	**Hazards, Concerns, and Potential Accidents/Incidents** Identify both activity and work-area hazards for each task/step.	**Controls, Preventive Measures, and Bounding Conditions** Specify preventive measures, controls for each hazard (e.g., lockout/tagout points, specific Personal Protective Equipment [PPE], Tamper Indicating Devices [TIDs], alarms, safes, recycle, waste minimization).	**Reference Documents** List permits, operating manuals, security plans, and other reference procedures.	**Training** List training and qualification requirements. (P300, Integrated Work Management, Section 6.1)
Excavation of Contaminated Soil				
Excavation of soil stained with spilled material.	Excavation hazards associated with underground utilities: electrocution, explosion	• Excavation Permit as required	• P101-17 Excavation/Fill /Soil Disturbance	None
	Use of hand tools: Pinch points, mashing fingers and/or toes	• All hand tools will be inspected for integrity before use. Personnel will be instructed to use hand tools in the intended manner. • Proper PPE: **Eyes:** Safety glasses with side shields **Hands:** Work gloves **Foot:** safety shoes	None	None
	Use of Heavy Equipment: Workers struck or crushed by equipment, Rollover	• Only qualified equipment operators are allowed to operate heavy equipment. • Equipment shall be inspected daily or before each use • Heavy equipment shall be inspected for engineering controls • Persons on the ground are instructed to get and maintain eye contact with heavy equipment operators with pre-established hand signals.	• Subparts O of 29 CFR 1926 and 29 CFR 1910	None

Attachment A
Integrated Work Document (IWD) Part 1 Activity Specific Information (cont'd)

Work Tasks/Steps Identify work steps/tasks in sequence when such sequencing contributes to safety, security, and/or environmental protection.	**Hazards, Concerns, and Potential Accidents/Incidents** Identify both activity and work-area hazards for each task/step.	**Controls, Preventive Measures, and Bounding Conditions** Specify preventive measures, controls for each hazard (e.g., lockout/tagout points, specific Personal Protective Equipment [PPE], Tamper Indicating Devices [TIDs], alarms, safes, recycle, waste minimization).	**Reference Documents** List permits, operating manuals, security plans, and other reference procedures.	**Training** List training and qualification requirements. (P300, Integrated Work Management, Section 6.1)
Excavation of soil stained with spilled material., **cont'd**	Potential for historical site contaminants, SWMUs: DU, HE, Beryllium, Lead	• Signs and postings • Consult with Industrial Hygienist (IH), RCTs and HE Operations Team Leader • Consult EPC-CP and WES-DO • Have soil surveyed by an RCT prior to and as excavated, as necessary. • Additional PPE as required by IH and RCT ***Note:*** In the event that an item is encountered within an HE area that cannot be immediately identified as normal firing site debris work shall be paused and an explosives SME will be contacted to identify the item in question. ***Note****:* In active HE areas a person with site specific knowledge will be consulted to identify any hazards prior to the start of work.	• WFO-AP-263, *WFO Access Requirements for Knowledgeable Persons* • P 101-17 Excavation/Fill/ Soil Disturbance • Decision Support Application (DSA)	
	Heavy Lifting.	• Proper lifting techniques • Lift only what you are capable of but not more than 50 pounds. • Use two or more people to lift heavy or awkward loads • Position load to be lifted directly in front of body. Bend knees and grasp load underneath with both hands and raise load using legs (not back). • Do not lift and twist	None	None

Attachment A
Integrated Work Document (IWD) Part 1 Activity Specific Information (cont'd)

Work Tasks/Steps Identify work steps/tasks in sequence when such sequencing contributes to safety, security, and/or environmental protection.	**Hazards, Concerns, and Potential Accidents/Incidents** Identify both activity and work-area hazards for each task/step.	**Controls, Preventive Measures, and Bounding Conditions** Specify preventive measures, controls for each hazard (e.g., lockout/tagout points, specific Personal Protective Equipment [PPE], Tamper Indicating Devices [TIDs], alarms, safes, recycle, waste minimization).	**Reference Documents** List permits, operating manuals, security plans, and other reference procedures.	**Training** List training and qualification requirements. (P300, Integrated Work Management, Section 6.1)
Containerize wastes				
Containerize waste absorbent material, excavated soil and other waste	Pinch points, mashing fingers and/or toes	• Keep hands away from pinch points. • Proper PPE: **Eyes:** Safety glasses with side shields **Hands:** Work gloves **Foot:** safety shoes	None	None
	Use of hand tools: Pinch points, mashing fingers and/or toes	• All hand tools will be inspected for integrity before use. Personnel will be instructed to use hand tools in the intended manner. • Proper PPE: **Eyes:** Safety glasses with side shields **Hands:** Work gloves **Foot:** safety shoes	None	None
	Heavy Lifting.	• Proper lifting techniques • Lift only what you are capable of but not more than 50 pounds. • Use two or more people to lift heavy or awkward loads • Position load to be lifted directly in front of body. Bend knees and grasp load underneath with both hands and raise load using legs (not back). • Do not lift and twist	None	None
	Incorrect waste determination and management	• WMC determines waste type • WMC will label waste container • WMC will manage wastes	P-409 Waste Management	Waste Generator Overview

Attachment A
Integrated Work Document (IWD) Part 1 Activity Specific Information (cont'd)

Work Tasks/Steps Identify work steps/tasks in sequence when such sequencing contributes to safety, security, and/or environmental protection.	**Hazards, Concerns, and Potential Accidents/Incidents** Identify both activity and work-area hazards for each task/step.	**Controls, Preventive Measures, and Bounding Conditions** Specify preventive measures, controls for each hazard (e.g., lockout/tagout points, specific Personal Protective Equipment [PPE], Tamper Indicating Devices [TIDs], alarms, safes, recycle, waste minimization).	**Reference Documents** List permits, operating manuals, security plans, and other reference procedures.	**Training** List training and qualification requirements. (P300, Integrated Work Management, Section 6.1)
Transport fo Waste Containers				
Waste Management Coordinator (WMC) transports waste containers to designated waste storage area	Operation of lift gate: Pinch points, mashing fingers and/or toes	• Advise nearby workers that the lift gate is being operated • Kept clear of lift gate swing radius • Proper PPE: **Eyes:** Safety glasses with side shields **Hands:** Work gloves	Manufacturer instructions	None
	Heavy Lifting	• Proper lifting techniques • Lift only what you are capable of but not more than 50 pounds. • Use two or more people to lift heavy or awkward loads • Position load to be lifted directly in front of body. Bend knees and grasp load underneath with both hands and raise load using legs (not back). • Do not lift and twist	None	None
	Shifting loads	• Secure loads in truck bed	None	None

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant)

Form 2101

Los Alamos NATIONAL LABORATORY EST 1943

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

Non-Tenant Activity Form

IWD No./Work Request No: WFO-IWD-0016 Revision #: F

Facility Operation Director (FOD) must determine the facility entry and coordination requirements and identify the Environment, Safety, Health (ESH)/Security and Safeguards (S&S) hazards and controls associated with the activity location.

FOD	TA	Bldg.	Room	Other Location
3	16	205	112, 114, 115, 116, 100B, 120, 122, 124, 126	

FOD Designated Facility Point-of-Contact	Name	Phone	Pager	Email
	Don Hyatt	7-7519	4-6314	hyatt@lanl.gov
	Mel Ortiz	7-5419	4-3070	msortiz@lanl.gov
	Byron Denny	5-5339	4-6586	byron@lanl.gov

Entry and Coordination Requirements (*Check one or more of the following*)

- ☐ No Entry/Coordination Requirements
- ☒ Plan of the Day/Plan of the Week (POTD/POTW)
- ☒ Security Clearance Requirements
- ☐ Co-located Hazards/Concerns
- ☒ Check out at End of Work
- ☒ Escort Required
- ☐ Other Bounding Conditions: ___
- ☒ FOD-designated facility Point-of-Contact must sign IWD Part 3
- ☒ Check in at Start of Work ☒ Work-Area Training Required
- ☒ Work must be Scheduled ☒ Check in Daily
- ☒ Other Security Requirements (ex.: Cellphone, No Foreign Nationals, etc.)
- ☐ Quality Issues ☒ Check out Daily
- ☒ Review under Authorization Basis (AB)/Safety Basis/Unreviewed Safety Question (USQ)

Additional Comments (refer to Job Hazard Analysis [JHA] Tool Facility Notes)
WTEF is a Category II Nuclear Facility, Check in with the WETF Duty Operator, 7-2060, 16-205-110, prior to start of work. The WETF work control process must be followed. Security Requirements: No 2-way pagers or personal cell phones. Blackberries are allowed except in the "Closed Area". Government issued cell phones must have the battery removed. "Q" clearance and be complete on all WETF and Lab-Wide requirements for WETF access unless escorted. "L" clearance and Un-Cleared personnel must be escorted at all times.

Instructions: In the block below, identify work-area hazards that could potentially affect the worker(s) or others. Avoid using the same Part 2, Form 2101 for multiple facilities. Ensure that work area hazards, specific to the facility or work location are identified and controlled. Specify the facility controls and preventive measures that must be implemented by the worker(s) to protect against the site hazards as well as any special training required.

ESH/S&S WORK AREA HAZARDS & CONTROLS

Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	Work Area Hazard Present	Facility Controls/ Preventive Measures/ Bounding Conditions Specify preventive measures, controls and bounding conditions for each site hazard	Reference Documents List permits, operating manuals, and other reference procedures	Training and Qualification List training requirements (P300, Integrated Work Management, Section 6.1)
☐ No Work Area Hazards				

Form 2101 (12/17) Page 1

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd)

ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integrated Work Management, Section 6.1)
Ionizing Radiation Work in posted radiological areas, work with radioactive materials, or work on or near radiation producing devices. **Specify Hazard:** Work in posted radiological areas, work with radioactive materials, or work on or near radiation producing devices.	☒ Yes ☐ No	Facility and job-specific pre-job briefing, facility postings	Job specific RWPs and work package instructions and WETF-AP-FRPR-34 Facility Radiation Protection Requirements Weapons Engineering Tritium Facility	RAD Worker II and Facility Access Training unless escorted
Worker Exposure Working near non-ionizing radiation, beryllium, noise, chemicals, hazardous biological materials, lead, asbestos, temperature/humidity extremes, or high explosives. **Specify Hazards: Nitrogren/Beryllium in Room 120 cabinet and Room 126 drums**	☒ Yes ☐ No	Facility and job-specific pre-job briefing. Oxygen monitors are present throughout areas with potential for low oxygen concentration • If accessing the Be cabinet in room 120, contact IH for Beryllium evaluation and controls. • If accessing the drums or handling beryllium articles or items from the drums in room 126, contact IH for evaluation and controls.	P101-5 Cryogens P101-21 Chronic Berylium Disease Prevention Program	Facility Briefing by Duty Operator Beryllium Awareness Training Course 28340
Energized and Operative Systems Working near energized electrical parts, pressure systems, steam lines; near unprotected belts, pulleys, chains or rotating equipment; fuel fired equipment other than vehicles; or spark or flame producing operations. **Specify Hazards:**	☐ Yes ☒ No			
Confined Spaces Entry into tanks, manholes, cooling towers, sumps, or any other area with potentially low oxygen concentration or other hazards such as toxic vapors or engulfment. **Specify Hazards:**	☐ Yes ☒ No			

Form 2101 (12/17)

Page 2

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

ESH/S&S WORK AREA HAZARDS & CONTROLS

Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	Work Area Hazard Present	Facility Controls/ Preventive Measures/ Bounding Conditions Specify preventive measures, controls and bounding conditions for each site hazard	Reference Documents List permits, operating manuals, and other reference procedures	Training and Qualification List training requirements (P300, Integretated Work Management, Section 6.1)
Elevated Work Surface Elevated work when fall protection is not provided by conventional handrail systems or required per P101-20, *Fall Protection Program*	☐ Yes ☒ No			
Environmental Impact Activities conducted in areas containing potential release site, contaminated soil, sensitive species, watercourse wetlands, floodplain, historical/archeological sites, or other work area condition that can be impacted by or can impact the environment. **Specify Hazards:**	☐ Yes ☒ No			
Security Requirements **Specify:**	☒ Yes ☐ No	Q or L Clearance or Escorted	P202-1 Security Areas, Property Protection Areas, and General Access Areas	U-Train 1425 Annual Security Refresher
Other Hazards **Specify:**	☐ Yes ☒ No			

I have verified that the hazards identified above adequately identify the area hazards and that the IWM process has been applied appropriately.

FOD or Representative (Signature/Z #/Date) **Approval Required** _____ 12857 9/9/19

Date Approval Expires: **September 30, 2020**

Form 2101 (12/17) Page 3

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

Form 2101

Los Alamos NATIONAL LABORATORY EST.1943

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

Non-Tenant Activity Form

IWD No./Work Request No: WFO-IWD-0016 Revision #: F

Facility Operation Director (FOD) must determine the facility entry and coordination requirements and identify the Environment, Safety, Health (ESH)/Security and Safeguards (S&S) hazards and controls associated with the activity location.

FOD	TA	Bldg.	Room	Other Location
3	16	205	100, 100A, 101, 102, 103, 104, 104A, 106, 110	

FOD Designated Facility Point-of-Contact	Name	Phone	Pager	Email
	Don Hyatt	7-7519	4-6314	hyatt@lanl.gov
	Mel Ortiz	7-5419	4-3070	msortiz@lanl.gov
	Byron Denny	5-5339	4-6586	byron@lanl.gov

Entry and Coordination Requirements (*Check one or more of the following*)

- ☐ No Entry/Coordination Requirements
- ☒ Plan of the Day/Plan of the Week (POTD/POTW)
- ☒ Security Clearance Requirements
- ☐ Co-located Hazards/Concerns
- ☒ Check out at End of Work
- ☒ Escort Required
- ☐ Other Bounding Conditions: ____
- ☒ FOD-designated facility Point-of-Contact must sign IWD Part 3
- ☒ Check in at Start of Work
- ☒ Work-Area Training Required
- ☒ Work must be Scheduled
- ☒ Check in Daily
- ☒ Other Security Requirements (ex.: Cellphone, No Foreign Nationals, etc.)
- ☐ Quality Issues
- ☒ Check out Daily
- ☒ Review under Authorization Basis (AB)/Safety Basis/Unreviewed Safety Question (USQ)

Additional Comments (refer to Job Hazard Analysis [JHA] Tool Facility Notes)
WTEF is a Category II Nuclear Facility, Check in with the WETF Duty Operator, 7-2060, 16-205-110, prior to start of work. The WETF work control process must be followed. Security Requirements: No 2-way pagers or personal cell phones. Blackberries are allowed except in the "Closed Area". Government issued cell phones must have the battery removed. "Q" clearance and be complete on all WETF and Lab-Wide requirements for WETF access unless escorted. "L" clearance and Un-Cleared personnel must be escorted at all times.

Instructions: In the block below, identify work-area hazards that could potentially affect the worker(s) or others. Avoid using the same Part 2, Form 2101 for multiple facilities. Ensure that work area hazards, specific to the facility or work location are identified and controlled. Specify the facility controls and preventive measures that must be implemented by the worker(s) to protect against the site hazards as well as any special training required.

ESH/S&S WORK AREA HAZARDS & CONTROLS

Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integrated Work Management, Section 6.1)
☐ **No Work Area Hazards**				

Form 2101 (12/17) Page 1

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integretated Work Management, Section 6.1)
Ionizing Radiation Work in posted radiological areas, work with radioactive materials, or work on or near radiation producing devices. **Specify Hazard:**	☐ Yes ☒ No			
Worker Exposure Working near non-ionizing radiation, beryllium, noise, chemicals, hazardous biological materials, lead, asbestos, temperature/humidity extremes, or high explosives. **Specify Hazards:**	☐ Yes ☒ No			
Energized and Operative Systems Working near energized electrical parts, pressure systems, steam lines; near unprotected belts, pulleys, chains or rotating equipment; fuel fired equipment other than vehicles; or spark or flame producing operations. **Specify Hazards:**	☐ Yes ☒ No			
Confined Spaces Entry into tanks, manholes, cooling towers, sumps, or any other area with potentially low oxygen concentration or other hazards such as toxic vapors or engulfment. **Specify Hazards:**	☐ Yes ☒ No			
Elevated Work Surface Elevated work when fall protection is not provided by conventional handrail systems or required per P101-20, *Fall Protection Program*	☐ Yes ☒ No			
Environmental Impact Activities conducted in areas containing potential release site, contaminated soil, sensitive species, watercourse wetlands, floodplain, historical/archeological sites, or other work area condition that can be impacted by or can impact the environment. **Specify Hazards:**	☐ Yes ☒ No			

Form 2101 (12/17) Page 2

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

ES&H/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integretated Work Management, Section 6.1)
Security Requirements **Specify:**	☒ Yes ☐ No	Q or L Clearance or Escorted	P202-1 Security Areas, Property Protection Areas, and General Access Areas	U-Train 1425 Annual Security Refresher
Other Hazards **Specify:**	☐ Yes ☒ No			

I have verified that the hazards identified above adequately identify the area hazards and that the IWM process has been applied appropriately.

FOD or Representative (Signature/Z #/Date) **Approval Required** _____ 9/9/19

Date Approval Expires: **September 30, 2020**

Form 2101 (12/17) Page 3

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

Form 2101

Los Alamos NATIONAL LABORATORY EST. 1943

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

Non-Tenant Activity Form

IWD No./Work Request No: WFO-IWD-0016 Revision #: F

Facility Operation Director (FOD) must determine the facility entry and coordination requirements and identify the Environment, Safety, Health (ESH)/Security and Safeguards (S&S) hazards and controls associated with the activity location.

FOD	TA	Bldg.	Room	Other Location
3	16	205	UPS and Equipment Rooms	Roof
FOD Designated Facility Point-of-Contact	Name Don Hyatt Mel Ortiz Byron Denny	Phone 7-7519 7-5419 5-5339	Pager 4-6314 4-3070 4-6586	Email hyatt@lanl.gov msortiz@lanl.gov byron@lanl.gov

Entry and Coordination Requirements (*Check one or more of the following*)

- ☐ No Entry/Coordination Requirements
- ☒ Plan of the Day/Plan of the Week (POTD/POTW)
- ☒ Security Clearance Requirements
- ☐ Co-located Hazards/Concerns
- ☒ Check out at End of Work
- ☒ Escort Required
- ☐ Other Bounding Conditions: ____
- ☒ FOD-designated facility Point-of-Contact must sign IWD Part 3
- ☒ Check in at Start of Work
- ☒ Work must be Scheduled
- ☒ Other Security Requirements (ex.: Cellphone, No Foreign Nationals, etc.)
- ☐ Quality Issues
- ☒ Review under Authorization Basis (AB)/Safety Basis/Unreviewed Safety Question (USQ)
- ☒ Work-Area Training Required
- ☒ Check in Daily
- ☒ Check out Daily

Additional Comments (refer to Job Hazard Analysis [JHA] Tool Facility Notes)
WTEF is a Category II Nuclear Facility. Check in with the WETF Duty Operator. 7-2060, 16-205-110, prior to start of work. The WETF work control process must be followed. Security Requirements: No 2-way pagers or personal cell phones. Blackberries are allowed except in the "Closed Area". Government issued cell phones must have the battery removed. "Q" / "L" clearance required for access into UPS and Equipment Rooms. Un-Cleared personnel must be escorted at all times.

Instructions: In the block below, identify work-area hazards that could potentially affect the worker(s) or others. Avoid using the same Part 2, Form 2101 for multiple facilities. Ensure that work area hazards, specific to the facility or work location are identified and controlled. Specify the facility controls and preventive measures that must be implemented by the worker(s) to protect against the site hazards as well as any special training required.

ESH/S&S WORK AREA HAZARDS & CONTROLS

Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integretated Work Management, Section 6.1)
☐ **No Work Area Hazards**				

Form 2101 (12/17) Page 1

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integretated Work Management, Section 6.1)
Ionizing Radiation Work in posted radiological areas, work with radioactive materials, or work on or near radiation producing devices. **Specify Hazard:**	☐ Yes ☒ No			
Worker Exposure Working near non-ionizing radiation, beryllium, noise, chemicals, hazardous biological materials, lead, asbestos, temperature/humidity extremes, or high explosives. **Specify Hazards:** Potential for low oxygen concentration due to liquid nitrogen system.	☒ Yes ☐ No	Facility and job-specific pre-job briefing oxygen monitors are present throughout areas with potential for low oxygen concentration	P101-5 Cryogens	Facility Briefing by Duty Operator
Energized and Operative Systems Working near energized electrical parts, pressure systems, steam lines; near unprotected belts, pulleys, chains or rotating equipment; fuel fired equipment other than vehicles; or spark or flame producing operations. **Specify Hazards:**	☐ Yes ☒ No			
Confined Spaces Entry into tanks, manholes, cooling towers, sumps, or any other area with potentially low oxygen concentration or other hazards such as toxic vapors or engulfment. **Specify Hazards:**	☐ Yes ☒ No			
Elevated Work Surface Elevated work when fall protection is not provided by conventional handrail systems or required per P101-20, *Fall Protection Program*	☐ Yes ☒ No			
Environmental Impact Activities conducted in areas containing potential release site, contaminated soil, sensitive species, watercourse wetlands, floodplain, historical/archeological sites, or other work area condition that can be impacted by or can impact the environment. **Specify Hazards:**	☐ Yes ☒ No			

Form 2101 (12/17) Page 2

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integretated Work Management, Section 6.1)
Security Requirements **Specify:**	☒ Yes ☐ No	Q or L Clearance or Escorted	P202-1 Security Areas, Property Protection Areas, and General Access Areas	U-Train 1425 Annual Security Refresher
Other Hazards **Specify:**	☐ Yes ☒ No			

I have verified that the hazards identified above adequately identify the area hazards and that the IWM process has been applied appropriately.

FOD or Representative (Signature/Z #/Date) **Approval Required** [signature] 9/9/19

Date Approval Expires: **September 30, 2020**

Form 2101 (12/17)

Page 3

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

Los Alamos NATIONAL LABORATORY EST. 1943

Form 2101

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

Non-Tenant Activity Form

IWD No./Work Request No: WFO-IWD-0016 Revision #: F

Facility Operation Director (FOD) must determine the facility entry and coordination requirements and identify the Environment, Safety, Health (ESH)/Security and Safeguards (S&S) hazards and controls associated with the activity location.

FOD	TA	Bldg.	Room	Other Location
3	16	450	All	
FOD Designated Facility Point-of-Contact	Name	Phone	Pager	Email
	Don Hyatt	7-7519	4-6314	hyatt@lanl.gov
	Mel Ortiz	7-5419	4-3070	msortiz@lanl.gov
	Byron Denny	5-5339	4-6586	byron@lanl.gov

Entry and Coordination Requirements (*Check one or more of the following*)

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- ☒ Plan of the Day/Plan of the Week (POTD/POTW)
- ☒ Security Clearance Requirements
- ☐ Co-located Hazards/Concerns
- ☒ Check out at End of Work
- ☒ Escort Required
- ☐ Other Bounding Conditions: ___
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- ☒ Work must be Scheduled
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Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integrated Work Management, Section 6.1)
☐ **No Work Area Hazards**				

Form 2101 (12/17)

Page 1

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

ESH/S&S WORK AREA HAZARDS & CONTROLS				
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Ionizing Radiation Work in posted radiological areas, work with radioactive materials, or work on or near radiation producing devices. **Specify Hazard:**	☐ Yes ☒ No			
Worker Exposure Working near non-ionizing radiation, beryllium, noise, chemicals, hazardous biological materials, lead, asbestos, temperature/humidity extremes, or high explosives. **Specify Hazards:**	☐ Yes ☒ No			
Energized and Operative Systems Working near energized electrical parts, pressure systems, steam lines; near unprotected belts, pulleys, chains or rotating equipment; fuel fired equipment other than vehicles; or spark or flame producing operations. **Specify Hazards:**	☐ Yes ☒ No			
Confined Spaces Entry into tanks, manholes, cooling towers, sumps, or any other area with potentially low oxygen concentration or other hazards such as toxic vapors or engulfment. **Specify Hazards:**	☐ Yes ☒ No			
Elevated Work Surface Elevated work when fall protection is not provided by conventional handrail systems or required per P101-20, *Fall Protection Program*	☐ Yes ☒ No			
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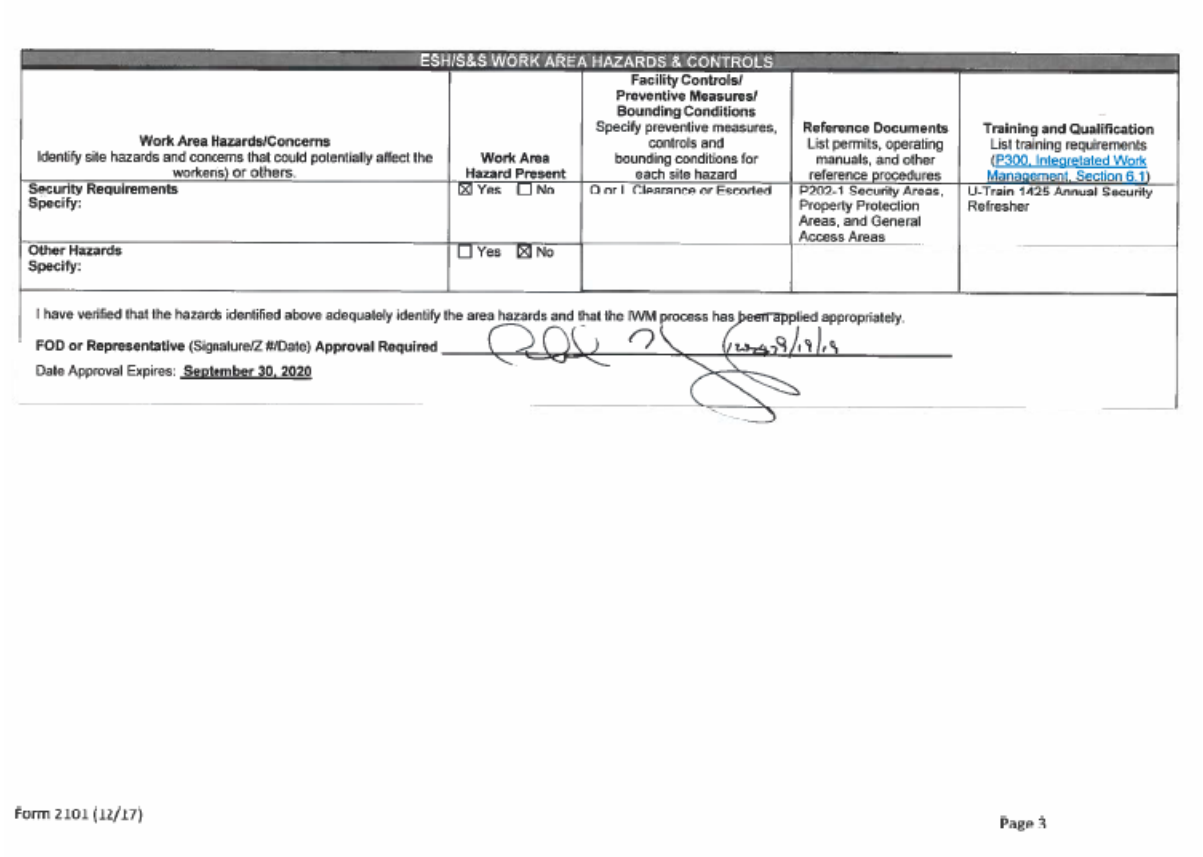
Form 2101 (12/17)

Page 2

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd)



ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the workers) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integrelated Work Management, Section 6.1)
Security Requirements Specify:	☒ Yes ☐ No	D or L Clearance or Escorted	P202-1 Security Areas, Property Protection Areas, and General Access Areas	U-Train 1425 Annual Security Refresher
Other Hazards Specify:	☐ Yes ☒ No			

I have verified that the hazards identified above adequately identify the area hazards and that the IWM process has been applied appropriately.

FOD or Representative (Signature/Z #/Date) **Approval Required** _____ 9/19/19

Date Approval Expires: **September 30, 2020**

Form 2101 (12/17) Page 3

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

Form 2101

Los Alamos NATIONAL LABORATORY EST 1943

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

Non-Tenant Activity Form

IWD No./Work Request No: WFO-IWD-0016 Revision #: F

Facility Operation Director (FOD) must determine the facility entry and coordination requirements and identify the Environment, Safety, Health (ESH)/Security and Safeguards (S&S) hazards and controls associated with the activity location.

FOD	TA	Bldg.	Room	Other Location
3	16	450	160, 161, 162, 163 Equip. Rooms	Roof
FOD Designated Facility Point-of-Contact	Name Don Hyatt Mel Ortiz Byron Denny	Phone 7-7519 7-5419 5-5339	Pager 4-6314 4-3070 4-6586	Email hyatt@lanl.gov msortiz@lanl.gov byron@lanl.gov

Entry and Coordination Requirements (*Check one or more of the following*)

- ☐ No Entry/Coordination Requirements
- ☒ Plan of the Day/Plan of the Week (POTD/POTW)
- ☒ Security Clearance Requirements
- ☐ Co-located Hazards/Concerns
- ☒ Check out at End of Work
- ☒ Escort Required
- ☐ Other Bounding Conditions: ____
- ☒ FOD-designated facility Point-of-Contact must sign IWD Part 3
- ☒ Check in at Start of Work
- ☒ Work-Area Training Required
- ☒ Work must be Scheduled
- ☒ Check in Daily
- ☒ Other Security Requirements (ex.: Cellphone, No Foreign Nationals, etc.)
- ☐ Quality Issues
- ☒ Check out Daily
- ☒ Review under Authorization Basis (AB)/Safety Basis/Unreviewed Safety Question (USQ)

Additional Comments (refer to Job Hazard Analysis [JHA] Tool Facility Notes)
WTEF is a Category II Nuclear Facility, Check in with the WETF Duty Operator, 7-2060, 16-205-110, prior to start of work. The WETF work control process must be followed. Security Requirements: No 2-way pagers or personal cell phones. Blackberries are allowed except in the "Closed Area". Government issued cell phones must have the battery removed. "Q" / "L" clearance required for access into Equipment Rooms and roof. Un-Cleared personnel must be escorted at all times.

Instructions: In the block below, identify work-area hazards that could potentially affect the worker(s) or others. Avoid using the same Part 2, Form 2101 for multiple facilities. Ensure that work area hazards, specific to the facility or work location are identified and controlled. Specify the facility controls and preventive measures that must be implemented by the worker(s) to protect against the site hazards as well as any special training required.

ESH/S&S WORK AREA HAZARDS & CONTROLS

Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integretated Work Management, Section 6.1)
☐ **No Work Area Hazards**				

Form 2101 (12/17) Page 1

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integretated Work Management, Section 6.1)
Ionizing Radiation Work in posted radiological areas, work with radioactive materials, or work on or near radiation producing devices. **Specify Hazard:**	☐ Yes ☒ No			
Worker Exposure Working near non-ionizing radiation, beryllium, noise, chemicals, hazardous biological materials, lead, asbestos, temperature/humidity extremes, or high explosives. **Specify Hazards:**	☐ Yes ☒ No			
Energized and Operative Systems Working near energized electrical parts, pressure systems, steam lines; near unprotected belts, pulleys, chains or rotating equipment; fuel fired equipment other than vehicles; or spark or flame producing operations. **Specify Hazards:**	☐ Yes ☒ No			
Confined Spaces Entry into tanks, manholes, cooling towers, sumps, or any other area with potentially low oxygen concentration or other hazards such as toxic vapors or engulfment. **Specify Hazards:**	☐ Yes ☒ No			
Elevated Work Surface Elevated work when fall protection is not provided by conventional handrail systems or required per P101-20, *Fall Protection Program*	☐ Yes ☒ No			
Environmental Impact Activities conducted in areas containing potential release site, contaminated soil, sensitive species, watercourse wetlands, floodplain, historical/archeological sites, or other work area condition that can be impacted by or can impact the environment. **Specify Hazards:**	☐ Yes ☒ No			

Form 2101 (12/17)

Page 2

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integrated Work Management, Section 6.1)
Security Requirements Specify:	☒ Yes ☐ No	Q or L Clearance or Escorted	P202-1 Security Areas, Property Protection Areas, and General Access Areas	U-Train 1425 Annual Security Refresher
Other Hazards Specify:	☐ Yes ☒ No			

I have verified that the hazards identified above adequately identify the area hazards and that the IWM process has been applied appropriately.

FOD or Representative (Signature/Z #/Date) **Approval Required** _____ 9/19/19

Date Approval Expires: **September 30, 2020**

Form 2101 (12/17)

Page 3

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

Los Alamos NATIONAL LABORATORY EST. 1943

Form 2101

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

Non-Tenant Activity Form

IWD No./Work Request No: WFO-IWD-0016 Revision #: F

Facility Operation Director (FOD) must determine the facility entry and coordination requirements and identify the Environment, Safety, Health (ESH)/Security and Safeguards (S&S) hazards and controls associated with the activity location.

FOD	TA	Bldg.	Room	Other Location
3	16	205/450	Exterior Areas	

FOD Designated Facility Point-of-Contact	Name	Phone	Pager	Email
	Don Hyatt	7-7519	4-6314	hyatt@lanl.gov
	Mel Ortiz	7-5419	4-3070	msortiz@lanl.gov
	Byron Denny	5-5339	4-6586	byron@lanl.gov

Entry and Coordination Requirements (*Check one or more of the following*)

- ☐ No Entry/Coordination Requirements
- ☒ Plan of the Day/Plan of the Week (POTD/POTW)
- ☒ Security Clearance Requirements
- ☐ Co-located Hazards/Concerns
- ☒ Check out at End of Work
- ☒ Escort Required
- ☐ Other Bounding Conditions: ___
- ☒ FOD-designated facility Point-of-Contact must sign IWD Part 3
- ☒ Check in at Start of Work ☒ Work-Area Training Required
- ☒ Work must be Scheduled ☒ Check in Daily
- ☒ Other Security Requirements (ex.: Cellphone, No Foreign Nationals, etc.)
- ☐ Quality Issues ☒ Check out Daily
- ☒ Review under Authorization Basis (AB)/Safety Basis/Unreviewed Safety Question (USQ)

Additional Comments (refer to Job Hazard Analysis [JHA] Tool Facility Notes)
WTEF is a Category II Nuclear Facility, Check in with the WETF Duty Operator, 7-2060, 16-205-110, prior to start of work. The WETF work control process must be followed. Security Requirements: No 2-way pagers or personal cell phones. Blackberries are allowed except in the "Closed Area". Government issued cell phones must have the battery removed. "Q" / "L" clearance required for all exterior areas of WETF. Un-Cleared personnel must be escorted at all times.

Instructions: In the block below, identify work-area hazards that could potentially affect the worker(s) or others. Avoid using the same Part 2, Form 2101 for multiple facilities. Ensure that work area hazards, specific to the facility or work location are identified and controlled. Specify the facility controls and preventive measures that must be implemented by the worker(s) to protect against the site hazards as well as any special training required.

ESH/S&S WORK AREA HAZARDS & CONTROLS

Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integrated Work Management, Section 6.1)
☐ **No Work Area Hazards**				

Form 2101 (12/17) Page 1

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integretated Work Management, Section 6.1)
Ionizing Radiation Work in posted radiological areas, work with radioactive materials, or work on or near radiation producing devices. **Specify Hazard:**	☐ Yes ☒ No			
Worker Exposure Working near non-ionizing radiation, beryllium, noise, chemicals, hazardous biological materials, lead, asbestos, temperature/humidity extremes, or high explosives. **Specify Hazards:**	☐ Yes ☒ No			
Energized and Operative Systems Working near energized electrical parts, pressure systems, steam lines; near unprotected belts, pulleys, chains or rotating equipment; fuel fired equipment other than vehicles; or spark or flame producing operations. **Specify Hazards:**	☐ Yes ☒ No			
Confined Spaces Entry into tanks, manholes, cooling towers, sumps, or any other area with potentially low oxygen concentration or other hazards such as toxic vapors or engulfment. **Specify Hazards:**	☐ Yes ☒ No			
Elevated Work Surface Elevated work when fall protection is not provided by conventional handrail systems or required per P101-20, *Fall Protection Program*	☐ Yes ☒ No			
Environmental Impact Activities conducted in areas containing potential release site, contaminated soil, sensitive species, watercourse wetlands, floodplain, historical/archeological sites, or other work area condition that can be impacted by or can impact the environment. **Specify Hazards:**	☐ Yes ☒ No			

Form 2101 (11/17)

Page 2

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integretated Work Management, Section 6.1)
Security Requirements **Specify:**	☒ Yes ☐ No	Q or L Clearance or Escorted	P202-1 Security Areas, Property Protection Areas, and General Access Areas	U-Train 1425 Annual Security Refresher
Other Hazards **Specify:**	☐ Yes ☒ No			

I have verified that the hazards identified above adequately identify the area hazards and that the WM process has been applied appropriately.

FOD or Representative (Signature/Z #/Date) **Approval Required** [signature] 9/19/19

Date Approval Expires: **September 30, 2020**

Form 2101 (12/17) Page 3

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

Form 2101

Los Alamos NATIONAL LABORATORY EST. 1943

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

Non-Tenant Activity Form

IWD No./Work Request No: WFO-IWD-0016 Revision #: F

Facility Operation Director (FOD) must determine the facility entry and coordination requirements and identify the Environment, Safety, Health (ESH)/Security and Safeguards (S&S) hazards and controls associated with the activity location.

FOD	TA	Bldg.	Room	Other Location
3	16	329	All	
FOD Designated Facility Point-of-Contact	Name Don Hyatt Mel Ortiz Byron Denny	Phone 7-7519 7-5419 5-5339	Pager 4-6314 4-3070 4-6586	Email hyatt@lanl.gov msortiz@lanl.gov byron@lanl.gov

Entry and Coordination Requirements (*Check one or more of the following*)

- ☐ No Entry/Coordination Requirements
- ☒ Plan of the Day/Plan of the Week (POTD/POTW)
- ☒ Security Clearance Requirements
- ☐ Co-located Hazards/Concerns
- ☒ Check out at End of Work
- ☒ Escort Required
- ☐ Other Bounding Conditions: ____
- ☐ FOD-designated facility Point-of-Contact must sign IWD Part 3
- ☒ Check in at Start of Work ☒ Work-Area Training Required
- ☒ Work must be Scheduled ☒ Check in Daily
- ☒ Other Security Requirements (ex.: Cellphone, No Foreign Nationals, etc.)
- ☐ Quality Issues ☒ Check out Daily
- ☐ Review under Authorization Basis (AB)/Safety Basis/Unreviewed Safety Question (USQ)

Additional Comments (refer to Job Hazard Analysis [JHA] Tool Facility Notes)
WTEF is a Category II Nuclear Facility, Check in with the WETF Duty Operator, 7-2060, 16-205-110, prior to start of work. The WETF work control process must be followed. Security Requirements: No 2-way pagers or personal cell phones. Blackberries are allowed except in the "Closed Area". Government issued cell phones must have the battery removed. "O" / "I." clearance required for access. Un-cleared personnel must be escorted at all times.

Instructions: In the block below, identify work-area hazards that could potentially affect the worker(s) or others. Avoid using the same Part 2, Form 2101 for multiple facilities. Ensure that work area hazards, specific to the facility or work location are identified and controlled. Specify the facility controls and preventive measures that must be implemented by the worker(s) to protect against the site hazards as well as any special training required.

ESH/S&S WORK AREA HAZARDS & CONTROLS

Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others. ☐ **No Work Area Hazards**	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integrated Work Management, Section 6.1)

Form 2101 (12/17) Page 1

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integrated Work Management, Section 6.1)
Ionizing Radiation Work in posted radiological areas, work with radioactive materials, or work on or near radiation producing devices. **Specify Hazard:**	☐ Yes ☒ No			
Worker Exposure Working near non-ionizing radiation, beryllium, noise, chemicals, hazardous biological materials, lead, asbestos, temperature/humidity extremes, or high explosives. **Specify Hazards:**	☐ Yes ☒ No			
Energized and Operative Systems Working near energized electrical parts, pressure systems, steam lines; near unprotected belts, pulleys, chains or rotating equipment; fuel fired equipment other than vehicles; or spark or flame producing operations. **Specify Hazards:**	☐ Yes ☒ No			
Confined Spaces Entry into tanks, manholes, cooling towers, sumps, or any other area with potentially low oxygen concentration or other hazards such as toxic vapors or engulfment. **Specify Hazards:**	☐ Yes ☒ No			
Elevated Work Surface Elevated work when fall protection is not provided by conventional handrail systems or required per P101-20, *Fall Protection Program*	☐ Yes ☒ No			
Environmental Impact Activities conducted in areas containing potential release site, contaminated soil, sensitive species, watercourse wetlands, floodplain, historical/archeological sites, or other work area condition that can be impacted by or can impact the environment. **Specify Hazards:**	☐ Yes ☒ No			

Form 2101 (12/17)

Page 2

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integrated Work Management, Section 6.1)
Security Requirements Specify:	☒ Yes ☐ No	Q or L Clearance or Escorted	P202-1 Security Areas, Property Protection Areas, and General Access Areas	U-Train 1425 Annual Security Refresher
Other Hazards Specify:	☐ Yes ☒ No			

I have verified that the hazards identified above adequately identify the area hazards and that the IWM process has been applied appropriately.

FOD or Representative (Signature/Z #/Date) **Approval Required** 9/19/19

Date Approval Expires: **September 30, 2020**

Form 2101 (12/17) Page 3

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

Los Alamos NATIONAL LABORATORY EST. 1943

Form 2101

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

Non-Tenant Activity Form

IWD No./Work Request No: WFO-IWD-0016 Revision #: F

Facility Operation Director (FOD) must determine the facility entry and coordination requirements and identify the Environment, Safety, Health (ESH)/Security and Safeguards (S&S) hazards and controls associated with the activity location.

FOD	TA	Bldg.	Room	Other Location
3	16	824	All	
FOD Designated Facility Point-of-Contact	Name Don Hyatt Mel Ortiz Byron Denny	Phone 7-7519 7-5419 5-5339	Pager 4-6314 4-3070 4-6586	Email hyatt@lanl.gov msortiz@lanl.gov byron@lanl.gov

Entry and Coordination Requirements (*Check one or more of the following*)

- ☐ No Entry/Coordination Requirements
- ☒ Plan of the Day/Plan of the Week (POTD/POTW)
- ☒ Security Clearance Requirements
- ☐ Co-located Hazards/Concerns
- ☒ Check out at End of Work
- ☒ Escort Required
- ☐ Other Bounding Conditions: ____
- ☐ FOD-designated facility Point-of-Contact must sign IWD Part 3
- ☒ Check in at Start of Work
- ☒ Work-Area Training Required
- ☒ Work must be Scheduled
- ☒ Check in Daily
- ☒ Other Security Requirements (ex.: Cellphone, No Foreign Nationals, etc.)
- ☐ Quality Issues
- ☒ Check out Daily
- ☐ Review under Authorization Basis (AB)/Safety Basis/Unreviewed Safety Question (USQ)

Additional Comments (refer to Job Hazard Analysis [JHA] Tool Facility Notes)
WTEF is a Category II Nuclear Facility, Check in with the WETF Duty Operator, 7-2060, 16-205-110, prior to start of work. The WETF work control process must be followed. Security Requirements: No 2-way pagers or personal cell phones. Blackberries are allowed except in the "Closed Area". Government issued cell phones must have the battery removed. "Q" clearance required for access. "L" clearance and Un-Cleared personnel must be escorted at all times.

Instructions: In the block below, identify work-area hazards that could potentially affect the worker(s) or others. Avoid using the same Part 2, Form 2101 for multiple facilities. Ensure that work area hazards, specific to the facility or work location are identified and controlled. Specify the facility controls and preventive measures that must be implemented by the worker(s) to protect against the site hazards as well as any special training required.

ESH/S&S WORK AREA HAZARDS & CONTROLS

Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others. ☐ **No Work Area Hazards**	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integretated Work Management, Section 6.1)

Form 2101 (12/17) Page 1

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integretated Work Management, Section 6.1)
Ionizing Radiation Work in posted radiological areas, work with radioactive materials, or work on or near radiation producing devices. **Specify Hazard:**	☐ Yes ☒ No			
Worker Exposure Working near non-ionizing radiation, beryllium, noise, chemicals, hazardous biological materials, lead, asbestos, temperature/humidity extremes, or high explosives. **Specify Hazards:**	☐ Yes ☒ No			
Energized and Operative Systems Working near energized electrical parts, pressure systems, steam lines; near unprotected belts, pulleys, chains or rotating equipment; fuel fired equipment other than vehicles; or spark or flame producing operations. **Specify Hazards:**	☐ Yes ☒ No			
Confined Spaces Entry into tanks, manholes, cooling towers, sumps, or any other area with potentially low oxygen concentration or other hazards such as toxic vapors or engulfment. **Specify Hazards:**	☐ Yes ☒ No			
Elevated Work Surface Elevated work when fall protection is not provided by conventional handrail systems or required per P101-20, *Fall Protection Program*	☐ Yes ☒ No			
Environmental Impact Activities conducted in areas containing potential release site, contaminated soil, sensitive species, watercourse wetlands, floodplain, historical/archeological sites, or other work area condition that can be impacted by or can impact the environment. **Specify Hazards:**	☐ Yes ☒ No			

Form 2101 (12/17) Page 2

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integretated Work Management, Section 6.1)
Security Requirements **Specify:**	☒ Yes ☐ No	Q or L Clearance or Escorted	P202-1 Security Areas, Property Protection Areas, and General Access Areas	U-Train 1425 Annual Security Refresher
Other Hazards **Specify:**	☐ Yes ☒ No			

I have verified that the hazards identified above adequately identify the area hazards and that the IWM process has been applied appropriately.

FOD or Representative (Signature/Z #/Date) **Approval Required** 9/19/19

Date Approval Expires: **September 30, 2020**

Form 2101 (12/17) Page 3

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

Los Alamos NATIONAL LABORATORY EST.1943

Form 2101

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

Non-Tenant Activity Form

IWD No./Work Request No: ____ WFO-IWD-0016 Revision #: F

The Facility Operation Director (FOD) must determine the facility entry and coordination requirements and identify the Environment, Safety, Health (ESH)/Security and Safeguards (S&S) hazards and controls associated with the specific activity location.

FOD WFO	TA 15	Bldg. 312	Room All Interior Spaces	Other Location
FOD Designated Facility Point-of-Contact	Name Edward Jacquez	Phone 7-8170	Pager	Email ebj@lanl.gov

Entry and Coordination Requirements (*Check one or more of the following*)

- ☐ No Entry/Coordination Requirements
- ☒ Plan of the Day/Plan of the Week (POTD/POTW)
- ☒ Security Clearance Requirements
- ☐ Co-located Hazards/Concerns
- ☐ Check out at End of Work
- ☐ Escort Required
- ☐ Other Bounding Conditions: ____
- ☐ FOD-designated facility Point-of-Contact must sign IWD Part 3
- ☒ Check in at Start of Work
- ☒ Work must be Scheduled
- ☐ Work-Area Training Required
- ☒ Check in Daily
- ☐ Other Security Requirements (ex.: Cellphone, No Foreign Nationals, etc.)
- ☐ Quality Issues
- ☐ Check out Daily
- ☐ Review under Authorization Basis (AB)/Safety Basis/Unreviewed Safety Question (USQ)

Additional Comments

All work at DARHT must be on the approved DARHT Plan of the Day (POD). Workers must sign in and out on a daily bais.

This IWD Part 2 does not address any activities that require:
- Penetrations or disturbing of surface areas
-Entry into confined spaces
-Elevated work surfaces

In these situations, the IWD part 1, Activitity-Specific Information, must address these hazards.

Instructions: In the block below, identify work-area hazards that could potentially affect the worker(s) or others. Avoid using the same Part 2, Form 2101 for multiple facilities. Ensure that work area hazards, specific to the facility or work location are identified and controlled. Specify the facility controls and preventive measures that must be implemented by the worker(s) to protect against the work area hazards, and also special training required.

ESH/S&S WORK AREA HAZARDS & CONTROLS

Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integretated Work Management, Section 6.1)

Form 2101 (12/17)

Page 1

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

		conditions for each site hazard		
☐ No Work Area Hazards				
Ionizing Radiation Work in posted radiological areas, work with radioactive materials, or work on or near radiation producing devices. **Specify Hazard:**	☒ Yes ☐ No	Accelerator Halls are exclusion areas during accelerator operations. These areas will be locked. In addition, engineered controls are in place to prevent exposure.		

IWD No./Work Request No: WFO-IWD-0016 Revision #: F

ESH/S&S WORK AREA HAZARDS & CONTROLS				
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integretated Work Management, Section 6.1)
Worker Exposure Working near non-ionizing radiation, beryllium, noise, chemicals, hazardous biological materials, lead, asbestos, temperature/humidity extremes, or high explosives. **Specify Hazards:**	☐ Yes ☒ No			
Energized and Operative Systems Working near energized electrical parts, pressure systems, steam lines; near unprotected belts, pulleys, chains or rotating equipment; fuel fired equipment other than vehicles; or spark or flame producing operations. **Specify Hazards:**	☐ Yes ☒ No			
Confined Spaces Entry into tanks, manholes, cooling towers, sumps, or any other area with potentially low oxygen concentration or other hazards such as toxic vapors or engulfment. **Specify Hazards:**	☐ Yes ☒ No			
Elevated Work Surface Elevated work when fall protection is not provided by conventional handrail systems or required per P101-20, *Fall Protection Program*	☐ Yes ☒ No			
Environmental Impact Activities conducted in areas containing potential release site, contaminated soil, sensitive species, watercourse wetlands, floodplain, historical/archeological sites, or other work area condition that can be impacted by or can impact the environment. **Specify Hazards:**	☐ Yes ☒ No			
Security Requirements **Specify:**	☒ Yes ☐ No	Q-Cleared, or escorted		

Form 2101 (12/17) Page 2

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

WFO-IWD-0016, Rev. F

Other Hazards **Specify:**	☐ Yes ☐ No			

I have verified that the hazards identified above adequately identify the area hazards and that the IWM process has been applied appropriately.

FOD or Representative (Signature/Z #/Date) **Approval Required** [signature] 15333 4-18-2019

Date Approval Expires: Upon Expiration of IWD
Per e-mail 4-18-19

Form 2101 (12/17)

Page 3

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

Los Alamos NATIONAL LABORATORY EST.1943

Form 2101

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

Non-Tenant Activity Form

IWD No./Work Request No: WFO-IWD-0016 Revision #: F

The Facility Operation Director (FOD) must determine the facility entry and coordination requirements and identify the Environment, Safety, Health (ESH)/Security and Safeguards (S&S) hazards and controls associated with the specific activity location.

FOD WFO	TA 15	Bldg. 312	Room N/A	Other Location Firing Point, to include Berm and other exterior areas
FOD Designated Facility Point-of-Contact	Name Edward Jacquez	Phone 7-8170	Pager	Email ebj@anl.gov

Entry and Coordination Requirements (*Check one or more of the following*)

- ☐ No Entry/Coordination Requirements
- ☒ Plan of the Day/Plan of the Week (POTD/POTW)
- ☒ Security Clearance Requirements
- ☐ Co-located Hazards/Concerns
- ☐ Check out at End of Work
- ☐ Escort Required
- ☐ Other Bounding Conditions: ____
- ☐ FOD-designated facility Point-of-Contact must sign IWD Part 3
- ☒ Check in at Start of Work
- ☒ Work must be Scheduled
- ☐ Other Security Requirements (ex.: Cellphone, No Foreign Nationals, etc.)
- ☐ Quality Issues
- ☐ Review under Authorization Basis (AB)/Safety Basis/Unreviewed Safety Question (USQ)
- ☐ Work-Area Training Required
- ☒ Check in Daily
- ☐ Check out Daily

Additional Comments

All work at DARHT must be on the approved DARHT Plan of the Day (POD). Workers must sign in and out on a daily bais.

This IWD Part 2 does not address any activities that require:
- Penetrations or disturbing of surface areas
-Entry into confined spaces
-Elevated work surfaces

In these situations, the IWD part 1, Activitity-Specific Information, must address these hazards.

Instructions: In the block below, identify work-area hazards that could potentially affect the worker(s) or others. Avoid using the same Part 2, Form 2101 for multiple facilities. Ensure that work area hazards, specific to the facility or work location are identified and controlled. Specify the facility controls and preventive measures that must be implemented by the worker(s) to protect against the work area hazards, and also special training required.

ESH/S&S WORK AREA HAZARDS & CONTROLS

Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integrated Work Management, Section 6.1)

Form 2101 (12/17)

Page 1

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

		conditions for each site hazard		
☐ No Work Area Hazards				
Ionizing Radiation Work in posted radiological areas, work with radioactive materials, or work on or near radiation producing devices. **Specify Hazard:**	☒ Yes ☐ No	The Firing Point may be an exclusion area during accelerator operations. During these times, the area will be locked. In addtion, engineered controls are in place to prevent exposure..		

WFO-IWD-0016

IWD No./Work Request No: ____ Revision #: F

ESH/S&S WORK AREA HAZARDS & CONTROLS

Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	**Work Area Hazard Present**	**Facility Controls/ Preventive Measures/ Bounding Conditions** Specify preventive measures, controls and bounding conditions for each site hazard	**Reference Documents** List permits, operating manuals, and other reference procedures	**Training and Qualification** List training requirements (P300, Integrated Work Management, Section 6.1)
Worker Exposure Working near non-ionizing radiation, beryllium, noise, chemicals, hazardous biological materials, lead, asbestos, temperature/humidity extremes, or high explosives. **Specify Hazards:**	☐ Yes ☒ No			
Energized and Operative Systems Working near energized electrical parts, pressure systems, steam lines; near unprotected belts, pulleys, chains or rotating equipment; fuel fired equipment other than vehicles; or spark or flame producing operations. **Specify Hazards:**	☐ Yes ☒ No			
Confined Spaces Entry into tanks, manholes, cooling towers, sumps, or any other area with potentially low oxygen concentration or other hazards such as toxic vapors or engulfment. **Specify Hazards:**	☐ Yes ☒ No			
Elevated Work Surface Elevated work when fall protection is not provided by conventional handrail systems or required per P101-20, *Fall Protection Program*	☐ Yes ☒ No			
Environmental Impact Activities conducted in areas containing potential release site, contaminated soil, sensitive species, watercourse wetlands, floodplain, historical/archeological sites, or other work area condition that can be impacted by or can impact the environment. **Specify Hazards:**	☐ Yes ☒ No			

Form 2101 (12/17) Page 2

Attachment B
Integrated Work Document (IWD) Part 2 (Non Tenant) (cont'd

WFO-IWD-0016, Rev. F

Security Requirements Specify:	☒ Yes ☐ No	Q-Cleared, or escorted		
Other Hazards Specify:	☐ Yes ☐ No			

I have verified that the hazards identified above adequately identify the area hazards and that the IWM process has been applied appropriately.

FOD or Representative (Signature/Z #/Date) **Approval Required** [signature] 153313 9/18/19

Date Approval Expires: Upon Expiration of IWD
Per email 9-18-19

Form 2101 (12/17)

Page 3

Attachment C Integrated Work Document (IWD) Part 2 (Tenant)

Form 2102

Los Alamos NATIONAL LABORATORY EST.1943

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

Tenant Activity Form

IWD No./Work Request No: WFO-IWD-0016, Spill Response and Clean Up in Weapons Facilities Operations (WFO) Areas Revision #: 2

FOD must determine the facility entry and coordination requirements and identify the ESH/S&S hazards and controls associated with the activity location.

FOD	TA	Bldg.	Room	Other Location
3	6, 8 , 9, 11, 14, 15, 16, 22, 36, 37, 39, 40, 49, 67, 68	All except WETF & DARHT	All	N/A
	Name	Phone	Pager	Email
FOD Designated Facility Point-of-Contact	John Branch, WFO OM Designee Christina Archuleta-Mares, WFO OM Designee Ritanne Campbell, WFO OM Designee	412-9696 231-7583 500-7878		jbranch@lanl.gov xtina@lanl.gov rfarmer@lanl.gov

Entry and Coordination Requirements (*Check one or more of the following*):

- ☐ No Entry/Coordination Requirements
- ☐ POTD/POTW
- ☐ Work must be Scheduled
- ☒ Co-located Hazards/Concerns
- ☐ Review under AB/Safety Basis/USQ this 2102.
- ☐ FOD designated facility point-of-contact must sign IWD Part 3
- ☒ Check in at Start of Work
- ☐ Check in Daily
- ☒ Check out at End of Work
- ☐ Check out Daily
- ☒ Work-Area Training Required
- ☐ Escort Required
- ☐ Quality Issues
- ☒ Other Bounding Conditions CAUTION: NO ENTRY to Confined Spaces under
- ☒ Security Clearance Requirements
- ☐ Other Security Requirements

Instructions: In the block below, provide facility or work-area information needed by the workers on this activity. (Things to consider include specific work-area hazards and controls, potential conflicts with co-located activities, or any facility restrictions on the activity.) Identify relevant reference documents and any training required.

Facility/Work-Area Information Relevant to this Activity

Work within VTRs requires check-in first with appropriate Access Control Office and coordination with respective Program Office to ensure coordination with programmatic activities.

Follow ALL Postings:

TA-6
ACCESS CONTROL: Work within TA-6 requires check-in first with TA-40-1 ACO for access to fire roads, canyons, etc. Inform ACO what locations and routes will be taken while on site (use a map of area if possible).

Form 2102 (4/12) Page ___ of ___

Attachment C Integrated Work Document (IWD) Part 2 (Tenant) (cont'd)

Specify Hazards: PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- PRS exists. Notify WFO Environmental Generalist, if required.
- Archeological sites exist within open areas. Do not disturb any marked archeological sites. If entry into any area required contact Environmental Stewardship Group.
- Work during threatened and endangered species seasons will restricts outdoor activities.
- Excavation Permit for soil disturbance activities

TA-8
ACCESS CONTROL: Must check-in with TA-8-21 Access Control to sign in locally and receive a briefing on site hazards AND to inform ACO what locations and routes will be taken while on site (use a map of area if possible).
CAUTION: This area uses Radiography equipment – specifically Buildings TA-8-22, TA-8-23, TA-8-70, and TA-8-120. Work group shall adhere to all local ACO instructions as to where access is allowed and where it is restricted, e.g. areas around buildings performing radiography.

Specify Hazards: Radiography Activities, High Explosives Area, PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- PRS exists. Notify WFO Environmental Generalist, if required.
- Archeological sites exist within open areas. Do not disturb any marked archeological sites. If entry into any area required contact Environmental Stewardship Group.
- Work during threatened and endangered species seasons will restricts outdoor activities.
- Excavation Permit for soil disturbance activities

TA-9
ACCESS CONTROL: Work within TA-9 requires check-in first with TA-9 ACO for access.
CAUTION: This area is a HE Area. Work group shall adhere to all TA-9 local ACO instructions as to where access is allowed and where it is restricted, e.g. areas around HE facilities and magazines.

Specify Hazards: High Explosives Area, PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- PRS exists. Notify WFO Environmental Generalist, if required.
- Work during threatened and endangered species seasons restricts outdoor activities.
- Excavation Permit for soil disturbance activities

TA-11
ACCESS CONTROL: Work within TA-11 requires check-in first with TA-16 ACO for access to fire roads, canyons, etc. AND to inform ACO what locations and routes will be taken while on site (use a map of area if possible).
CAUTION: This area has resumed High Explosive Operations. Work group shall adhere to all local ACO instructions and posted area as to where access is allowed and where it is restricted.

ESH CONCERNS: Entry into HE and DU contaminated areas may be required. Notify the TA-16 ACO prior to accessing areas to ensure area is safe for activities and to coordinate RCT support.

Specify Hazards: High Explosives Area, PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- Follow all postings
- PRS exists. Notify WFO Environmental Generalist, if required.
- Archeological sites exist within open areas. Do not disturb any marked archeological sites. If entry into any area required contact Environmental Stewardship Group.

Form 2102 (4/12) Page ___ of ___

Attachment C Integrated Work Document (IWD) Part 2 (Tenant) (cont'd)

- Work during threatened and endangered species seasons will restricts outdoor activities.
- Excavation Permit for soil disturbance activities

TA-14
ACCESS CONTROL: Work within TA-14 requires check-in first with TA-15 ACO for access to fire roads, canyons, etc. AND to inform ACO what locations and routes will be taken while on site (use a map of area if possible).
CAUTION: This area is a HE Firing Site Area. Work group shall adhere to all local ACO insructions as to where access is allowed and where it is restricted, e.g. areas around firing sites.

ESH CONCERNS: Entry into HE and DU contaminated areas may be required. Notify the TA-15 ACO and area Group office prior to accessing area to ensure area is safe for activities and to coordinate RCT support.
- Follow all postings
- Contact applicable SME as needed: IH, RCT, ExSO

Specify Hazards: High Explosives Area, PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- PRS exists. Notify WFO Environmental Generalist, if required.
- Archeological sites exist within open areas. Do not disturb any marked archeological sites. If entry into any area required contact Environmental Stewardship Group.
- Work during threatened and endangered species seasons will restricts outdoor activities.
- Excavation Permit for soil disturbance activities

TA-15
ACCESS CONTROL: Work within TA-15 requires check-in first with TA-15 ACO for access to fire roads, canyons, etc. and to get a radio AND to inform ACO what locations and routes will be taken while on site (use a map of area if possible).
CAUTION: This area is a HE Firing Site Area. Work group shall adhere to all local ACO insructions as to where access is allowed and where it is restricted, e.g. areas around firing sites.

ESH CONCERNS: Entry into HE, beryllium, and DU contaminated areas may be required. Notify the TA-15 ACO and area Group office prior to accessing area to ensure area is safe for activities and to coordinate RCT support.

Specify Hazards: High Explosives Area, PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- PRS exists. Notify WFO Environmental Generalist, if required.
- Archeological sites exist within open areas. Do not disturb any marked archeological sites. If entry into any area required contact Environmental Stewardship Group.
- Work during threatened and endangered species seasons will restricts outdoor activities.
- Excavation Permit for soil disturbance activities

TA-16
ACCESS CONTROL: Work within TA-16 requires check-in first with TA-16 ACO for access to fire roads, canyons, etc. and to get a radio AND to inform ACO what locations and routes will be taken while on site (use a map of area if possible).
CAUTION: This area is a High Explosives Area. Work group shall adhere to all local ACO insructions as to where access is allowed and where it is restricted, e.g. areas around firing sites.

Specify Hazards: High Explosives Area, PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- PRS exists. Notify WFO Environmental Generalist, if required.

Form 2102 (4/12) Page ___ of ___

Attachment C Integrated Work Document (IWD) Part 2 (Tenant) (cont'd)

- Archeological sites exist within open areas. Do not disturb any marked archeological sites. If entry into any area required contact Environmental Stewardship Group.
- Work during threatened and endangered species seasons will restricts outdoor activities.
- Excavation Permit for soil disturbance activities

TA-22
ACCESS CONTROL: Work within TA-22 requires check-in first with TA-22 ACO for access to fire roads, canyons, etc. and to get a radio AND to inform ACO what locations and routes will be taken while on site (use a map of area if possible).
CAUTION: This area is a High Explosives Area. Work group shall adhere to all local ACO insructions as to where access is allowed and where it is restricted, e.g. areas around HE facilites and magazines.

Specify Hazards: High Explosives Area, PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- PRS exists. Notify WFO Environmental Generalist, if required.
- Archeological sites exist within open areas. Do not disturb any marked archeological sites. If entry into any area required contact Environmental Stewardship Group.
- Work during threatened and endangered species seasons will restricts outdoor activities.
- Excavation Permit for soil disturbance activities

TA-36
ACCESS CONTROL: Work within TA-36 requires check-in first with TA-15 ACO for access to fire roads, canyons, etc. and to get a radio AND to inform ACO what locations and routes will be taken while on site (use a map of area if possible).
CAUTION: This area is a Firing Site Area. Work group shall adhere to all local ACO insructions as to where access is allowed and where it is restricted, e.g. areas around firing sites.

ESH CONCERNS: Entry into HE, beryllium, and DU contaminated areas may be required. Notify the TA-15 ACO prior to accessing area to ensure area is safe for activities and to coordinate SME support (ExSO, IH, RCT).

Specify Hazards: High Explosives Area, PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- PRS exists. Notify WFO Environmental Generalist, if required.
- Archeological sites exist within open areas. Do not disturb any marked archeological sites. If entry into any area required contact Environmental Stewardship Group.
- Work during threatened and endangered species seasons will restricts outdoor activities.
- Excavation Permit for soil disturbance activities

TA-37
ACCESS CONTROL: Work within TA-37 requires check-in first with TA-16 ACO for access to fire roads, canyons, etc. and to get a radio AND to inform ACO what locations and routes will be taken while on site (use a map of area if possible).
CAUTION: This area is a High Explosives Magazine Area

Specify Hazards: High Explosives Area, PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- PRS exists. Notify WFO Environmental Generalist, if required.
- Archeological sites exist within open areas. Do not disturb any marked archeological sites. If entry into any area required contact Environmental Stewardship Group.

Form 2102 (4/12) Page ___ of ___

Attachment C Integrated Work Document (IWD) Part 2 (Tenant) (cont'd)

- Work during threatened and endangered species seasons will restricts outdoor activities.
- Excavation Permit for soil disturbance activities

TA-39
ACCESS CONTROL: Work within TA-39 requires check-in first with TA-39 ACO for access to fire roads, canyons, etc. and to get a radio AND to inform ACO what locations and routes will be taken while on site (use a map of area if possible).
CAUTION: This area is a HE Firing Site Area. Work group shall adhere to all local ACO insructions as to where access is allowed and where it is restricted, e.g. areas around firing sites.

ESH CONCERNS: Entry into HE and DU contaminated areas (off-road) may be required. Notify the TA-39 ACO and area Group office prior to accessing area to ensure area is safe for activities and to coordinate RCT support.

Specify Hazards: High Explosives Area, PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- PRS exists. Notify WFO Environmental Generalist, if required.
- Archeological sites exist within open areas. Do not disturb any marked archeological sites. If entry into any area required contact Environmental Stewardship Group.
- Work during threatened and endangered species seasons will restricts outdoor activities.
- Excavation Permit for soil disturbance activities

TA-40
ACCESS CONTROL: Work within TA-40 requires check-in first with TA-40 ACO for access to fire roads, canyons, etc. and to get a radio AND to inform ACO what locations and routes will be taken while on site (use a map of area if possible).
CAUTION: This area is a HE Firing Site Area – specifically buildings TA-40-5, TA-40-8, TA-40-9, and TA-40-15. Work group shall adhere to all local ACO insructions as to where access is allowed and where it is restricted, e.g. areas around firing sites.

Specify Hazards: Designated/Posted Contamination Areas: Beryllium, Depleted Uranium, High Explosive Area, PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- Follow all postings
- PRS exists. Notify WFO Environmental Generalist, if required.
- Archeological sites exist within open areas. Do not disturb any marked archeological sites. If entry into any area required contact Environmental Stewardship Group.
- Work during threatened and endangered species seasons will restricts outdoor activities.
- Excavation Permit for soil disturbance activities

TA-49
ACCESS CONTROL: Work within TA-49 requires check-in first with TA-16 ACO for access to fire roads, canyons, etc. and to get a radio AND to inform ACO what locations and routes will be taken while on site (use a map of area if possible).
Accessing the HE Area within TA-49 also requires check in at TA-49-113.

Specify Hazards: Designated/Posted Contamination Areas: Beryllium, Depleted Uranium, High Explosive Area, PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- Follow all postings
- PRS exists. Notify WFO Environmental Generalist, if required.

Form 2102 (4/12) Page ___ of ___

Attachment C Integrated Work Document (IWD) Part 2 (Tenant) (cont'd)

- Archeological sites exist within open areas. Do not disturb any marked archeological sites. If entry into any area required contact Environmental Stewardship Group.
- Work during threatened and endangered species seasons will restricts outdoor activities.
- Excavation Permit for soil disturbance activities

TA-67
ACCESS CONTROL: Work within TA-67 requires check-in first with TA-15 ACO for access to fire roads, canyons, etc. and to get a radio AND to inform ACO what locations and routes will be taken while on site (use a map of area if possible).
CAUTION: This area is near a Firing Site Area. Work group shall adhere to all local ACO insructions as to where access is allowed and where it is restricted, e.g. areas around firing sites.

Specify Hazards: Designated/Posted Contamination Areas: Beryllium, Depleted Uranium, High Explosive, PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- Follow all postings
- PRS exists. Notify WFO Environmental Generalist, if required.
- Archeological sites exist within open areas. Do not disturb any marked archeological sites. If entry into any area required contact Environmental Stewardship Group.
- Work during threatened and endangered species seasons will restricts outdoor activities.
- Excavation Permit for soil disturbance activities

TA-68
ACCESS CONTROL: Work within TA-68 requires check-in first with TA-15 ACO for access to fire roads, canyons, etc. and to get a radio AND to inform ACO what locations and routes will be taken while on site (use a map of area if possible).
CAUTION: This area is near a Firing Site Area. Work group shall adhere to all local ACO insructions as to where access is allowed and where it is restricted, e.g. areas around firing sites.

Specify Hazards: Designated/Posted Contamination Areas: Beryllium, Depleted Uranium, High Explosive, PRS, sensitive species-e.g. spotted owl, historical/archeological sites, and waste generation.
- Follow all postings
- Contact applicable SME as needed: IH, RCT, ExSO
- PRS exists. Notify WFO Environmental Generalist, if required.
- Archeological sites exist within open areas. Do not disturb any marked archeological sites. If entry into any area required contact Environmental Stewardship Group.
- Work during threatened and endangered species seasons will restricts outdoor activities.
- Excavation Permit for soil disturbance activities

ABNORMAL EVENTS: Any injury, accident, spill, off normal occurrence, etc. MUST be reported immediately to the WFO-FOD Duty Officer @ 664-2926 AND the Access Control Office.

Reference Documents: P101-8, Explosives Safety; P121 Radiation Safety; P101-21 Chronic Beryllium Disease Prevention Program, WFO-OP-1137 WFO Lightning Threat Actions, WFO-BEP-378 WFO Building Emergency Plan

Training Requirements: Per: WFO-IWD-0016, Spill Response and Clean Up in Weapons Facilities Operations (WFO) Areas, Site Specific Training for ALL areas

Form 2102 (4/12) Page ___ of ___

Attachment C Integrated Work Document (IWD) Part 2 (Tenant) (cont'd)

FOD Approval
I have verified that the hazards identified above adequately identify the area hazards and that the IWM process has been applied appropriately.
FOD or Representative (Signature/Z #/Date) **Approval Required** John Brown 232120 9/25/19
Date Approval Expires: Upon Expiration of WFO-IWD-0016, Spill Response and Clean Up in Weapons Facilities Operations (WFO) Areas

Form 2102 (4/12)

Page ___ of ___

Attachment D Integrated Work Document (IWD) Part 3 Validation and Work Release Validation and Work Release

Form 2103

Los Alamos NATIONAL LABORATORY EST.1943

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

IWD #WFO-IWD-0016 **Revision #:** F Work Release

By signing below, I verify this activity is compatible with current facility configuration and operating conditions.
FOD designated Operations Manager or other facility point-of-contact for work area

Signature/Z#/Date **(If required by FOD):** 10/2/19
Note: For Standing IWD, release may be given concurrently with signatures on Part 2. 206821

By signing below, I have verified the following:

- I have verified authorization by ensuring approval signatures of the RLM and FOD.
- I have jointly conducted a validation walkdown with workers to confirm the IWD can be performed as written, and that required initial conditions and other prerequisites are in place.
- The assigned workers are authorized and are competent to perform the work in a safe, secure, and environmentally responsible manner.
- I have conducted the pre-job briefing, and all workers (including support workers) have been briefed.
- I have ensured coordination with any required FOD work-area representatives (e.g., area work coordinators).

PIC (Signature/Z#/Date) **Required:** , 178509, 09/27/19

Alternate PIC Signatures **acknowledges** PIC authority is assumed for the first time. *(Note: Alternate PICs are required to sign only once, but formal handoff includes conferring with previous PIC to obtain all required information associated with the handoff.)*

Alternate PIC (Signature/Z#/Date) **Required:** _____

Alternate PIC (Signature/Z#/Date) **Required:** _____

Pre-Job Brief Content

- What are the critical steps* or phases of this activity?
- How can we make a mistake at that point?
- What is the worst thing that can go wrong?
- What controls, preventive measures, and bounding conditions are needed?
- What work permits are required and how will we meet their requirements?
- What are the handoffs and coordination requirements among workers and multiple PICs?
- Are there hold-points including those that require sign-offs?
- What are the pause/stop work responsibilities and expectations (e.g., for unanticipated conditions or hazards)?
- How would we respond to alarms and emergencies?
- Are there lessons learned from previous similar work?
- Is other information needed to perform this activity in a safe, secure, and environmentally responsible manner?
- Does everyone agree to the work tasks/steps, hazards, and controls and commit to follow them?

* "Critical steps occur anytime human performance involves a substantial transfer of energy, or movement of solids, liquids, and gases, or the transmission of data and information that , if not performed under control, could cause serious harm to one or more important assets." (Performance Improvement, vol. 53, no. 9, October 2014)

IWD #WFO-IWD-0016 Revision #:F Work Release

Pre-Job Brief Attendance Roster

By signing below **as required**, I agree to the following:

- I agree to follow the work steps and implement the controls as written as applicable to my work assignments.
- I agree to pause/stop work when conditions or hazards change or when I encounter unexpected conditions during the execution of work, or when work cannot be performed as written, or instructions become unclear during execution.
- I confirm that I am authorized, qualified, and fit to perform the work.

Worker (Signature/Z#/Date)	**Worker** (Signature/Z#/Date)
Worker (Signature/Z#/Date)	**Worker** (Signature/Z#/Date)
Worker (Signature/Z#/Date)	**Worker** (Signature/Z#/Date)
Worker (Signature/Z#/Date)	**Worker** (Signature/Z#/Date)
Worker (Signature/Z#/Date)	**Worker** (Signature/Z#/Date)
Worker (Signature/Z#/Date)	**Worker** (Signature/Z#/Date)
Worker (Signature/Z#/Date)	**Worker** (Signature/Z#/Date)

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

IWD #: WFO-IWD-0016 **Revision #:** F

Feedback of ongoing activities/post job review with the workers and Person in Charge (PIC) should include the following:

- identify inefficiencies, problems during the activity, coordination issues, unanticipated conditions, near misses; and
- develop recommendations for improvement.

A post-job review with the workers and PIC should include the following:

- verify that the activity is complete and make notifications in accordance with Facility Operations Director (FOD) requirements; and
- ensure that follow-through actions (e.g., clean-up, recycle, waste disposal, equipment removal, and secure storage) are completed.

Lessons learned; safety, security, and environmental issues; coordination issues; and unexpected conditions.
Suggested improvements to enter into the Job Hazard Analysis (JHA) Tool, FootPrints, or other Integrated Work Control data bases supported by Lessons Learned.
Other recommendations for improvements to performing this activity. State the positive attributes of this activity.

Completion Statement

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

ATTACHMENT 25: SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN FOR THE LOG-HERG REFUELING TRUCKS

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

FOR THE

LOG-HERG REFUELING TRUCKS

Los Alamos National Laboratory

Prepared By:
Navarro Research & Engineering, LLC
190 Central Park Square Suite 203
Los Alamos, NM 87544
Phone: 505-661-4887

In Conjunction with:
Los Alamos National Laboratory
Water Quality (ENV-CP)

Revision 0: March 2010
Revision 1: April 2015

LA-UR-15-22845

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Appendix E Facility Diagrams and Other Information
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General Requirements Cross Reference

Final SPCC Rule 40 CFR	Description of Section	SPCC Section
§ 112.7	General requirements for SPCC Plans for all facilities and all oil types.	Introduction
§112.7(a.1, 2)	Discussion of facility's conformance with rule requirements; deviations from Plan requirements	1.1 Conformance
§112.7(a.3.i, iii)	Facility characteristics that must be described in the Plan; facility diagram	Section 2.0 Facility Description, Appendix E
§112.7(a.3.ii, iv, v, vi; a.4; a.5)	Spill prevention, response and reporting information in the Plan; emergency procedures.	Section 3. Spills and Appendix E
§ 112.7(b)	Fault analysis.	Section 3. Spills and Appendix E
§ 112.7(c)	Secondary containment.	2.1 Tank Trucks
§ 112.7(d)	Contingency planning.	N/A
§ 112.7(e)	Inspections, tests, and records.	1.3.1 Inspections and 1.3.2 Record keeping
§ 112.7(f)	Employee training and discharge prevention procedures.	1.3.3 Training
§ 112.7(g)	Security (excluding oil production facilities).	2.2 Security
§ 112.7(h)	Loading/unloading (excluding offshore facilities).	2.3 Transfer operations
§ 112.7(i)	Brittle fracture evaluation requirements.	1.3.1 Inspections
§ 112.7(j)	Conformance with State requirements.	1.1 Conformance
§ 112.8 § 112.12	Requirements for onshore facilities (excluding production facilities).	Throughout Plan
§ 112.8(a)§ 112.12(a)	General and specific requirements.	Throughout Plan
§ 112.8(b); (c.4, 5, & 11) § 112.12(b); (c.4, 5, & 11)	Facility drainage.	Section 2.0 Facility Description, 2.3 Transfer operations
§ 112.8(c.1, 2, 7) § 112.12(c.1, 2, & 7)	Bulk storage containers.	2.1 Tank Trucks
§ 112.8(c.3), § 112.12(c.3)	Bulk storage containers.	2.0 Facility Description
§ 112.8(c.6 & 10) § 112.12(c.6 & 10)	Bulk storage containers.	1.3.1 Inspections
§ 112.8(c.8) § 112.12(c.8)	Bulk storage container.	2.3 Transfer operations
§ 112.8(c.9) § 112.12(c.9)	Bulk storage container.	N/A
§ 112.8(d.1, 2 & 3) § 112.12(d.1, 2 & 3)	Facility transfer operations, pumping, and facility process.	2.3 Transfer operations
§ 112.8(d.5) § 112.12(d.5)	Facility transfer operations, pumping, and facility process.	2.4 Security
§ 112.8(d.4) § 112.12(c.4)	Facility transfer operations, pumping, and facility process.	1.3.1 Inspections
§ 112.9, § 112.13	Requirements for onshore production facilities.	N/A
§ 112.10 § 112.14	Requirements for onshore oil drilling and workover facilities.	N/A
§ 112.11 § 112.15	Requirements for offshore oil drilling, production, or workover facilities.	N/A

CERTIFICATION

This Plan was developed pursuant to provisions of the federal regulation for oil pollution prevention, 40 CFR Part 112. Its purpose is to provide spill prevention and response measures to prevent the pollution of navigable waters from oil related spills.

In accordance with 40 CFR Part 112.3 (d), this Plan has been reviewed and certified by a Registered Professional Engineer (PE). By means of this certification, the engineer, having examined the facility or having an agent examine the facility, and being familiar with the provisions of this regulation, attests that the Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of Part 112. Procedures for required inspections and testing have been established and this Plan is adequate for the facility.

Certified by:

Shellie Winsemius
Registered Professional Engineer
Navarro Research & Engineering, LLC

4-30-2015
Date:



Management Approval

This Plan has the full approval of management at a level with authority to commit the necessary resources. The owner/operator will fully implement this Plan in accordance with the requirements of 40 CFR Part 112.

Facility Owner/Operator

Approved By: _____ Date: _____
John F. Merhege, Logistics Division Leader

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN REVIEW PAGE

In accordance with 40 CFR 112.5(b), a review and evaluation of this SPCC Plan is conducted at least once every five years. As a result of this review and evaluation, the SPCC Plan will be amended within six months of the review to include more effective prevention and control technology if: (1) such technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field proven at the time of review. Any technical amendment to the SPCC Plan shall be certified by a Professional Engineer within six months after a change in the facility design, construction, operation, or maintenance occurs which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines. Non-technical amendments are not certified by a Professional Engineer.

I have completed review and evaluation of the SPCC Plan and will or will not amend the plan as indicated below

Review Dates	Signature	Name	Title	Amendment required (yes/no)
March 2015		Albert Dye	ENV-CP SPCC Program Lead	Yes

1. INTRODUCTION

The Spill Prevention Control and Countermeasure (SPCC) Plan is an Environmental Protection Agency (EPA) requirement of the Oil Pollution Prevention Regulation (40 CFR 112). 40 CFR 112.1(d)(2)(ii) requires that facilities that have an aggregate aboveground storage capacity of 1,320 gallons or greater of oil, including all containers and equipment 55 gallons or greater, maintain a SPCC Plan. The intent of the SPCC Plan is to prevent oil related spills from polluting navigable waters of the United States (U.S.) through the implementation of adequate prevention and response measures. With regard to Los Alamos National Laboratory (LANL), navigable waters of the U.S. include all canyons, arroyos, streams, and rivers within and surrounding LANL Technical Areas (TAs).

Due to LANL's diverse activities and changing conditions, a single Plan incorporating all LANL facilities subject to SPCC requirements is impractical. SPCC locations are addressed according to specific facility boundaries within LANL as determined by management and funding origination. The Facility Operations Director (FOD) or the facility tenant with approval from the FOD, develops, implements, and maintains SPCC Plans for the specific SPCC location(s) within their stewardship.

This SPCC Plan addresses the Heavy Equipment Shop and refueling trucks operated by the Logistics Heavy Equipment / Roads & Grounds (LOG-HERG) division at LANL.

1.1. Conformance

This SPCC Plan and facility conform to the requirements of 40 CFR Part 112 to the fullest extent possible. This facility has appropriate spill prevention, reporting, and response measures; tanks and secondary containment are appropriate for the materials stored (except as noted below); security is adequate; there are procedures for inspections, testing, and records; and annual training will occur.

Deviation from regulations for facility description:

- LOG may provide refueling services to construction vehicles and equipment located at construction sites that are regulated by 40 CFR 112 or 40 CFR 122. Such sites regulated by a SPCC Plan or Construction Storm Water Pollution Prevention Plan (SWPPP) are considered approved refueling sites based on regulatory requirements and will not be updated in this Plan. SPCC and SWPPP requirements include proper best management practices for ensuring that oil pollution prevention measures are administered during refueling activities. Facility maps and site specific pollution prevention requirements are available at the various SPCC and SWPPP regulated construction sites.

Future improvements to ensure compliance with regulations include:

- Train refueling personnel to respond to an incidental spill.
- Implement the use of the Remote Refueling Checklist form found in Appendix B.
- Train refueling personnel to identify adjacent storm drains and ditches and to choose and install temporary BMPs if needed.
- Perform refueling only at designated locations. If refueling must occur at an undesignated location, the location will be inspected for adjacent storm drains and ditches. Temporary BMPs will be installed if required.
- If temporary BMPs are specified for a location, fueling will not occur unless the temporary BMP has been installed by the facility or refueler team.
- Refueling will not occur during precipitation events in areas exposed to stormwater.
- Storage tanks will not be filled over 95%. The facility should determine the current level of fuel in the tank and request the specific amount to be delivered to not overfill their tank. It is strongly encouraged that all storage tanks be equipped with a level gage visible to refuelers. Vehicles can be filled until the dispensing nozzle shutoff is activated.
- Ensure drainage valve on outdoor portable container secondary containment is locked closed.

In addition to Federal regulations, this Plan complies with the New Mexico Environment Department (NMED) regulations for Ground and Surface Water Protection (NMAC 20.6.2). State water quality standards are considered when determining procedures for secondary containment drainage. These tanks do not fall under the NMED Petroleum Storage Tank Regulations (NMAC 20.5.1-17). The Certification of the Applicability of Substantial Harm Criteria is included in Appendix A.

1.2. Facility Owner & Operator

Refueling services at LANL are operated by Logistics Heavy Equipment / Roads & Grounds LOG-HERG Group for LANS.

Facility Owner and Operator.
Logistics (LOG) Division
Heavy Equipment / Roads & Grounds (LOG-HERG) Group
Los Alamos National Security LLC (LANS)

Contacts

Name	*Phone*	*Title*
Jillian Burgin	665-1893	DSESH-UIMS Deployed Environmental Professional
David Schrock	667- 6547	DSESH-EWMO Deployed Environmental Professional
Tim Walker-Foster	667 5177	LOG-HERG Group Leader
James Rabold	667- 5658	MSS-UI Operations & Maintenance Coordinator Lead

1.3. Management Responsibility

The owner/operator is responsible for preparing and implementing the requirements of the SPCC Plan. In addition to requirements specific to storage tanks and containment structures, 40 CFR Part 112 requires the development of procedures associated with inspections, record keeping, training, and Plan amendment. The following sections address implementation of these procedures at the facility.

This table shows the responsibilities that are further described in the SPCC Plan.

		ENV-CP	*Facility Owner/Operator*
General	*Prepare SPCC to meet regulatory requirements*	*X*	
	Approve SPCC		*X*
	Implement SPCC		*X*
	Approve physical changes needed to implement SPCC		*X*
	Provide oversight	*X*	*X*
	Leak and spill cleanup and disposal, provide spill information to ENV-CP, insert spill reports in Plan		*X*
	Spill reporting to state and federal regulators	*X*	
Inspections	*Provide qualified personnel to perform and write monthly SPCC walk around inspections*		*X*
	Provide annual DOT certification		*X*
	Provide qualified personnel to perform and write annual SPCC inspections	*X*	
	Implement corrective actions noted in inspections		*X*
Recordkeeping	*Maintain inspections in onsite SPCC*		*X*
	Maintain onsite training records for periodic briefings or Lessons Learned		*X*
	Review SPCC every five years	*X*	*X*
Training	*Provide annual training that meets SPCC regulatory requirements*	*X*	
	Ensure all oil handling personnel and designated persons accountable for discharge prevention attend annual training		*X*
Plan Amendment	*Provide information on changes to design, construction, operation or maintenance*	*X*	*X*
	Amend Plan when spill or other change in facility occurs	*X*	
	Implement changes to plan within 6 months of change to facility		*X*

1.3.1. Inspections

Inspections include monthly inspections, annual SPCC walk around inspections, and certified inspections. Procedures for each are detailed below. Records of each are kept in accordance with Section 1.3.2, Record Keeping. In the event of a problem, the deficiency is documented on the applicable inspection form and corrective action will be taken. Any identified leaks or problems associated with the system will be promptly corrected, and any oil accumulations will be removed.

Inspection Summary

Type	Frequency	Inspector
Periodic Inspections	Monthly	MSS-UI Deployed Environmental Professional EWMO Deployed Environmental Professional
Annual SPCC	Annual	Water Quality (ENV-CP)
Certified-DOT	Annual	Outside Contractor
Brittle Failure	Not applicable	n/a

Daily walk-around: Per DOT requirements the tanker trucks are inspected daily while in operation. Records are kept with the vehicles.

Periodic Inspections: Monthly periodic inspections are conducted by the Deployed Environmental Professional using the Periodic Inspection Checklist form in Appendix B. The inspections assess items recommended for periodic inspection in SP-001 including: condition of the tanks and portable containers, containment units, and tanker attachments and appurtenances.

Annual SPCC Walk-Around Inspections: SPCC inspections are performed by ENV-CP Water Quality personnel and assess compliance with the SPCC Plan including: recordkeeping, changes to the facility, the condition of the tanks and associated equipment. This inspection covers all areas required by SPCC regulations and are performed in accordance with the industry standard STI SP-001. SPCC inspections are performed using the SPCC Walk-Around Inspection Form located in Appendix B, and they identify the date the inspection was performed, facility/structure conditions, and identified deficiencies. Completed inspection forms contain the signature of the inspector. In addition, ENV-CP personnel will inspect the tank after a “Critical Situation” occurs such as a leak, exposure to fire, or a major storm.

Certified Inspections: The tanker trucks are inspected annually per DOT requirements. All of the other storage tanks and portable containers that are part of this plan are less than 1100 gallons and per STI SP001 only require a periodic inspection as described above.

Brittle Failure and Catastrophe Evaluation: Regulations require an evaluation for risk of discharge or failure due to brittle fracture or other catastrophe for field constructed ASTs that undergo a repair, alteration, reconstruction, or a change in service that might affect the risk of a discharge or failure. There are no field constructed oil storage ASTs at this facility, this evaluation does not apply.

1.3.2. Record Keeping

As required by 40 CFR 112.3(e), the SPCC Plan will be maintained at the facility at TA-60-1 Heavy Equipment Shop. The maintained plan includes inspection procedures, signed SPCC and certified inspections, drainage records, spill reports, and training records (as described below) that will be retained as part of this SPCC Plan at the facility for a minimum of three years. In addition, documents may be forwarded to the Records Management Team to be retained in accordance with Department of Energy requirements. Following is a summary of how record keeping requirements will be fulfilled at the facility:

- Completed AST Periodic Inspection Checklists, annual SPCC inspection reports, certified inspection reports, and Remote Refueling Checklist forms will be maintained as part of the SPCC in Appendix B.

- SPCC training records will be documented in the Employee Development System (EDS), in accordance with LANL's Institutional Program Conduct of Training ISD 781-1. Attendance records for Lessons Learned or periodic briefings are kept per facility requirements. Site Specific SPCC training records are retained in Appendix C.
- Amendments to the Plan will be recorded in the Amendment Log, Appendix D.
- A copy of spill reports will be retained in Appendix F.

1.3.3. Training

40 CFR Part 112.7(f)(1) states "Train your oil-handling personnel in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPCC Plan."

An online training program (Course: #30441) has been developed that covers spill procedure protocols; applicable pollution control laws, rules, and regulations; and lessons learned - information on known spill events or failures, SPCC Plan elements, and spill response procedures. This training program is required at least once a year for oil-handling personnel of SPCC facilities. Additional spill prevention briefings and information on known spill events or failures, malfunctioning equipment, and recently developed precautionary measures is provided to oil handling personnel through the LANL Institutional Program, Lessons Learned Notification and Feedback Program, or through periodic facility briefings on small spills. In addition to the above training, spill response personnel at LANL receive HAZWOPER training that covers spill prevention, control, and cleanup procedures. Site specific training is completed by required reading of this SPCC Plan and is documented in Appendix C.

Oil handling personnel and personnel that will have SPCC training at this facility include the Deployed Environmental Professionals identified in Section 1.2, the Resource Manager, Work Planners, and personnel who conduct fueling operations.

1.3.4. Plan Amendment

This SPCC Plan will be amended whenever there is a change in facility design, construction, operation or maintenance that materially affects the facility's potential for discharge of oil into or upon the navigable waters of the United States or adjoining shorelines. The Plan will also be amended as necessary if a spill causes a change in design, construction, operation, or maintenance. Such amendments shall be fully implemented as soon as possible, but not later than six months after such change occurs. Amendments to the Plan will be recorded in the Amendment Log, Appendix D.

In addition, in accordance with 40 CFR 112.5(b), a complete review and evaluation of this SPCC Plan will be conducted at least once every five years by the operating group and/or FOD and by ENV-CP. As a result of this review and evaluation, the SPCC Plan will be amended within six months of the review to include more effective spill prevention and control technology if:

1) Such technology will significantly reduce the likelihood of a spill event from the facility, and
2) If such technology has been field proven at the time of review.

Changes to the contact lists, as well as the addition of records to the Plan, do not require certification by a Professional Engineer. A Professional Engineer will certify all amendments that address technical changes such as a change in the facility's ability to discharge oil.

2. FACILITY DESCRIPTION

Logistics (LOG) is a multidisciplinary organization whose primary mission is to provide the Laboratory with safe, reliable, and efficient infrastructure maintenance and utilities support. LOG customers reside within 43 square miles involving approximately 1,400 building facilities.

This SPCC Plan addresses portable storage tanks used to refuel generators, fuel storage tanks, and vehicles around the Laboratory. It also addresses storage tanks and portable containers at the Heavy Equipment Shop, building TA-60-1, where the trucks are parked while not in service. At building TA-60-1 there is a 525 gallon used oil tank at the building used by the refuelers and the facility. There are also several drums stored outside the building and some drums and a tank located within the building.

LOG may provide refueling services to construction vehicles and equipment located at construction sites that are regulated by 40 CFR 112 or 40 CFR 122. Such sites regulated by a SPCC Plan or Construction Storm Water Pollution Prevention Plan (SWPPP) are considered approved refueling sites based on regulatory requirements and will not be updated in this Plan. SPCC and SWPPP requirements include proper best management practices for ensuring that oil pollution prevention measures are administered during refueling activities. Facility maps and site specific pollution prevention requirements are available at the various SPCC and SWPPP regulated construction sites.

A list of designated refueling locations is included in Section 2.4, and in addition, some refueling may occur in undesignated locations for emergency vehicles and portable emergency generators.

2.1. Tank Trucks

The SPCC amendments streamline requirements for mobile refuelers. Mobile refuelers are exempted from the sized secondary containment requirements. However, the general secondary containment requirements still apply. General secondary containment addresses the most likely discharge from the container and from oil transfers into and from the mobile refueler. General secondary requirements do not prescribe a size for a secondary containment structure but require that the containment system prevent the spilled oil from escaping the system prior to clean up occurring and that appropriate containment and/or diversionary structures or equipment to prevent a discharge to navigable waters or adjoining shorelines. Usage of the Remote Refueling Checklist found in Appendix B will identify the type of general secondary containment to be provided during refueling operations and to ensure that it is properly implemented.

The trucks are stored in the east side of TA-60-1 and the trucks pick up fuel offsite. The storage area is located about 1000’ feet via the drainage path from Sandia Canyon. Currently the area drains to a storm drain insert that filters for oil. Oil absorbing PetroBarriers™ units have been installed in the storm drain inlets at the northeast corner of the paved areas. The PetroBarriers™ are designed to allow to water to flow through while capturing small amounts of oil (oil sheens) from the water. They are also designed to completely stop the flow of all liquid if a release of oil or fuel were to flow into the storm drain.



Figure 1: TA-60-1 parking area storm drains equipped with PetroBarriers™

All of the refueling tanker trucks are in compliance with DOT standards and maintain current certifications. The tank truck fuel levels are checked by sticking the tanks once a week, the hoses are equipped with meters to track the amount dispensed. Each truck is equipped with a spill kit.

G82 0414A Fueling Truck

This truck has a 2000 gallon capacity diesel dispensing tank and a 1000 gallon gasoline dispensing tank. The dispensing hoses are equipped with automatic overfill shutoffs and a manual emergency shut off valve at the truck.



Figure 2: TA-60 G82 0414A Fueling Truck

G82 01079 Fueling Truck

This truck has a 2000 gallon capacity diesel dispensing tank and a 1000 gallon gasoline dispensing tank. The dispensing hoses are equipped with automatic overfill shutoffs and a manual emergency shut off valve at the truck.



Figure 3: TA-60 G82 01079 Fueling Truck

G82 01079 Replacement Truck

As of April 2015, a new fuel truck has been ordered to replace the G82 01079 vehicle. The specifications call for the replacement truck to be equipped with a DOT 406 certified, 4400 gallon tank, with four compartments: 2000 gallon diesel capacity; 1000 gallon unleaded gasoline capacity; 700 gallon E85 capacity; and 700 gallon B20 BIO diesel capacity. The fuel nozzles will be equipped with over-fill shutoffs

E29904 Fueling Truck

The 2800 gallon truck has a 2000 gallon E85 dispensing tank and an 800 gallon gasoline dispensing tank. The dispensing hoses are equipped with automatic overfill shutoffs and a manual emergency shut off valve at the truck.



Figure 4: TA-60 E29904 Fueling Truck

G82 0672D Service Truck

The service truck supplies oil, antifreeze, and grease on an on-call basis to undesignated areas via onboard pumps. The truck is equipped with skid mounted tanks with reel-mounted dispensing hoses that have automatic overfill shutoffs. There are four, 55 gallon polyethylene tanks and a 120 lb. grease container all of which are skid mounted on the truck bed. The truck has pumps for dispensing liquids and grease through hose reels located on a fixed shelf on a lube skid that allows them to be accessed from the rear of the load-bed area.



Figure 5: TA-60 G82 0672D Service Truck

TA-54 Tanker Truck

This truck has a 500 gallon fuel delivery tank, with 250 gallons of diesel and 250 gallons of gasoline. The tank is built to DOT 406 standards and is equipped with a pressure vent fill cap. The dispensing hoses are equipped with automatic overfill shutoffs. Due to access issues at TA-54, Area G, this truck is parked at TA-54, and does not leave the facility. The other tanker trucks deliver fuel to this tank for distribution within TA-54 by LOG staff. The TA-54 tanker truck is currently parked at the TA-54 Laydown Yard in a bermed earthen recessed catchment area.



Figure 6: TA-54 Tanker Truck

2.2. Heavy Equipment Shop

Building TA-60-1 is the Heavy Equipment Shop and is also covered under a MSGP Storm Water Pollution Prevention Plan. There is a 525 gallon plastic used oil tank at the building used by the refuelers and the Heavy Equipment Shop. It is located within a fiberglass containment unit that collects incidental spills for cleanup from when oil is poured in the manway top. There are several drums with oil and other chemicals stored outside the building within a secondary containment until that will have the drainage valve locked closed.

There are several oil drums and a 240 gallon LAFD listed oil tank located within the building. The building (and maintenance pits) acts as a secondary containment unit. .The northwest end of the facility drainage is captured by a trench drain that discharges into an oil-water separator.

2.3. Security

The TA-60-1 facility is locked when not staffed. There are no out of service pipelines. The storage tanks do not contain any master flow and drain valves that direct flow of the tanks' contents to the surface, the vehicles must be running to transfer fuel. TA-54 facility is fenced and access gates are lowered to prevent unauthorized entry into the area when the facility is not staffed. Both facilities have adequate lighting and security patrols to facilitate the discovery of a night spill and to deter vandals.

2.4. Facility Transfer Operations

There is no transfer piping associated with this plan. NFPA 385 Tank vehicles for Flammable and Combustible Liquids, Section 9.2.1, states that loading and unloading of tank vehicles shall be done only in approved locations. Filling of the tank trucks is performed offsite. The EOC tanks are fueled by an outside operator. Facilities with their own SPCC plans have developed site specific fueling procedures that must be followed. There are several facilities at LANL where refueling occurs but the oil capacity is under the threshold to require a SPCC. In general, at LANL, the areas where refueling operations will take place do not have dikes, oil catch basins, or a diversion system. General secondary containment requirements apply and active containment measures will be used. Specific spill prevention and containment measures for facility transfer operations are listed below, and the table shows the methods to be used at each site.

- The delivery system is equipped with an automatic overfill shutoff nozzle and a manual safety valve at the tank to shut off fuel flow.
- Utilize and properly follow the Remote Refueling Checklist (Appendix B).
- Refueling operations are monitored by personnel at all times and emergency spill absorbent materials are located on each truck in service for immediate use if needed.
- The refueling activity will occur in a designated area that would prevent a spill from entering a watercourse before the spill could be cleaned up. The area should be a flat gravel lot or asphalt area with temporary storm drain protection or temporary berms installed as needed. If temporary BMPs are specified for a location, fueling will not occur unless the temporary BMP has been installed by the facility or refueler team.
- If refueling must occur at an undesignated location, the location will be inspected for adjacent storm drains and ditches. Temporary BMPs will be installed if required.
- Refueling will not occur during precipitation events in areas exposed to stormwater.
- Storage tanks will not be filled over 90% unless the tank is equipped with a 95% overfill prevention valve. The facility must determine the current level of fuel in the tank and request the specific amount to be delivered to not overfill their tank.
    - Storage tanks should be equipped with a level gage visible to refuelers. It is recommended that tanks be equipped with failsafe devices to prevent overfilling.
    - Vehicles must not be filled past the point when the dispensing nozzle shutoff is activated, i.e., tanks must not be topped off with additional fuel.
- Future improvements may include installation of sight levels on tanks

SPCC regulated facilities at LANL with possible fuel transfer operations

Facilities with SPCC plans must describe facility transfer operations and appropriate procedures and containment. The table below describes where the procedures can be found.

Designated Fueling Locations **SPCC Regulated Facilities:** **Stationary Equipment**	**Site Specific Filling Procedure**	**General Secondary Containment Method (for refueling area) and Capacity**
TA-16 WETF Generator	described in facility SPCC Plan	• Temporary berms • Spill kit
TA-50 Artic generator	described in facility SPCC Plan	• Drain cover • Spill kit
TA-3 Power Plant emergency generator	described in facility SPCC Plan and UOI 66-20-170	• Spill container under refueling hose
TA-60 Emergency Generator trailer (stored at TA-60 Electrical yard but location will change when in use)	described in facility SPCC Plan	• If required at deployed location: Temporary berms • Spill kit
TA-33 Generator	described in facility SPCC Plan	• Spill kit
TA-3 SAS	described in facility SPCC Plan	• Spill kit
TA-48-270 generator	described in facility SPCC Plan	• Spill kit
TA-48-271 generator	described in facility SPCC Plan	• Spill kit
TA-55 PF8 Generator	described in facility SPCC Plan	• Spill kit
TA-55-362 CAS	described in facility SPCC Plan	• Spill kit
TA-55-364 facility Emergency generator	described in facility SPCC Plan	• Spill kit
TA-55 facility tanks in sumps	described in facility SPCC Plan	• Spill kit
TA-55-551 Utility Building	described in facility SPCC Plan	• Spill kit
TA-55-583, 584, 585 RLUOB Generators	described in facility SPCC Plan	• Spill kit
Designated Fueling Locations **SPCC Regulated Facilities:** **Vehicles and Mobile Equipment**	**Site Specific Filling Procedure**	**General Secondary Containment Method (for refueling area) and Capacity**
TA-55 Vehicle refueling	described in facility SPCC Plan	• Spill kit
TA-3 Power Plant vehicle refueling	described in this SPCC Plan	• Spill kit
TA-53 “orange box” vehicle fueling	described in this SPCC Plan	• Spill kit
Chromium Project Wells Construction Equipment	described in facility SPCC Plan (draft pending)	• Park uphill of berms when refueling • Spill kit

Other Designated fueling areas

Perform refueling only at designated locations. If on-call refueling of snowplows, lawnmowers etc is required, it must be done at one of the designated locations throughout the lab. If refueling must occur at an undesignated location, the location will be inspected for adjacent storm drains and ditches, and the Remote Refueling Checklist (Appendix B) will be followed prior to the required temporary BMPs. Procedures are discussed in Section 2.4.

Designated Fueling Locations: Vehicles and Mobile Equipment	General Secondary Containment Method
Heavy Equipment Shop TA-60-1	• Attended by two people • Spill kit
PTLA vehicle fueling TA-64	• Attended by two people • Spill kit
Utilities and Infrastructure Vehicles (TA-3-223, TA-46 SWSC)	• Attended by two people • Spill kit
TA-16 HE area	• Attended by two people • Spill kit
TA-54 fueling truck parking area TA-54 truck: (heavy equipment refueling area at end of Mesita del Buey road in Area G and at 54-315 access control to Area G)	• Spill kit
TA-60-250 Roads and Grounds	• Attended by two people • Spill kit
Unplanned locations: Emergency operations, etc.	• Attended by two people • Spill kit • Temporary BMPs will be installed if location requires.

Designated Fueling Locations: Stationary Equipment	General Secondary Containment Method
TA-3-1400 generator	• Attended by two people • Spill kit
TA-3-1498 LDCC generator	• Attended by two people • Spill kit
TA-35-88 generator	• Attended by two people • Spill kit
TA-35-27 generator	• Attended by two people • Spill kit
TA-3-40 generator	• Attended by two people • Spill kit
TA-16-218 generator	• Attended by two people • Spill kit
43-1 generator	• Attended by two people • Spill kit
59-1 generator	• Attended by two people • Spill kit
64-1 generator	• Attended by two people • Spill kit
73-1 generator	• Attended by two people • Spill kit
TA-33 portable generators	• Attended by two people • Spill kit

3. SPILLS

The following sections provide information on the potential for spill events at the facility and the established procedures to be implemented in the event of a spill. There have been no reportable oil spills, over reportable quantities, at the facility associated with the refueling operations. The Deployed Environmental Professional is the person accountable for discharge prevention and reporting to facility management.

3.1. Spill History

The following is a history of the spills related to the Refueler SPCC and documents spills that have occurred within the past three years. On December 12, 2012 at the TA-54 Laydown Yard within the Bermed Catchment Basin (truck storage area) approximately 16 oz.of fuel was spilled onto soil during refueling of the TA-54 Tanker Truck. The spill was properly cleaned up and waste was properly disposed of. On August 30, 2013, at TA-60-1, approximately 1.5 gallons of unleaded gasoline was spilled from G82 0414A due to overfilling of the tanker truck and then parking on an incline. Absorbent was used on the asphalt to absorb the fuel and several applications of micro-blaze occurred. On October 28, 2014 at TA-60-1, less than a quart of diesel was spilled from G82 01414A onto asphalt during replacement of the dispenser nozzle and subsequent leakage of residual fuel from the hose. Absorbent was applied and the area was sprayed with micro-blaze.

3.2. Potential Spill Predictions

Type	Type of failure (discharge scenario)	Potential Discharge volume (gallons)	Direction of flow for uncontained discharge	Secondary Containment Method and Capacity
Tank Trucks	Catastrophic	varies – max 2000	East to Sandia Canyon	PetroBarrier™ protected storm drain
Tank Truck	Catastrophic	Varies – max 500	North to Cañada del Buey	• Oil spill contingency plan and • Bermed containment area
Product transfer areas	Spills	a few gallons	depends on location- see maps in Appendix E	• oil spill contingency plan and • Temporary berms, depends on location, see table in Section 2.4

3.3. Spill Prevention

Spill prevention includes training employees on appropriate spill prevention and work procedures and performing inspections and maintenance activities to minimize the potential for equipment failure. Work is also to be performed using LANL's five step Integrated Safety Management approach, which evaluates a task and identifies potential hazards such as a spill event.

3.3. Oil Spill Contingency Plan

An oil spill contingency plan is a detailed oil spill response and removal plan that addresses controlling, containing, and recovering an oil discharge in quantities that may be harmful to navigable waters or adjoining shorelines. The LANL/Field Office Hazardous Materials Emergency Management Plan is available at https://adss.lanl.gov/emplans/100_r5-1_hmemp.pdf . Facility specific procedures are described below.

Definition of the authorities, responsibilities, and duties of all entities involved in oil removal operations:

Authorities	Contact Responsibilities	Response Duties
Onsite workers	Notify Deployed Environmental Professional and **contact EM at 7-6211 or 911** if necessary	Qualified workers may, but are not required to, clean up simple/small spills
Deployed Environmental Professional	Notify ENV-CP, document spill in SPCC Plan in accordance with Section 1.3.2	Contact the appropriate Waste Generator and Waste Management Coordinator for disposal.
EM	If EM is notified of a spill event, they will contact all additional applicable parties including ENV-CP	Respond per contingency plan
ENV-CP Water Quality	Completion of spill reports that are reportable to federal and state agencies. Provide information to federal and state agencies.	Provide oversight for spill mitigation activities.

Procedures for early detection and timely notification of an oil discharge;
Two personnel are present to monitor the refueling operations. The parking area is visited daily on work days. Notifications will occur as in the table above.

Assurance that full resource capability is known and can be committed following a discharge;
EM (Emergency Management) is a 24 hour fully trained and equipped team located onsite at LANL at TA-69. They maintain a mobile trailer capable of responding to an oil spill.
Each tank truck has a spill cleanup kit.

Actions for after discovery and notification of a discharge; *Procedures to facilitate recovery of damages and enforcement measures.*

LANLs EM team will respond to and clean up a spill per the LANL contingency plan available at http://rcra-permitapps.lanl.gov/General-Appendix%20E.pdf.

Disposal occurs by the Waste Management Coordinator (WMC) per LANL Procedure P409 Waste Management
http://policy.lanl.gov/pods/policies.nsf/MainFrameset?ReadForm&DocNum=P409&FileName=P409.pdf.
Oil stained soils are disposed of as NM special waste, plastic and spill absorbents are disposed of as used oil by the WMC.

ENV-CP will complete required state, federal, and DOE Order 232 ORPS reporting, including the federal reporting of spills in excess of 1,000 gallons or two combined spills greater than 42 gallons in 12 months in accordance with Laboratory and DOE policies and federal and state regulatory reporting requirements per P322-3 Performance Improvement from Abnormal Events
http://int.lanl.gov/policy/documents/P322-3.pdf.

Appendix A

CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA

Facility Name: LOG-HERG Refueling Facility and MSS-EWMO TA-54 Refueling Truck

Facility Address: LANL, Los Alamos, NM

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

   Yes _____ No **X**

   Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

   Yes _____ No **X**

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in accordance with EPA 40 CFR 112, App. C) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

   For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments'' and the applicable Area Contingency Plan.

   Yes _____ No **X**

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in accordance with EPA 40 CFR 112, App. C) such that a discharge from the facility would shut down a public drinking water intake 2?

   Yes _____ No **X**

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a re-portable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

   Yes _____ No **X**

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

John F. Merhege — Name (please type or print)

Logistics Division Leader — Title

Signature

Date

Appendix B

Inspection and Maintenance Records

1. **Blank monthly inspection form**
2. **Blank annual inspection form**
3. **Remote Refueling Checklist**
4. **Completed inspection and checklist records**

AST Periodic Inspection Checklist - Heavy Equipment Shop

Note any leaks, deficiencies, or changes. Repair any deficiencies found. If the tank or secondary containment has a leak, remove tank from service within 24 hours.

Frequency	Date	By	Item inspected	Comments
Monthly			Tanker trucks: G82 0414A G82 01079 E29904 G82 0672D Service Truck	
			Used Oil tank	
			Outdoor Drum storage and containment	
			Indoors Drum and tank storage and containment	
			Storm drain protection or secondary containment units	
Monthly			Tanker trucks: G82 0414A G82 01079 E29904 G82 0672D Service Truck	
			Used Oil tank	
			Outdoor Drum storage and containment	
			Indoors Drum and tank storage and containment	
			Storm drain protection or secondary containment units	
Monthly			Tanker trucks: G82 0414A G82 01079 E29904 G82 0672D Service Truck	
			Used Oil tank	
			Outdoor Drum storage and containment	
			Indoors Drum and tank storage and containment	
			Storm drain protection or secondary containment units	

AST Periodic Inspection Checklist- TA-54 Mobile Refueler

Note any leaks, deficiencies, or changes. Repair any deficiencies found. If the tank or secondary containment has a leak, remove tank from service within 24 hours.

Frequency	Date	By	Item inspected	Comments
Monthly			Tanker trucks: TA-54 tanker truck	
			Recessed earthen catchment (structurally intact, berms diverting run-on)	
Monthly			Tanker trucks: TA-54 tanker truck	
			Recessed earthen catchment (structurally intact, berms diverting run-on)	
Monthly			Tanker trucks: TA-54 tanker truck	
			Recessed earthen catchment (structurally intact, berms diverting run-on)	
Monthly			Tanker trucks: TA-54 tanker truck	
			Recessed earthen catchment (structurally intact, berms diverting run-on)	
Monthly			Tanker trucks: TA-54 tanker truck	
			Recessed earthen catchment (structurally intact, berms diverting run-on)	
Monthly			Tanker trucks: TA-54 tanker truck	
			Recessed earthen catchment (structurally intact, berms diverting run-on)	

REFUELING ANNUAL SPCC WALK-AROUND INSPECTION FORM

Inspection Date: _____ Certified Inspector:_____
Others Present: _____

General Information	Status	Comments
Last SPCC review/revision date		
Any changes to facility that impact ability to discharge oil? (new or removed tanks, oil filled equipment, or drums; changes to procedures):		
SPCC Records maintained?		
Training complete?		
Spill Control equipment		
Refueling areas (signs of spills, BMPs available for temporary drainage control)		
Security (lighting, fencing)		

Tanker Trucks	Status	Comments
Tank Shell and Coating Condition		
Piping, Pumps, Flanges, Valves, Vents, dispensers Condition		
General Condition of Containment Unit:		
Housekeeping		
Other Issues		

Results of annual tests by others

G82 0414A DOT Certified Date:_____

G82 01079 DOT Certified Date:_____

E29904 DOT Certified Date:_____

G82 0672D DOT Certified Date:_____
TA-54 Tanker DOT Certified Date:_____

Recycle Oil Tank	Status	Comments
Tank Shell and Coating Condition		
Piping, Pumps, Flanges, Valves, Vents Condition		
General Condition of Containment Unit:		
Housekeeping		
Other Issues		

Portable Container Storage Areas	Status	Comments
Spill Control equipment		
Housekeeping		
Security (lighting, fencing)		
Area drainage		
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc)		
Condition of containers and containments (dents, bulging, leaks, etc.)		

Items Requiring Corrective Actions:_____

Corrective actions taken (give dates):_____

Other Comments:_____

Inspector's signature: _____ Date:_____

Owner/Operator signature: _____ Date:_____

Los Alamos National Laboratory
Los Alamos National Security, LLC.
LOG-HERG Refueling Trucks SPCC Plan
Remote Refueling Checklist

Overview:
Pursuant to 40 CFR 112 of the Oil Pollution Prevention Regulations and this SPCC Plan, the check list of questions below must be fully evaluated to determine if the site is acceptable for refueling of construction equipment and off-road construction vehicles.

References:
The information in this document is based on and in compliance with the Technical Standards and Safety Act, 2000 and the Technical Standards and Safety Authority's (TSSA) Liquid Fuels Handling Code, 2007.

Refueling Criteria:

Dispensing of fuel shall not take place within

1) a building;
2) during a precipitation event (heavy raining, snowing, etc.);
3) within 90 feet of access to a storm drain, arroyo, drainage channel, or watercourse;
4) 5 feet from any opening in a building; or
5) 9 feet from any source of ignition.

BMP's for Refueling:

1) Perform regular preventative maintenance on tanks and fuel lines
2) Use dry cleanup methods for the fueling area as opposed to hosing it down; use dry sweeping compounds.
3) **Avoid topping** off fuel tanks in receiving equipment, which may cause spills by overfilling
4) Refuel in areas of impervious pavements. This allows for spill cleanup using dry absorbent materials before precipitation can wash spills away.
5) Use drip pan under hose and dispensing nozzle.
6) Use fueling hoses with check valves to prevent hose drainage.
7) Train personnel on remote fueling BMP's

The fueling truck is equipped with spill control equipment to address potential spills from fueling activities: Yes ❑ No ❑

If the refueling activity does not meet all of the items and spill control equipment is not available on the refueling vehicle, contact ENV-CP at (667-0666) to assess alternative and/or additional BMP requirements.

I certify that the above information is correct to the best of my knowledge:

_____ _____

Fueler's Signature Date:

insert DOT tanker inspection certifications for all tanker trucks

Appendix C
Training Records

SPCC Training Roster

Subject: SPCC Training
Instructor: self-study

Your signature certifies that you have read the **Refueling SPCC** and are familiar with the SPCC Program, operator observance procedures, and pollution control laws, rules, and regulations as outlined in the SPCC.

Name	Signature	Date

Appendix D

Plan Amendment Tracking Log

Date	Plan Section	Amendment	PE Certification needed?
4/2015	All	Update of SPCC Plan for changes to covered vehicles, fueling locations, storage site BMPs, and organizational changes	Yes

Appendix E

Facility Diagrams and Other Information



Tanker Truck Parking Area at TA-60-1



TA-54 Refueling Truck Parking Location



Typical Emergency Generator where refueling operations take place (TA-48-1)

Appendix F

Spill Reports

ATTACHMENT 26: WEAPONS FACILITIES OPERATIONS CLEAN FILL ACCEPTANCE AND REUSE PROCESS

WEAPONS FACILITIES OPERATIONS
LOS ALAMOS NATIONAL LABORATORY

Document Number:	WFO-OP-415
Revision:	A

Weapons Facilities Operations Clean Fill Acceptance and Reuse Process

Effective Date:	**Next Review Date:**

Review Cycle: ☐ 1 year ☒ 2 years ☐ 3 years

Usage Mode: ☒ Reference ☐ UET ☐ Both UET & Reference

Reviewed and Approved for Use By:

	Printed Name	Z#	Org	Signature	Date
Responsible Line Manager	Robert Stokes	100844	DESH-WFO		
SME Reviewer	Bradley Schilling	210081	EPC-CP		
SME Reviewer	Holly Wheeler	118432	EPC-CP		

Approved and Authorized for Use By:

	Printed Name	Z#	Org	Signature	Date
Facility Operations Director (FOD)	Brian L. Watkins	206831	WFO-DO		

For Document Control Team Reference:
☐ USQ *(applicable to WETF)* ☐ USI *(applicable to DARHT)* ☐ N/A

Users are responsible for verifying that they are working to the most current revision of a document.

REVISION HISTORY

Revision	Effective Date	Action	Description
A		New Procedure	

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1.0 PURPOSE

The purpose of this procedure is to describe Weapons Facilities Operations (WFO) processes for

a. Accepting transfer of material from a LANL technical area to the LANL TA-16 Stockpile Area

AND

b. Requesting transfer of material from the TA-16 Stockpile Area for use within WFO FOD.

2.0 SCOPE

This procedure does not replace or supersede ADESH-AP-TOOL-704.0, Construction and Demolition Debris. It provides additional details, including documentation required if material is to be accepted at the TA-16 Stockpile Area.

Persons or organizations generating material and requesting acceptance for its use as clean fill (Acceptance Material Generator) should first refer to the ADESH-AP-TOOL-704.0.

This procedure applies to WFO High Explosives/Weapons Facilities (WFO-HE) Operations Manager (OM), Deployed Environment, Safety, and Health (DESH)-WFO Deployed Environmental Professional (DEP), DESH-WFO Managers, WFO Maintenance and Site Services (MSS) personnel; clean fill material generators; clean fill material requestors.

3.0 RESPONSIBILITIES

3.1 WFO High Explosives/Weapons Facilities (WFO-HE) Operations Manager (OM) and Deployed DESH-WFO Managers

- Responsible for developing, maintaining and revising this procedure.
- Responsible for ensuring procedure compliance.

3.2 DESH-WFO DEP

- Responsible for evaluation, maintenance and follow up of this procedure.
- Complying with requirements of this procedure.
- Notifying supervisory personnel of conditions that could require corrective action.
- Issuing a PAUSE/STOP Work Order whenever warranted by conditions related to health or safety in accordance with P101-18, Procedure for Pause/Stop Work.

4.0 TRAINING AND QUALIFICATION

The following required reading must be completed prior to implementing this procedure:

WFO-OP-415, *Weapons Facilities Operations Clean Fill Acceptance and Reuse Process*

5.0 PROCEDURAL STEPS

WFO operates and maintains the TA-16 Stockpile Area for receipt, storage, and distribution of WFO clean fill. This section sets forth the requirements (a) for accepting material at the facility and (b) for accepting requests to use the material.

5.1 Clean Fill Criteria

1. Clean fill may contain the following materials only:
   a. Soil, including top soil
   b. Soil and gravel
   c. Sand
   d. Tufa (a soft mixture of silica, calcium carbonate, and/or volcanic ash)
2. Clean fill may **NOT** contain:
   a. Pieces larger than 12 inches in diameter.
   b. Material that has been subjected to a spill or release of chemical contaminants, e.g., petroleum products.
   c. Material that has received prior treatment to remediate contamination.

   AND/OR

   d. Material containing land-clearing debris, construction and demolition debris, municipal solid waste, radioactive waste, hazardous waste, New Mexico special waste, or any other solid waste not meeting clean fill criteria.

5.2 Acceptance of Material

5.2.1 Acceptance Criteria

1. There must be a need for the material offered.
2. Material must meet the Clean Fill Criteria specified in Section 5.1.
3. Material may contain no contaminants that would cause it to be considered waste or a pollutant.
4. The following documentation must be provided:

a. Analytical Report containing sample analysis or (if requested by deployed DESH-WFO DEP) results of material sampling.

AND EITHER

b. Acceptable Knowledge (AK) Documentation, provided by Material Generator.

OR (IF AK DOCUMENTATION IS NOT AVAILABLE)

c. Database Verification, performed by DESH-WFO DEP/Verifier, equivalent to acceptable AK documentation.

5.3 Process for Acceptance

5.3.1 Material Generator

[1]	**ACCESS** WFO Clean Fill Acceptance Request Form (WFO-FORM-416).
[2]	**OBTAIN** and **ATTACH:** a. Analytical Report. b. Sampling results if requested by DESH-WFO DEP. c. Acceptable Knowledge (AK) documentation if available. DESH-WFO DEP can assist Material Generator with the form and attachments.
[3]	**SUBMIT** completed form and documentation to DESH-WFO DEP. **Note:** Form may be submitted to DESH-WFO DEP via e-mail.

5.4 Characterization/Verification

5.4.1 Deployed DESH-WFO DEP /Verifier

[1]	**COMPLETE** *Characterization/Verification* portion of WFO-FORM-416.
[2]	**REVIEW** Analytical Report data as follows: a. Levels presented in Inorganic and Radionuclide Background Data for Soils, Canyon Sediments, and Bandelier Tuff at Los Alamos National Laboratory, Sept 22, 1998. b. If Toxicity Characteristic Leaching Procedure (TCLP) analytical data provided, compare to regulatory TCLP levels. c. Ensure that petroleum analytical results meet the following requirements: i. Benzene concentration ≤ 10 mg/kg. ii. Total benzene, toluene, ethyl benzene, and xylene isomer (BTEX) concentration ≤ 50 mg/kg. iii. Total petroleum hydrocarbon (TRPH) concentration ≤ 100 mg/kg (i.e., is below New Mexico Special Waste levels)
[3]	If necessary, **PERFORM** review of applicable databases (EX-ID, GIS, PRS, PR-ID, and Stack Emission d/base). To evaluate Be, DU, and HE see IRT GIS Map and WFO-MAP-016, *WFO Large Area Map.*

[4]	If you have concerns **(e.g., Haz, Rad, PCB, asbestos),** based on these analytical results, refer Material Generator to WFO Waste Management Coordinator (WMC) for resolution. **DO NOT** proceed until all concerns are resolved.
[5]	**PERFORM** field inspection of material for size, etc. (See Section 5.1of this procedure.)
[6]	**IF** material is not acceptable (i.e., reusable), **THEN** reject it; explain reason for rejection.
[7]	**IF** you find that clean fill acceptance criteria are met, **THEN:** **SIGN** and **DATE** verification and **SUBMIT** form to WFO-HE Operations Manager (or designee).

5.5 Approval

5.5.1 WFO-HE Operations Manager (or designee)

[1]	**DETERMINE** and **CONCUR** that clean fill acceptance criteria have been met. **Note:** WFO-HE Operations Manager (or designee) determination is made by reviewing the applicable AK documentation, applicable databases, and manager's knowledge of the operation that generated the material.
[2]	**INDICATE** concurrence/approval by **SIGNING** and **DATING** certification on form. **IF** not approved, **THEN** explain why.
[3]	**RETURN** form to DESH-WFO DEP.

5.6 Transfer of Material

5.6.1 DESH-WFO DEP

[1]	On approval by WFO-HE Operations Manager (or designee), **ADVISE** Material Generator that transfer of material has been approved
[2]	**ASSIST** with arrangements for transfer of material to TA-16 Stockpile Area.
[3]	**CONFIRM** transfer of material.
[4]	**COMPLETE** last section of WFO Clean Fill Acceptance Request Form (WFO-FORM-416).
[5]	**SEND** copy of form to Material Generator.
[6]	**UPDATE** WFO ESH server.
[7]	**FILE** documentation on the WFO ESH server in the Clean Fill folder.

5.7 Requesting Clean fill

5.7.1 Soil Requestor

[1]	**ACCESS** WFO Soil Reuse Request Form (WFO-FORM-417).
[2]	**COMPLETE** the top portion of the form and **SUBMIT** to DESH-WFO DEP. **Note:** Form may be submitted to DESH-WFO DEP via e-mail.

5.7.2 DESH-WFO DEP

[1]	Upon receipt of WFO Soil Reuse Request Form (WFO-FORM-417), **DETERMINE** if requested material is available.
[2]	**IF** the material is available, **THEN** arrange for safe transfer to Soil Requestor's site.
[3]	**COMPLETE** bottom section of WFO Soil Reuse Request Form. **IF** material was not transferred, **THEN** explain under Comments. **SIGN** and **DATE** WFO Soil Reuse Request form.
[4]	**PROVIDE** a copy of the signed form to the Soil Requestor and WFO-HE Operations Manager. **Note:** Copies of signed form may be sent to Soil Requestor and WFO-HE Operations Manager via e-mail.
[5]	**UPDATE** Clean Fill Database (WFO ESH server).
[6]	**FILE** documentation on the WFO ESH server in the Clean Fill folder.

6.0 POST- PERFORMANCE ACTIVITY

6.1 Records Processing

Records generated while performing this procedure must be processed and maintained in accordance with WFO-AP-150, WFO Records Management Program.

7.0 REFERENCES

- ADESH-AP-TOOL-704.0, Construction and Demolition Debris
- New Mexico Solid Waste Rules 20.9.2 – 20.9.10 NMAC
- WFO-AP-150, WFO Records Management Program

8.0 ACRONYMS/DEFINITIONS

8.1 Acronyms

Term	Description
AK	Acceptable Knowledge (Documentation)
DESH	Deployed Environment, Safety, and Health
DEP	Deployed Environmental Professional
WFO-HE	WFO High Explosives/Weapons Facilities
ESH	Environment, Safety, and Health
FOD	Facilities Operations Director
GIS	Geographic Information System
IRT	Integrated Review Tool
LO/TO	Lockout/Tagout
OM	Operations Manager
TCLP	Toxicity Characteristic Leaching Procedure
WFO	Weapons Facilities Operations
WMC	Waste Management Coordinator

9.0 ATTACHMENTS

Attachment 1: *Example WFO Clean Fill Acceptance Request Form*
Attachment 2: *Example WFO Soil Reuse Request Form*

ATTACHMENT 1
Example WFO Clean Fill Acceptance Request Form
Page 1 of 1

WFO Clean Fill Acceptance Request Form

Section 1: Soil Acceptance Request. (Material Generator to fill in this section, then submit to DESH-WFO DEP; form may be submitted to DESH-WFO DEP via e-mail)			
Type of soil requested [e.g. top soil, soil/gravel, sand, tufa]		Location of Soil:	
Volume [e.g. 1 yd^3,5 yds^3]	PR-ID# (f known)		Excavation ID #
Generator/Requestor:	Print Name	Z-number	Cost Codes
Title		Phone	Date
Subcontractor Technical Representative (STR) if applicable		Name	Phone
Section 2: Characterization/Verification. (DESH-WFO DEP /Verifier to fill in this section, then submit to WFO-HE Operations Manager (OM) (or designee))			
Analytical Report Attached? ☐ Yes ☐ No		If not, why not? (explain)	
Compare Analytical Report to *Inorganic and Radionuclide Background Data for Soils, Canyon Sediments, and Bandelier Tuff at Los Alamos National Laboratory, September 22, 1998:*			OK? ☐ Yes ☐ N/A
Sampling Required: ☐ Yes ☐ N/A		If yes, sample for what? (explain)	
Acceptable Knowledge (AK) Documentation attached? ☐ Yes ☐ No			If not, why not? (explain)
Database verification. (Required if AK Documentation is NOT attached.		**Concerns (If there are concerns (e.g., Haz, Rad, PCB, asbestos), refer Material Generator to internal Waste Management Coordinator (WMC).**	
EX-ID database	No Concerns ☐		
GIS database	No Concerns ☐		
PRS database	No Concerns ☐		
PR-ID database	No Concerns ☐		
Stack emission d/base database	No Concerns ☐		
Field verification (size)	No Concerns ☐		
DESH-WFO DEP verifies that all material acceptance criteria have been satisfied.	DESH-WFO DEP Printed Name	Signature	Date
Section 3: Approval. (WFO-HE Operations Manager (OM) (or designee) to fill in this section, then return to DESH-WFO DEP)			
Approved: ☐ Yes ☐ No		If not approved, why not? (explain)	
I certify under penalty of law that I am familiar with the operation that generated the material through personal knowledge as well as AK information provided by Material Generator and verified in applicable databases and that to the best of my knowledge and belief the material contains no constituents that would cause it to be considered a waste or a pollutant.			
WFO-HE Operations Manager (OM) (or designee) Printed Name		Signature	Date
Section 4: Receipt. (DESH-WFO DEP to fill in this section, then send copy to Material Generator).			
RECEIVED ☐ **REJECTED** ☐		If rejected, explain why:	
DESH-WFO DEP Printed Name		Signature	Date

WFO-FORM-416A
Ref. Doc.: WFO-OP-415

Example

ATTACHMENT 2
Example WFO Soil Reuse Request Form
Page 1 of 1

WFO Soil Reuse Request Form

Section 1: Soil Reuse Request. (Soil Requestor to fill in this section) Note: Soil Requestor submits form to DESH-WFO DEP; form may be submitted to DESH-WFO DEP via e-mail.		
Type of soil requested [e.g. top soil, soil/gravel, sand, tufa]	Soil will be transferred to TA-	
Volume [e.g. 1 yd^3,5 yds^3]	Excavation ID #	
Comments:		
Soil Requestor Printed Name	Z-Number	Signature
Title	Phone	Date
Section 2: Soil Reuse Request. (DESH-WFO DEP to fill in this section)		
Volume [e.g. 1 yd^3,5 yds^3]	Excavation ID #	
Comments:		
Section 3: Release (DESH-WFO DEP to fill in this section)		
DESH-WFO DEP Printed Name	Z-Number	Signature
Date	Phone	
DESH-WFO DEP provides a copy of the signed form to Soil Requestor and WFO-HE Operations Manager (OM). NOTE: Copies of signed form may be sent to Soil Requestor and WFO-HE Operations Manager (OM) via e-mail.		

Example