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LA-UR-15-26794
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Title:	Stormwater Pollution Prevention Plan TA-60 Roads and Grounds Facility and Associated Sigma Mesa Staging Area
Author(s):	Sandoval, Leonard Frank
Intended for:	MSGP regulatory compliance document Environmental Programs
Issued:	2015-09-03 (rev.4)

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STORM WATER POLLUTION PREVENTION PLAN

TA-60 Roads and Grounds Facility and Associated Sigma Mesa Staging Area

Los Alamos National Laboratory

A requirement of the
NPDES GENERAL PERMIT
for Storm water Discharges Associated with Industrial Activities

Prepared By:

Los Alamos National Laboratory
Environmental Protection Division, Environmental Stewardship Group
Los Alamos, New Mexico 87545

In Conjunction with:
Los Alamos National Laboratory
Environmental Protection Division, Compliance Programs Group
ENV-CP

Revision 3: August 2015

LA-UR-15-26794

TA-60 Roads and Grounds Facility and Associated Sigma Mesa Staging Area
STORM WATER POLLUTION PREVENTION PLAN

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STORM WATER POLLUTION PREVENTION PLAN
FOR
TA-60 Roads and Grounds Facility and Associated Sigma Mesa Staging Area
LOS ALAMOS NATIONAL LABORATORY

PREFACE

This Storm water 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 Multi-Sector General Permit for Storm water Discharges Associated with Industrial Activity (U.S. EPA, September 2008) issued by the U.S. Environmental Protection Agency (EPA) for the National Pollutant Discharge Elimination System (NPDES) and using the industry specific permit requirements for Sector P– Land Transportation and Warehousing. The applicable storm water discharge permit is EPA General Permit Registration Number NMR05GB21 (Los Alamos National Security (LANS) (U.S. EPA, January 2009). Contents of the September 2008 Multi-Sector General Permit can be viewed at http://cfpub.epa.gov/npdes/stormwater/msgp.cfm

The current permit expires September 2020.

This SWPPP applies to discharges of storm water from the operational areas of TA-60 Roads and Grounds Facility and Sigma Mesa Staging Area at the Los Alamos National Laboratory (referred to as LANL or the "Laboratory"). The Laboratory is owned by the Department of Energy (DOE) and operated by LANS, LLC. Throughout this document, the term "Facility" refers to the TA-60 Roads and Grounds Facility and Sigma Mesa Staging Area.

A copy of the LANS NOI and Delegation of Authority Letter is located in Appendix M of this SWPPP.

INTRODUCTION

SECTION 1: FACILITY DESCRIPTION AND CONTACT INFORMATION

1.1 Facility Contact Information/Responsible Parties

Facility Operator: Los Alamos National Security, LLC
Los Alamos National Laboratory
Environmental Protection Division (ENV) Compliance Programs (CP)
P. O. Box 1663 MS K90
Los Alamos, N. M. 87545

Holly Wheeler MSGP Compliance Project Lead
Office: 505 667-1312
hbenson@lanl.gov

Leonard F. Sandoval MSGP SWPPP Inspector
Deployed Environmental Professional
Office: 505 667-3557 Cell: 505 231-1235
lesandov@lanl.gov

Other applicable facility data and contact information is provided in the facility NOI, which is located in Appendix M. A copy of this SWPPP is maintained on-site with the Deployed Environmental Professional for the facility.

1.2 Stormwater Pollution Prevention Teams

This Storm water Pollution Prevention Plan (SWPPP) is applicable to operations at the Technical Area -60 (TA-60) Roads and Grounds Facility and Associated Sigma Mesa Staging Area off Eniwetok Drive, in Los Alamos County, New Mexico. Utilities and Institutional Facilities (UIF) and Roads and Grounds Operations at Los Alamos National Laboratory (the Laboratory) has established a Pollution Prevention Team (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 where required. All PPT members will have access to either a hard copy or an electronic version of this SWPPP. A list of PPT members (along with contact information) is provided in Appendix A of this SWPPP.

Designation of Pollution Prevention Teams

The SWPP Team for the TA-60 Roads and Grounds Facility and Sigma Mesa Staging Area consists of operations and management personnel from Roads and Grounds Operations for the facility, a representative from ENV-CP Stormwater Compliance and Permitting Team, a Waste Management Coordinator, and Deployed Environmental Professional assigned to the facility. The ENV-CP representative is responsible for

LANL's compliance with regards to the National Pollutant Discharge Elimination System (NPDES) 2015 MSGP permit. The team members are selected on the basis of their familiarity with the activities at the TA-60 Roads and Grounds Facility and Sigma Mesa Staging Area and the potential impacts of those activities on storm water runoff. The members of the team are identified in Appendix A.

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

- *Pollution Prevention Team Leader*: The Pollution Prevention Team Leader is responsible for revising and updating the SWPPP, or designating a representative, to update it as required under Section 8 of this SWPPP. Updates to the SWPPP are required within 14 days of completing a corrective action. Team members may also be selected to assist/represent the Team Leader in performing routine inspections.
- *ENV-CP MSGP Project Leader:* Supports the facility and provides guidance associated with implementation of the compliance requirements identified in the 2015 MSGP. The ENV-CP MSGP Project Leader also acts as the institutional point of contact for all interactions with the regulatory authority (EPA) and supervises personnel implementing monitoring requirements for the facility.
- *Environmental Inspector:* Responsible for conducting the routine facility inspections and entering corrective actions into the ENV-CP MSGP Corrective Action Report database. The Environmental Inspector is also responsible for tracking and updating the status of corrective actions that cannot be implemented immediately.
- *All members:* All PPT members are responsible for being familiar with and implementing this SWPPP and for compliance with the 2015 MSGP. PPT members are also responsible for attending meetings that will be scheduled as needed to discuss revisions of the SWPPP, inspection findings, status of corrective actions and any other topics pertinent to management of the SWPPP.

Appointment of New Team Members

The PPT members from the appropriate organizations are appointed by the Facility Operations Director (FOD) responsible for the facility oversight of TA-60 Roads and Grounds Facility and Sigma Mesa Staging Area. Each representative will serve or be replaced by the FOD. The list of current team members is included in Appendix A of this SWPPP, and will be revised whenever a member is added or removed from the team, or when the SWPPP duties of an existing team member are changed. Revisions to the PPT alone shall not trigger recertification of this plan. The ENV-CP Team Leader appoints the MSGP Compliance Project Lead from ENV-CP. The ESH Deployed Services Division, UI &MSS Group Leader shall provide Deployed Environmental Professional (DEP) personnel as requested by the FOD. The DEP or designated backup, acts as the Pollution Prevention Team Leader and the Environmental Inspector.

1.3 Activities at the Facility

The TA-60 Roads and Grounds Facility/Sigma Mesa Staging Area (RGF/SMSA) is located within the boundaries of LANL in Los Alamos County, New Mexico at Sigma Mesa. A general location map and site maps for the TA-60 RGF/SMSA facility are provided in Appendix B.

The RGF/SMSA falls under industrial Sector P, Land Transportation and Warehousing, of the 2015 MSGP. The facility includes two locations; the main facility where operations personnel, trucks, equipment and materials used for deicing and maintaining roads and grounds are stored and the east location identified in the SWPPP as the TA-60 Sigma Mesa Staging Area, where trucks, equipment and construction materials (sand, gravel, rock and clean soil) are staged. The SMSA is located 0.9 miles east of the main Roads and Grounds facility. Most of the staging area is located north of Eniwetok Road with a smaller parking and storage area located south of Eniwetok Road. Some miscellaneous equipment parts (loading buckets, blades, etc) are stored on both sides of the staging area.

Activities at this facility include the following:

- Storage of equipment and supplies used to maintain roads and grounds at LANL,
- Storage of trucks and heavy equipment, used to transport/haul material or move debris,
- Storage of bulk potassium acetate and other liquids applied for deicing,
- Staging of clean soil prior to reuse,
- Potholing staging area,
- Staging of asphalt millings prior to reuse
- Sediment catchment in the basin,
- Salt retention in the lined retention pond, and
- Storage of sand, gravel, rock, landscaping materials and herbicides related to grounds keeping and road maintenance.

The TA-60 RGF main site covers approximately 8.4 acres including 65% (about 5.35 acres) of impervious surfaces such as roofs and paved areas. The area immediately surrounding the main Roads and Grounds Building (TA-60-250) is paved with asphalt. The entire area within the fence of the pesticide storage shed is covered in asphalt and concrete. The areas immediately to the north and south of the salt shed are paved with asphalt. The entire heavy equipment storage yard is also covered in asphalt. The remainder of the facility with the exception of the storm water basins and drainage swales is covered in gravel and/or recycled asphalt millings. These areas include the employee parking area, truck parking areas, storage sheds and transportainers, sign storage area, and the access roadways.

The TA-60 Sigma Mesa Staging Area covers approximately 10.55 acres including less than 1% impervious asphalt (Eniwetok Road). The remainder is gravel, dirt surface and undisturbed land.

1.4 General Location Map

The general location map for the facility can be found in Appendix B as Figure 1. The map is a 2008 fly-over that provides a general overview of the facility boundary, structures and pervious and impervious areas.

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1.5 Site Maps

Appendix B includes the facility site map. Map 1 is the main Roads & Grounds Facility, and Map 2 is the Sigma Mesa Staging Area. Features located on these maps include the following:

- Direction of stormwater flow,
- Locations of structural control measures,
- Locations of non-TMDL impaired receiving waters (canyon bottoms),
- Locations of potential pollutant sources and locations where significant materials are exposed to precipitation,
- The location and extent of significant structures and impervious surfaces – main facility = 65% impervious, SMSA = less than 1% impervious
- Spill locations (if any),
- Locations of industrial activities exposed to precipitation,
- Locations of outfalls,
- Locations of stormwater inlets and outfalls, with a unique identification code for each outfall, indicating if you are treating one or more outfalls as "substantially identical" – (see also Outfall section below and data table in Section 4.3 of this SWPPP
- Locations of all stormwater conveyances including ditches, pipes and swales,
- Locations of automated stormwater monitoring samplers,
- Loading and unloading areas,
- Location used for storage of waste,
- Locations of liquid product stored in tanks,
- The size of the property in acres, (main facility = 8.4 and the SMSA = 10.55)
- Immediate access roads used or traveled by carriers or raw materials, manufactured products, waste material, or by-products used or created by the facility
- Transfer areas for substances in bulk
- Locations of significant run-on flows.

1.6 Site Maps with T & E Habitat

Found in Appendix B as Figure 3.

Impaired Receiving Waters

Mortandad Canyon, located south of the TA-60 RG/SMSA, is the primary receiving water body for site drainage. About 40% of the main site flows north to Sandia Canyon. The runoff from the Sigma Mesa Staging Area goes primarily to Sandia Canyon with a small percentage flowing south to Mortandad Canyon. Due to a berm recently installed at the clean soil staging area and another berm installed at the potholing staging area, it is highly unlikely that discharge will occur from these areas. However, the soil staging area does have three constructed weirs with rock run-downs towards the top of the berm to allow stormwater flow to discharge from the staging area if it reaches that high. The canyons have ephemeral or intermittent stream flow and eventually flow into the Rio Grande approximately 10 miles southeast of the TA-60 RGF/SMSA. This facility does not discharge to Tier 2, Tier 2.5, or Tier 3 waters.

Both Mortandad and Sandia Canyons are on the New Mexico Environmental Department's 303d list for non-attainment of their designated uses. EPA has not approved or established a Total Maximum Daily Load (TMDL) for either stream. Potential contaminants leading to the inclusion of Sandia Canyon on the 303d list are Aluminum, Copper, Adjusted Gross Alpha, Dissolved Thallium, and PCBs and for Mortandad Canyon are Aluminum, Copper, Adjusted Gross Alpha, and PCBs. These listings are based primarily on stormwater data. The TA-60 RG/SMSA operations do not involve the pollutants of concern.

Outfalls
Roads and Grounds Main Facility (See Appendix B, Map 1)

Outfall 60-RG-1 ID# 031: Stormwater flows south of building TA-60-250, the employee parking area, and from the south truck parking area to the sedimentation basin (detention pond). This flow then drains west towards the outfall. Stormwater from the area south of the Salt Shed flows into the drainage channel south to the lined retention pond and then drains east toward the outfall. Drainage then travels through a culvert that runs south under Sigma Mesa road and discharges into Mortandad Canyon.

Outfall 60-RG-2 ID # 030: Small amounts of stormwater from the Heavy Equipment Storage Yard driveway drains to the southeast corner of the yard where it enters the asphalt drainage swale along Sigma Mesa road, travels through a culvert under the road and discharges into Mortandad Canyon.

Outfall 60-RG-3 ID # 032: Stormwater flows from the area north of the Salt Shed through the north Heavy Equipment Storage and parking area to a riprap lined channel that discharges via sampling station E123.4 (which is also known as Monitored Outfall # 60-RG-3 ID # 032) and then to the north towards Sandia Canyon.

Outfall 60-RG-4 ID # 033: Stormwater flows north from the west side of the small Equipment Storage Area and through the north parking lot where it discharges at a point north of the facility and then drains towards Sandia Canyon.

Outfall 60-RG-5 ID # 034: Stormwater flows north from the east side of the Small Equipment Storage Area, west side of Bldg. 250 (main Roads and Grounds Facility building) and north vehicle parking area located northwest of Bldg. 250 where it discharges at a point north of the facility and then drains towards Sandia Canyon.

Outfall 60-RG-6 ID #035: Stormwater flows north from the east side of Bldg. 250, the north parking area behind the building, and from several transportainers on the northern site boundary. Stormwater discharges at a point on the northwest side of the transportainers and then flows north towards Sandia Canyon.

Sigma Mesa Staging Area (See Appendix B, Map 2)

Outfall 60-RG-7 ID # 041: Stormwater flows southeast through a base course equipment staging area and discharges to a vegetated area that flows southeast towards Mortandad Canyon.

Outfall 60-RG-8 ID # 042: Stormwater flows northeast from the north equipment staging and stockpile area to a pond. Water in the pond discharges to a riprap lined channel that flows northeast towards Sandia Canyon.

Outfall 60-RG-9 ID # 040, outfall 60-RG-10 ID # 039, outfall 60-RG-11 ID # 038, 60 RG-12 ID# 037 and 60-RG-13 ID # 036: These outfalls are identical riprap lined weirs, which serve as discharge points for stormwater runoff that would accumulate along the berm that extends along the north end of the soil staging area. Stormwater, if discharged, would flow to the north, be collected in a swale located along the base of the berm and, if accumulated to an appropriate depth, would discharge through one of the weirs to Sandia Canyon.

Substantially Identical Outfalls The following outfalls at the Roads and Grounds Main Facility and Sigma Mesa Staging Area have been identified as substantially identical based on common potential pollutant sources, drainage areas, activities within the drainage areas and general site topography and characteristics. Information supporting this outfall determination for monitoring requirements is listed in Section 4.3 of this SWPPP and includes outfall locations, facility activities and associated potential pollutants, runoff coefficients and control measures.

Outfalls 60-RG-1 ID # 031 and 60-RG-2 ID # 030: Both of these areas receive stormwater runoff to the south of the main facility, discharge stormwater that may come in contact with heavy equipment or trucks, and both have the potential to discharge stormwater runoff to Mortandad Canyon.

Outfalls 60-RG-3 ID # 032 , 60-RG-4 ID # 033, 60-RG-5 ID # 034, and 60-RG-6 ID # 035: All of these outfalls receive stormwater runoff from the central portion of the main facility, discharge to Sandia Canyon, and discharge stormwater that may come in contact with vehicle or heavy equipment parking or storage. All outfalls at the facility are inclusive of monitoring performed at gage station E123.4 located at 60-RG-3 ID # 032. This outfall receives runoff from all central areas of the main facility and is the outfall with the highest

runoff coefficient. Therefore, monitoring at this outfall is representative of the remaining outfalls at the main facility discharging to Sandia Canyon.

Outfalls 60-RG-7 ID # 041 and 60-RG-8 ID # 042: These outfalls receive stormwater runoff from truck parking and equipment storage area and from construction material staging piles.

- **Outfalls 60-RG-9 ID # 040, 60-RG-10 ID # 039, and 60-RG-11 ID # 038**: All of these outfalls may receive stormwater runoff from the east clean soil staging area. Each of these outfalls is a weir situated towards the top of an earthen berm with riprap to prevent erosion at the discharge point. These three outfalls are identified as substantially identical outfalls because all soil staged within the area is clean, with the potential pollutants being sediment, hydraulic fluids, or diesel fuel should the heavy equipment leak during loading and unloading operations.

All stormwater from these outfalls would discharge to Sandia Canyon.

- **Outfalls 60-RG-12 ID # 037 and 60-RG-13 ID # 036**: All of these outfalls may receive stormwater runoff from the west clean soil staging area. Each of these outfalls is a weir situated towards the top of an earthen berm with riprap to prevent erosion at the discharge point. These two outfalls are identified as substantially identical outfalls because all soil staged within the area is clean, with the potential pollutants being sediment, hydraulic fluids, or diesel fuel should the heavy equipment leak during loading and unloading operations. This yard is separated by a compacted earthen berm from the east clean soil staging area. All stormwater from these outfalls would discharge to Sandia Canyon.

SECTION 2: POTENTIAL POLLUTANT SOURCES

The following is a description of site activities and materials that have been, are, or could be exposed to storm water. Controls used for each potential pollutant are described in Section 3.

2.1 Industrial Activities and Associated Pollutants

Industrial activities and associated pollutants for the TA-60-RG/SMSA are identified below. **Storage of equipment and supplies used to maintain roads and grounds at LANL**, The main Roads and Grounds facility has a yard to store 4-wheelers, lawn tractors, lawn mowers, snow blowers and miscellaneous small-engine equipment. There are approximately 100 pieces of equipment stored in the area although the inventory will vary depending upon how much equipment is deployed and/or in the shop for repairs or maintenance. Potential pollutants from this activity are fuel and oil from leaking equipment.

Storage of trucks and heavy equipment, used to transport/haul material or move debris.
Large trucks are parked at three locations in the parking lots around the main facility. Dump trucks, van trucks and flatbed trucks are parked outside the south and/or east corner of TA-60-29 and to the north of the small equipment storage area. Road salt spreading trucks are parked to the north of the Salt Shed. Heavy equipment is stored in the heavy equipment yard identified on the map. This yard is west of the lined retention pond. Maintenance is performed off site at the Heavy Equipment shop. In addition, passenger cars are parked in the gravel lot north of the sediment pond. Potential pollutants for this activity include spills of salt from the salt spreading trucks, and leaks or spills of fuel, oil, fluids (transmission and hydraulic) and anti-freeze.

Storage of bulk potassium acetate, GeoMelt ™ and other liquids and road salt applied for deicing.
Two 5000 gallon storage tanks with salt brine (potassium acetate) are located north of Bldg. TA-60-178. Four 10,000 gallon storage tanks are located south of Bldg. TA-60-178. They contain potassium acetate, calcium chloride, protein, super mix (anti-icing/pre-wetting solution) and CRYOTECH CF7- Potassium Acetate and Corrosion Inhibitors. The salt shed provides indoor storage for road salt and Ice Slicer™. The potential pollutant sources are leaks or spills during refilling or transfer of liquid or solid product including sodium chloride and Ice Slicer (which is naturally occurring complex chlorides including magnesium, calcium, sodium, and potassium.

Staging of clean soil prior to reuse
Soil pre-screened as originating from uncontaminated areas throughout LANL is transported by dump truck, or end-dumps to the east or west soil staging area located at the SMSA. One potential pollutant source would be sediment if it was transported with stormwater runoff from the site. The compacted earthen berm, weir and riprap prevent sediment migration from this location. A gravel surface is no longer effective at preventing sediment transport off site from the south central portion of the SMSA and therefore at the end of the day when loading and unloading operations cease the area affected by sediment transport is sweep with a vacuum truck. Other potential pollutants include leaks or spills of fuel, oil, fluids (transmission and hydraulic) and anti-freeze from heavy equipment performing work in the area.

Asphalt Millings Staging Area
Asphalt millings pre-screened as originating from uncontaminated areas throughout LANL is transported by dump truck, or end-dumps to the far east staging area located at the SMSA. Potential pollutants include leaks or spills of fuel, oil, fluids (transmission and hydraulic) and anti-freeze from heavy equipment performing work in the area.

Potholing Staging Area
Soil and mixture of water pre-screened as originating from uncontaminated areas throughout LANL is transported in a potholing machine to the far west staging area located at SMSA. One potential pollutant source would be sediment if it was transported with

stormwater runoff from the site. A compacted earth berm and a vegetated buffer strip where water is allowed to evaporate from the mixture prevents sediment migration from this location. Other potential pollutants include leaks or spills of fuel, oil, fluids (transmission and hydraulic) and anti-freeze from heavy equipment performing work in the area.

Sediment catchment in the detention basin
Soil/sediment from the main facility could travel with stormwater runoff to the detention basin located south of the facility. However, it is unlikely that sediment would discharge from the pond.

Salt retention in the lined retention pond
Road salt and other deicing liquids could migrate to the lined retention pond. However, these pollutants will not migrate off-site since the retention pond was designed to fully contain a 100 year storm event.

Storage of sand, gravel, rock, and other landscaping materials

Other potential pollutant sources

Pesticide Storage Shed (TA-60-29) Outfall 60-RG-4 ID # 033

Other Sector P Specific Concerns

- On-site waste storage or disposal.
- Parking areas for vehicle awaiting maintenance. None
- Illicit plumbing connections. No floor drains
- Fueling. None

Solid Waste Management Units (SWMUs)

There are two areas that are either within the boundary of the Roads and Grounds Facility, or that could be potentially affected by storm water runoff from the facility that have been designated as Solid Waste Management Units (SWMU's) in the Los Alamos National Laboratory (Operable Unit 1148) RCRA Facility Investigation (RFI) Work Plan for Environmental Restoration (May 1992).

- 60-001(d) – Bermed storage Area next to the Pesticide Storage Shed. This SWMU was approved for No Further Action (NFA) status in 1994.
- 60-002 – This SWMU is actually comprised of several piles of asphalt, concrete and debris throughout Sigma Mesa. One of the piles was located within the current boundary of the Roads and Grounds Facility. The pile was removed and disposed prior to construction of the Roads and Grounds Facility and confirmation samples were collected from beneath the pile. The data will be included in the report for the final disposition of the entire SWMU once all of the piles comprising the SWMU have been remediated and/or sampled. In the interim, there is no exposure of this SWMU to storm water from the Roads and Grounds Facility since the portion included within the Roads and Grounds Facility Boundary has been removed.

2.2 Spill and Leaks

Areas of Site Where Potential Spills/Leaks Could Occur

Location	Outfalls
Heavy equipment Storage Yard	Outfall 60-RG ID # 032
Heavy equipment Storage Yard	Outfalls 60-RG ID # 032, 033
Small equipment Storage Yard	Outfalls 60-RG ID # 032, 033, 034
Craft storage Buildings	Outfalls 60-RG ID # 032, 033, 034, 035
Vehicle storage at Sigma Mesa	Outfalls 60 ID # 041, 042

See Appendix G for the list of past spills

2.3 Non-Storm water Discharges

Except for flows from fire fighting activities, sources of non-storm water that are combined with storm water discharges associated with industrial activity must be identified in the SWPPP. Identified non-storm water discharges are summarized below.

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

- Discharges of water occur during testing of fire hydrants and preventive maintenance flushing of the fire suppression system. The hydrants are tested annually by the Los Alamos County Fire Department. Each test and flushing of a hydrant releases approximately 1,000 gallons of water. Preventive maintenance flushing occurs approximately every six months and releases an estimated 200 gallons of water. The runoff from flushing of fire hydrants and fire suppression system flows off the mesa top through areas in which no potential contaminants are stored or managed. The hydrants and fire suppression system are not tested or flushed during precipitation events.

2.4 Salt Storage

Salt Shed, Super Mix Blending Station and Associated Storage Tanks (TA-60-178).

- Salt storage: The Salt Shed provides indoor storage for road salt and Ice Slicer. Bags of Ice Melt on wood pallets are also stored in a closed transportainer (60-287) SE of TA-60 building 250. Potential Pollutants: Road salt is primarily sodium chloride and Ice Slicer is naturally occurring complex chlorides including magnesium, calcium, sodium, and potassium.

- Salt and brine loading area.

2.5 Sampling Data Summary

Storm water runoff from TA-60 RGF/SMSA is monitored by an automated sampler station, E123.4 Outfall 60-RG-3 ID # 032 installed in 2007 at the NW corner of the site. No past sampling data is available for this location since under the administrative continuance of the expired MSGP-2000 storm water monitoring was not required. Sector P does not require Benchmark Sampling other than the visual quarterly monitoring which will be reported as required by Section 5 of the SWPPP.

In 2009 during annual sampling at 60-RG-8 ID # 042 impaired waters pollutants Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, Aroclor 1248, Aroclor 1254, Aroclor 1260, Aroclor 1262 and Mercury were determined not to be present. Annual monitoring for these pollutanst was discontinued per Section 6.2.4.2 of the MSGP.

In 2010 during annual sampling at 60-RG-8 ID # 042 impaired waters pollutants Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, Aroclor 1248, Aroclor 1254, Aroclor 1260, Aroclor 1262 and Mercury were determined not to be present. Annual monitoring for these pollutanst was discontinued per Section 6.2.4.2 of the MSGP.

In 2011 during annual sampling at 60-RG-1 ID # 031, 60-RG-3 ID # 032, and 60-RG-8 ID # 042 impaired waters concentration for copper was less than natural background levels and annual monitoring for this pollutant was discontinued per Section 6.2.4.2 of the MSGP.

In 2012 during annual sampling at 60-RG-8 ID # 042 impaired waters concentration for Gross Alpha was detected, but less than natural background levels and annual monitoring for this pollutant was discontinued per Section 6.2.4.2 of the MSGP.

In 2013 during annual sampling at 60-RG-10 ID # 039 impaired waters pollutants Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, Aroclor 1248, Aroclor 1254, Aroclor 1260, Aroclor 1262 and Mercury were determined not to be present. Impaired waters concentrations for Aluminum, Copper, and Gross Alpha were found to be less than natural background levels and annual monitoring for these pollutants was discontinued per Section 6.2.4.2 of the MSGP.

SECTION 3: STORM WATER CONTROL MEASURES

3.1 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.

The Salt Shed provides indoor storage for road salt and Ice Slicer that is protected from coming in contact with storm water by keeping three roll-up doors closed.

Small containers of fuel and oils are stored in a flammable cabinet located just inside the entrance to the small equipment storage area.

Pesticides are stored inside a building.

3.2 Good Housekeeping

Good housekeeping practices that are specifically applicable to the prevention of storm water contamination include:

- Individual mixing operations take place in closed vessels, so that the potential for exposure of storm water to materials is limited to loading and unloading activities. When possible, the road salt is stored inside the Salt Shed to prevent exposure to storm water. The use of a brine solution for deicing operations is also being transitioned in to reduce the use of road salt.
- All storage areas are kept clean and neat. Vehicles and other equipment are stored and maintained in specified areas and heavy equipment repair and maintenance is never performed at this site.
- Garbage and floatables are routinely picked up by facility personnel. All garbage containers are covered to prevent windblown debris.

3.3 Maintenance

Outdoor areas are inspected at least monthly as per Section 5.1 of the SWPPP to ensure that the grounds are kept in an orderly condition and those structures such as storm water control structures are properly maintained and free of debris or other obstructions. The inspection will also identify any leaks, spills, or non-storm water discharges in any of the areas. Deficient items identified during inspections are documented in the ENV-CP MSGP Corrective Actions tracking database. If control measures are in need of routine maintenance, it must be conducted immediately in order to minimize pollutant discharges. If a control measure is found to need repair or replacement, all reasonable steps to prevent or minimize the discharge of pollutants must immediately occur until the final repair or replacement is implemented including cleaning up any contaminated surfaces so that the material will not be discharged during subsequent storm events. Final repairs/replacement of stormwater controls should be completed as soon as feasible but must be no later than the timeframe established in Part 4.3 of the 2015 MSGP for corrective actions, I.e., within 14 days or, if that is infeasible, within 45 days. If the completion of stormwater control repairs/replacement will exceed the 45 day timeframe, the site will take the minimum additional time necessary to complete the maintenance, provided that the EPA Regional Office is notified of the intention to exceed 45 days, and documentation of the rational is contained in this SWPPP. Note: "All reasonable steps" means that the permittee has undertaken initial actions to assess and address the condition causing the corrective action, including for example, cleaning up any exposed material that may be discharged in a storm event (e.g., through sweeping, vacuuming) or making arrangement (i.e., scheduling) for a new best management practice to be installed at a later date. If a control measure was never installed, was installed incorrectly or not in accordance with Part 2

and/or 8 of the 2015 MSGP, or is not being properly operated or maintained site personnel must conduct corrective action as specified in Part 4 of the 2015 MSGP. Temporary BMP's will be installed to serve as backup controls while a control measure is offline.

The Pollution Prevention Team Leader is responsible for ensuring that any maintenance or repairs associated with a deficiency or opportunity for improvement, including any regular or scheduled maintenance (such as the removal of debris) are promptly and adequately performed. Any necessary changes to operational procedures or structural features must be implemented in a timely manner.

3.4 Spill Prevention and Response

Operational controls are implemented to minimize the possibility of any accidents resulting in spills or releases. Regulatory environmental reporting requirements are described in LANL's Emergency Procedures and Protective Actions P1201-4 and Environmental Reporting Requirements for Releases or Events ENV-DO-QP-101.2. Spill Prevention practices at the facility include application of good housekeeping procedures, best management practices, and engineering and administrative controls. Examples of these measures include storing equipment with drip pans, and inspecting regularly for leaks.

One of the functions of the Roads and Grounds crew is to provide small spill and leak response and cleanup throughout the laboratory. Because of this, ample supplies of materials as well as trained and qualified response personnel are available at the facility to rapidly contain and clean up any spills or leaks. All unauthorized spills and leaks are entered in the ENV-CP MSGP Corrective Action Reporting database.

Operational controls are implemented to minimize the possibility of any accidents resulting in spills or releases off site. In general, the approach to spill clean-up of a known substance is to first contain the spill by securing the spill source and deploying spill containment materials. If secondary containment is being provided (e.g. secondary containment pallets for liquids) it will contain the spill. Small spills are responded to by the operator involved in the spill or by the operator located in the vicinity. For incidental releases, absorbents are used to pick-up free liquids and the contaminated absorbents are properly disposed. Standard procedures for spill containment and clean up include the use of spill control kits, sorbent pillows, socks, sheets, and granules. Clean-up residues are managed as appropriate and as determined by the facility waste management coordinator and ENV-CP personnel depending on the material spilled. Larger spills or spills of unknown substances require that ENV-CP personnel be contacted to respond to the spill, securing the spill area and contacting LANL's Emergency Management Division.

The Security and Emergency Operations (SEO), Emergency Response Group (SEO-1) has been appointed by the Laboratory Director as the organization responsible for emergency management at the Laboratory. The SEO and SEO-1 group will be notified if a spill cannot be easily controlled with the materials on hand, threatens to escape the facility or enter the environment, needs additional resources, involves an unidentified hazard, involves injuries to personnel, requires fire protection, is beyond the training and skill levels

of operational or facility personnel regarding the use of spill control equipment, or personnel are not confident in their ability to carry out spill response activities. The SEO and SEO-1 group can be reached at **667-6211** during regular business hours as well as after hours. If a fire or explosion occurs, or if the potential for such exists, the situation must be reported by dialing 911 from a non-cellular phone or by activating a fire pull box. 911 should also be dialed in the event of an employee injury. In the event of a spill, the Emergency Management Office will notify the individuals or organizations responsible for the completion of spill reports or the fulfillment of regulatory reporting requirements.

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

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

Copies of internal spill reports are maintained by ENV-CP. All spills occurring within the MSGP facility shall be entered in the ENV-CP Corrective Actions Reporting database and documented in the spill log in Appendix J.

Pesticide Storage Shed (TA-60-29) Outfall 60-RG-4 ID # 033

- Product mixing area. Mixing is performed outside the building in a containment area located north of the shed. All containers with pesticides are labeled to encourage proper handling and facilitate rapid response in case of spills or leaks.

Heavy Equipment Storage Yard outfall 60-RG-3 ID # 032

- Storage of Heavy Equipment. Drip pans installed under leaking equipment and routine inspections look for drips. All heavy equipment vehicles have yellow spill kits.

Small Equipment Storage Yard outfall

- Storage and small engine repair area for 4-wheelers, lawn tractors, lawn mowers, snow blowers and miscellaneous small-engine equipment. Fuel and oil is stored in appropriate containers and in secondary containment.

Vehicle Parking Lots

- Large trucks are parked at three locations in the parking lots around the facility. Dump trucks, van trucks and flatbed trucks are parked outside the southeast corner of TA-60-29 and to the north of the small equipment storage area. Road salt spreading trucks are parked to the north of the Salt Shed. Drip pans installed under leaking equipment and routine inspections look for drips.

Craft Storage Buildings

- Materials are stored inside buildings. Potential for spills when loading and unloading. Absorbent is available at TA-60-250 to help address potential leaks and spills.

3.5 Erosion and Sediment Controls

Erosion and sediment are controlled at the Roads and Grounds Facilities by both preventing erosion through the use of pavement and compacted millings and stabilized ditches and by trapping sediment. Velocity dissipation devices are installed at each discharge point.

General structural controls include the following:

- Runoff from the north side of the facility is collected in a drainage swale/base course berm and released to the canyon through rock check dams.
- Sediment traps/check dams: A sediment traps/check dams is located at the northeast corner of SMSA to trap sediment from the stone stockpile area.

Sigma Mesa Staging Area (SMSA)

There are several control measures present at the SMSA. Compacted earthen berms are present on the north, east and west sides of the east and west soil staging areas. The northern berm of each of these staging areas has riprap lined weirs, which serve as discharge points for stormwater runoff that would accumulate along the berm. There is also a berm along the east central portion of the SMSA and on the north side in the same general area. A gravel surface is no longer effective at preventing sediment transport off site from the south central portion of the SMSA and therefore at the end of the day when loading and unloading operations cease the area affected by sediment transport is sweep with a vacuum truck.

To retain stormwater runoff and to minimize the potential for offsite transport of material within the potholing staging area, two primary control measures are implemented: a compacted earth berm and a vegetated buffer strip. The earth berm is approximately 430 ft in length and extends across the entire length of the north side of the area. It is a minimum of two feet in height with approximately 2:1 side slopes and is 2 feet wide across the top. The berm was sized to retain stormwater runoff from a 25-yr, 2-hr storm event. The

vegetated buffer strip, comprised of existing perennial vegetation and woodchips from on-site material, is 50 feet in width and located immediately upslope from the compacted earth berm (see the SMSA map in Appendix B).

North of Eniwetok Road at the far eastern portion of the SMSA, stormwater flows to a retention pond with a riprap lined discharge point located adjacent to the automated stormwater sampler (60-00RGE). Sediment is cleaned out of the retention pond when it's two thirds full.

The south central portion of the SMSA (south of Eniwetok Road) has a riprap lined area and a straw waddle leading to outfall 60-RG-7 ID # 041. In addition, there is a berm in the same area to control stormwater runoff velocity and direct stormwater prior to discharge at the outfall.

This area is located 0.9 miles east of the main facility. Most of the staging area is located north of Eniwetok Road with a smaller parking and storage area located south of Eniwetok Road. The area is mainly used as a Teamster vehicle parking area and materials (sand and gravel) storage area. Some miscellaneous equipment parts (loading buckets, blades, etc) are stored on both sides of the staging area.

- Gravel and Sand Piles: TSS
- Soil for use as clean fill and potholing staging area
- Vehicles and Various Miscellaneous Pieces of Equipment: Leaks are contained by drip pans, inspection and routine maintenance.

3.6 Management of Runoff

Runoff from the salt storage area goes to the lined retention pond where up to a 100 year storm is fully contained.

3.7 Salt Storage Piles or Piles Containing Salt

- Salt piles are primarily stored in the Salt Storage Shed and are not exposed to stormwater because three roll up doors on the shed are kept closed.

- Road Salt Runoff Control: Runoff from the area around the east, west and south sides of the Salt Storage Shed is directed into the lined retention pond to prevent salt discharge into the canyon. The pond is lined with an impervious plastic liner and will retain a 100-year storm.

3.8 MSGP Sector-Specific Non-Numeric Effluent Limits

- **Vehicle and Equipment Storage Areas**. See Section 3.4 for specific control measures to control spills and leaks.

***Pesticide Storage Shed* (TA-60-29)**

- Product mixing area: Mixing is performed outside the building in a containment area located north of the shed.
- Pesticide application equipment storage and maintenance: Spill prevention, containment and control and drip pans and good housekeeping.
- Appendix J contains the Standard Operation Procedures for handling storm water trapped in the secondary containment.

Heavy Equipment Storage Yard The equipment storage yard is located west of the Salt Shed.

- Storage of heavy equipment: Leaks are contained by drip pans and routine maintenance. Maintenance is performed off-site at the Heavy Equipment shop.

Small Equipment Storage Yard

- Storage and small engine repair area for 4-wheelers, lawn tractors, lawn mowers, snow blowers and miscellaneous small-engine equipment. Small containers of fuel and oils are stored on a secondary containment and in a flammable cabinet located just inside the entrance to the small equipment storage area. Approximately 50 gallons of fuel is stored on the secondary containment. Ten gallons of fuel and approximately ten gallons of oils are stored in the flammable cabinet.

Vehicle Parking Lots

- Large trucks are parked at three locations in the parking lots around the facility. Dump trucks, van trucks and flatbed trucks are parked outside the southeast corner of TA-60-29 and to the north of the small equipment storage area. Road salt spreading trucks are parked to the north of the Salt Shed. Leaks are contained by drip pans and routine maintenance.
- Passenger cars are parked in the gravel lot north of the sediment pond. Leaks are contained by drip pans and routine maintenance.

Clean Fill Yards

- 2.775 acres clean fill yards, added to this SWPPP revision and located in the Roads and Grounds staging area. Equipment will be hauling fill into and out of these areas. There will also be equipment involved in 'working' the fill and soil.

Asphalt Millings Staging Yard

- 0.3 acres asphalt millings staging yard, added to this SWPPP revision and located adjacent to the clean fill yards in the Roads and Grounds staging area. Equipment will be hauling asphalt millings into and out of this area. Equipment will also be used to load the asphalt millings.

Potholing Staging Yard

- 2.585 acres potholing staging yard, added to this SWPPP revision and located adjacent to the clean fill yards in the Roads and Grounds staging area. The yard consists of two open pits with one being 25 feet long by 27 feet wide and the other 14 feet wide by 45 long. Both pits are 6 to 8 feet deep. Equipment will be hauling potholing material into this area. Equipment will also be used to move the potholing material once it dries out.

- **Fueling Areas**. There are no fueling stations at Roads and Grounds.
- **Material Storage Areas**. Except as detailed under Small Equipment and Salt Storage there are no material storage areas.
- **Vehicle and Equipment Maintenance Areas**. No maintenance of equipment is done at this facility.

3.9 Employee Training

The primary object of the training program is to ensure employees who work in areas where industrial material or activities are exposed to stormwater or who are responsible for implementing activities necessary to meet the conditions of this permit, including all members of the stormwater pollution prevention team understand the requirements of the 2015 MSGP and their specific responsibilities with respect to those requirements.

Personnel who are responsible for the design, installation, maintenance, and/or repair of controls (including pollution prevention measures), who are responsible for the storage and handling of chemicals and materials that could become contaminants in stormwater discharges, who are responsible for conducting and documenting monitoring and inspections, and who are also responsible for implementing and documenting corrective actions at Roads and Grounds as well as Stormwater PPT members receive annual stormwater pollution prevention training. If formalized, this training is recorded in LANL's U-Train database.

The training incorporates at a minimum, the following topics:

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

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

The ENV-CP sampling team is tasked with meeting monitoring requirements and train to the following procedures once a year:

- ENV-CP-QAPP-MSGP: *Quality Assurance Project Plan for the Storm Water Multi-Sector General Permit for Industrial Activities Program,*
- ENV-CP-QP-045: *Installing, Setting up , and Operating ISCO Samplers for the MSGP,*
- ENV-CP-QP-048: *Processing MSGP Storm Water Samples,*
- ENV-CP-QP-047: *Inspecting Storm Water Runoff Samplers and Retrieving Samples for the MSGP,* and
- ENV-CP-QP-064: *Multi-Sector General Permit Storm Water Visual Inspections.*

Training activities are documented in Appendix I.

3.10 Non-storm Water Discharges

See section 2.3

3.11 Waste Garbage and Floatable Debris

The following control measures are used at the TA-60 RGF/SMSA facilities.

Good housekeeping practices that are specifically applicable to the prevention of storm water contamination include:

- Regular walk through inspections are conducted to ensure that no potential contaminants are present in exposed areas.
- Individual mixing operations take place in closed vessels, so that the potential for exposure of storm water to materials is limited to loading and unloading activities. The use of a brine solution for deicing operations is also being transitioned in to reduce the use of road salt.
- All storage areas are kept clean and neat. Vehicles and other equipment are stored and maintained in specified areas and heavy equipment repair and maintenance is never performed at this site.
- Garbage and floatables are routinely picked up by facility personnel. All garbage containers are covered to prevent windblown debris.

3.12 Dust Generation and Vehicle Tracking of Industrial Materials

Dust is controlled throughout the site by the use of pavement, compacted millings, gravel, speed limits, routine sweeping with a street sweeper, and watering for dust suppression when necessary.

SECTION 4: SCHEDULES AND PROCEDURES FOR MONITORING

4.1 Storm water Monitoring

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

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

4.2 Monitoring Schedule

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

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

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

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

a substitute sample will be collected during the next qualifying storm event or as soon as practical.

4.3 Substantially Identical Outfalls

This facility utilizes substantially identical outfalls for monitoring events. The outfalls have been identified as substantially identical based on common potential pollutant sources, drainage areas, activities within the drainage areas, and general site topography and characteristics. Required information supporting this outfall determination is as follows:

Roads & Grounds Main Facility (See Appendix B – Fig. 2, Map 1)				
Outfall ID	**Outfall Location**	**Activities/Potential Pollutants**	**Runoff Coefficient**	**Control Measures**
60-RG-1 ID # 031	Southern facility boundary, south of sediment basin (Discharge to: Mortandad Canyon)	Vehicle parking – oil/fuel/hydraulic fluids Salt storage area – road salt	65%	Sediment basin (detention pond) Vegetative buffer, check dams, culvert
60-RG-2 ID # 030	South facility boundary, south of heavy equipment storage area (Discharge to: Mortandad Canyon)	Heavy equipment storage and parking – oil/fuel/hydraulic fluids	>65%	Asphalt drainage swale, riprap, culvert
60-RG-3 ID # 032	Northwest corner of facility boundary (Discharge to: Sandia Canyon	Heavy equipment storage and parking – oil/fuel/hydraulic fluids	>80%	Riprap, asphalt berm, TRM (P-300), Jersey barriers
60-RG-4 ID # 033	Northwest facility boundary (Discharges to: Sandia Canyon)	Heavy equipment storage and parking – oil/fuel/hydraulic fluids	65%	Riprap, asphalt berm, TRM (P-300), Jersey barriers
60-RG-5 ID # 034	Northwest facility boundary (Discharges to: Sandia Canyon)	Small equipment storage and parking – oil/fuel/hydraulic fluids	65%	Riprap, asphalt berm, TRM (P-300), Jersey barriers
60-RG-6 ID # 035	Northern facility boundary, north of building 60-0250 (Discharges to: Sandia Canyon	Vehicle parking – oil/fuel/hydraulic fluids	65%	Riprap, asphalt berm, TRM (P-300), Jersey barriers

Sigma Mesa Staging Area (See Appendix B – Fig. 2 Map 2)				
Outfall ID	**Outfall Location**	**Activities/Potential Pollutants**	**Runoff Coefficient**	**Control Measures**
60-RG-7 ID # 041	Southern facility boundary, south of sediment basin (Discharge to: Mortandad Canyon)	Equipment storage – oil/fuel/hydraulic fluids	45-60%	Base course, riprap, vegetative buffer
60-RG-8 ID # 042	Northwest facility boundary (Discharges to: Sandia Canyon)	equipment and stockpile storage – oil/fuel/hydraulic fluids	45-60%	Riprap channel

Outfalls 60-RG-4 ID # 033 thru 60-RG-60-6 ID # 035: Monitoring performed at gage station E123.4 located at Outfall 3, which is also Monitored Outfall 60-RG-3 ID #032, receives runoff from all central areas of the main facility and is the outfall with the highest runoff coefficient. Therefore, monitoring at this outfall is representative of the site as a whole in regard to potential pollutant discharge stormwater runoff.

4.4 Summary of Monitoring Requirements (Sandia / Mortandad Canyons)

Monitoring Type	Location	Parameters			Numeric Limitations	Schedule
Benchmark	Refer to SWPPP Map	None			None	Quarterly
			Sandia	Mortandad		
Impaired Waters	Refer to SWPPP Map	Aluminum	530 mg/L	1324 mg/L	None	Annual
		Copper	5 mg/L	7 mg/L		
		Gross Alpha, adjusted	15 pCi/L	15 pCi/L		
		Thallium, dissolved (Sandia Canyon only)	0.47mg/L	N/A		
		PCB in Water Column	0.014 mg/L	0.014 mg/L		

Procedures:

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

4.5 Summary of Monitoring Requirements

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

- Analytical constituent(s) per outfall,
- Frequency of analysis (annual or quarterly),
- Matrix type (snow melt or rainfall),
- Sample type (grab),
- Preservation'
- Container type,
- Unfiltered,
- Holding times,
- Detection Limits,
- Volume, and
- Analytical method.

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

4.6 Monitoring Results

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

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

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

4.7 Recordkeeping

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

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

For snowmelt monitoring, all information except rainfall event durations, totals, and time since previous event is included. Additionally, all records of monitoring information, including all calibration and maintenance records are maintained for a minimum period of at least three years from the date the permit expires.

SECTION 5: INSPECTIONS AND CORRECTIVE ACTIONS PROCESS

5.1 Routine Facility Inspection Procedures

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

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

- Areas where industrial material or activities are exposed to stormwater;
- Areas where potential pollutant sources are identified;
- Discharge points; and
- Examine and look for leaks or spills, offsite tracking, trash residue, or other industrial materials that may have or could come in contact with stormwater.

The Stormwater PPT member performing the inspection documents the inspection and notes potential stormwater pollution problems that were encountered on the routine facility inspection form. Any required corrective actions identified during the inspection are addressed in accordance with ENV-CP-QP-022,

MSGP Stormwater Corrective Actions. All identified corrective actions found as a result of routine facility inspections must comply with Part 4 of the 2015 MSGP. Corrective actions are recorded and documented in the ENV-CP MSGP CAR database.

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

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

- An unauthorized release or discharge (e.g., spill leak, or discharge of non-stormwater not authorized by the 2015 MSGP or another NPDES permit to a water of the U.S. occurs at your facility.
- Your control measures are not stringent enough for the discharge to meet applicable water quality standards or the non-numeric effluent limits in the 23015 MSGP.
- A required control measure was never installed, was installed incorrectly, or not in accordance with Parts 2 and/or 8 of the 2015 MSGP or is not being properly operated or maintained.
- Whenever a visual assessment shows evidence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, and foam).
- Construction or a change in design, operation, or maintenance at the facility that significantly changes the nature of pollutants discharged into stormwater from the facility, or significantly increases the quantity of pollutants discharged.

Specific areas of the facility to be inspected include:

- Salt storage area and pond
- Pesticide storage area
- Heavy equipment parking/storage
- Small equipment storage
- Sediment basin and outfalls
- Vehicle parking back lot
- Craft's storage areas
- Sigma Mesa sediment trap
- Vehicle storage areas
- Stone storage piles
- Clean soil piles
- Potholing staging area
- Asphalt millings staging area
- Outfalls

5.2 Quarterly Visual Inspection Procedures

The quarterly visual assessments are conducted at outfalls 60-RG-2 ID# 030, 60-RG-4 ID# 033 through 60-RG-7 ID# 041, 60-RG-9 ID# 040, 60-RG-11 ID# 038, and 60-RG-12 ID# 037 by a qualified member of the Storm water PPT (Deployed Environmental Professional or ENV-CP). Visual assessments will:

- use a clean clear glass or plastic sample container in a well lite area;
- sample collected as soon as practicable after the first 30 minutes of a discharge if not possible to collect within the first 30 minutes following a storm event;
- snowmelt samples must be collected during a period of measurable discharge from the site;
- be conducted at least 72 hours since the last storm event;
- 72 hour storm interval does apply if you document that less than a 72 hour interval is representative for local storm events during the sampling period;
- document rationale if a visual assessment is unable to be collected in a quarter (no precipitation event or adverse conditions);
- perform an additional assessment during the next qualifying storm event if unable to perform in a particular quarter;
- Perform one quarterly assessment during snow melt discharge.

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

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

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

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

SECTION 6: DOCUMENTATION TO SUPPORT ELIGIBILITY CONSIDERATIONS UNDER OTHER FEDERAL LAWS

6.1 Documentation Regarding Endangered Species

The Los Alamos National Laboratory (LANL) Threatened and Endangered Species Habitat Management Plan (HMP) was prepared to provide for the protection of federally listed threatened and endangered species and their habitats at LANL. The HMP was designed to be a comprehensive landscape-scale management plan that balances the current operations and future development needs of LANL with the habitat requirements of

threatened and endangered species. It also facilitates DOE compliance with the Endangered Species Act and related federal regulations. The HMP received concurrence from the U.S. Fish and Wildlife Service (USFWS) and was first implemented in 1999. All changes to the HMP, such as adding new species or changing requirements, are assessed in a new consultation with the USFWS before being implemented. The HMP provides guidance by species for different types of activities allowed without further review by the USFWS.

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

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

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

6.2 Documentation Regarding Historic Properties

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

- TA-3-22 Power and Steam Plant
- TA-3-38 Metals Fabrication Shop
- TA-3-38 Wood Shop
- TA-3-39 and 102 Metal Shop

- TA-3-66 Sigma Complex
- TA-60 Asphalt Batch Plant
- TA-60-1 Heavy Equipment Yard
- TA-60 Material Recycle Facility
- TA-60 Roads and Grounds
- TA-60-2 Warehouse
- TA-54 Area L
- TA-54 Area G
- TA-54 Maintenance Facility West
- TA-54 RANT

6.3 Documentation Regarding NEPA Review

The Final Site-Wide Environmental Impact Statement for the Operation of Los Alamos National Laboratory (DOE/EIS-0380) was issued in May 2008, and a Record of Decision in September 2008. Stormwater issues and associated pollution prevention requirements and activities at LANL are analyzed in Chapters 4 and 5 of the 2008 Site-Wide EIS. These activities are integrated into environmental reviews on a project-specific level through both the LANL excavation permit process and the LANL project requirements (PR-ID) process. Stormwater issues are identified and pollution prevention activities are implemented during the design and construction phases of all LANL projects, and as part of facility operations, including routine maintenance. LANL staff monitors stormwater pollution prevention compliance at the MSGP sites in accordance with Section 4.0 *Monitoring* of this plan. Corrective actions are taken as necessary as described in Section 3.3.

SECTION 7: SWPPP CERTIFICATION

TA-60 Roads and Grounds Facility and Sigma Mesa Staging Area
STORM WATER POLLUTION PREVENTION PLAN
CERTIFICATION STATEMENT

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

Signature: _____ Digitally signed by Andrew Erickson, 141880 DN: cn=Andrew Erickson, 141880, o=Los Alamos National Laboratory, ou=Facility Operations Director Utility and Institutional Facilities, email=erickson@lanl.gov, c=US Date: 2015.09.01 14:40:51 -06'00' Date: _____

Andrew W. Erickson

Facility Operations Director
Utilities and Institutional Facilities, UIF

SECTION 8: SWPPP MODIFICATIONS

The SWPPP will be modified by the PPT and reviewed by the ENV-CP Technical Advisor(s) whenever necessary to address any of the triggering conditions for corrective actions listed in Section 3.3 of this SWPPP to ensure that they do not reoccur; or to reflect changes implemented when a review following the triggering conditions listed in Section 3.3 of this SWPPP indicates that changes to control measures are necessary to meet the effluent limits described in this SWPPP. Changes to this SWPPP document must be made in accordance with the corrective action deadlines defined in Section 5.4 and must be signed and dated in accordance with the signatory requirements listed in Appendix B Subsection 11 (Signatory Requirements) of the 2015 MSGP. SWPPP updates are required within 14 calendar days of completing corrective actions.

APPENDIX A

Pollution Prevention Team Members

POLLUTION PREVENTION TEAM MEMBERS

Pollution Prevention Team Leader
Name: Jake Caldwell
Title: TA-60 Roads and Grounds Site Superintendent
Office: 505-665-3666
Cell: 505-699-2274
Email: jackc@lanl.gov
Duties: Responsible for ensuring that the requirements of this SWPPP are met; overseeing the assigned duties of other PPT members; and communication of information to the group leader and LANL support organizations.

Maintenance and Oversight Officer
Name: Larry Velasquez
Title: TA-60 Roads and Grounds Logistics Superintendent
Office: 505-667-6111
Cell: 505-695-6949
Email: lvelasquez@lanl.gov
Duties: Responsible for review of proposed work at the TA-60 RGF/SMSA to ensure compliance with this SWPPP; initiate and follow through with corrective measures to maintain BMPs; assisting in revising and updating this SWPPP; and documenting spill and cleanup procedures.

ENV-CP MSGP Compliance Project Lead
Name: Holly Wheeler
Title: MSGP SWPPP Technical Lead
Office: 505- 667-1312
Email: hbenson@lanl.gov
Duties: Provide technical guidance on SWPPP contents, adequacy, and implementation; aides in performing and documenting the Site Compliance Evaluations; provide guidance on BMPs; and assists with revising this SWPPP as needed.

Environmental Technical Advisor/Inspector
Name: Leonard F. Sandoval
Title: Deployed Environmental Professional / MSGP SWPPP Inspector
Office: 505-667-3557
Cell: 505-231-1235
Email: lesandov@lanl.gov
Duties: Provide technical guidance concerning SWPPP contents, adequacy, and implementation; assists site representatives in performing and documenting the Site Compliance Evaluations; provides guidance on BMPs, assists with revising this SWPPP as needed, and conducts routine inspections.

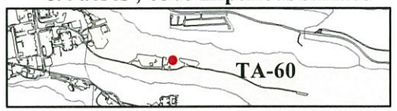
APPENDIX B

Site Maps

Figure 1: General Location Map
Figure 2: Site Maps 1 & 2
Figure 3: Site Maps with T & E Habitat

ROADS AND GROUNDS OPERATIONAL SWPPP

8.4 acres ; 65% imperious surface



SANDIA CANYON impaired recieving water (noTMDL).
Does not discharge to Tier 2, 2.5 , or 3 waters.

60-RG-3 ID# 032
60-RG-4 ID# 033
60-RG-5 ID# 034
60-RG-6 ID# 035
60-RG-2 ID# 030
60-RG-1 ID# 031

01
02
07
08

262
7250'
7310'
7316'
7314'
7290'
7230'

RAAC ASSEMBLY FACILITY
HVY. EQPT. STORAGE
SALT SHED 60-0178
PAVED 07
HVY. EQPT. STOR
HVY. EQPT. STORAGE
60-002
60-0224
VEHICLE PARKING
1977
1978
SMALL EQPT. STORAGE
PESTICIDE EQPT. STORAGE
60-0250
PARKING (ASPHALT)
PESTICIDE SHED
60-0029
03-1191
ELECTRICAL CRAFTS STORAGE AREA
60-004(a)
PARKING (GRAVEL)
LINED RETENTION POND 07
ROAD 7
SEDIMENT BASIN
ENIWETOK DRIVE
TO SIGMA MESA STAGING AREA 0.9 MILES

POTENTIAL RELEASE SITES (PRS) SOURCE STATEMENT:
Los Alamos National Laboratory, Waste & Environmental Services Division,
GIS/Geotechnical Services Group, EP2008-0224; 1:2,500 Scale Data; 30 May 2008.

LA-UR-15-26794

MORTANDAD CANYON IMPARED RECEIVING WATER (no TMDL)

LEGEND

- DRAINAGE PATTERN
- DIRECTION OF FLOW
- 6-SNOW TRT. MIX TANKS
- PRS
- FIRE HYDRANTS
- FLAMMABLE CONTAINMENT
- STAND PIPE
- DISCHARGE PTS.
- 01 MSGP SAMPLER (E123.4)
- 02 MSGP SAMPLER
- BASE COURSE BERM
- FACILITY BOUNDARY
- MANHOLE
- RUN ON POINT
- PAVED ROADS (ASPHALT)
- FENCES
- 20 FT CONTOURS
- DRAIN PIPE
- CULVERT
- JERSEY BARRIER
- WATTLE (S)
- LOADING AREAS
- SPEED BUMP BERMS
- STRUCTURES
- ROCK CHECK DAM
- GRAVEL
- ROCK RUN DOWN
- DUMPSTER
- DEVELOPED BUFFER MEXICAN SPOTTED OWL HABITAT

0 50 100 200 Feet

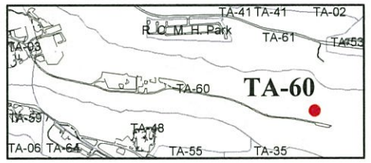
UTILITIES AND INSTITUTIONAL FACILITIES

U07001.rev1

Classification: U | Reviewer: H. Salazar | Date: 24-AUG-2015

ROADS AND GROUNDS OPERATIONAL SWPPP SIGMA MESA STAGING AREA

10.55 acres, <1% impervious surface



SANDIA CANYON impaired recieving water (no TMDL).
Does not discharge to Tier 2, 2.5 , or 3 waters.

60-RG-13 ID# 036
60-00RGCFYW
60-RG-12 ID# 037
60-RG-11 ID# 038
60-00RGCFYE
60-RG-9 ID# 040
60-RG-10 ID# 039
03
02
01
POTHOLING STAGING AREA
CLEAN FILL YARDS
CLEAN FILL YARDS
60-0RGE
OUTFALL # 60-RG-8 ID# 042
RETENTION POND
ENIWETOK
60-002
OUTFALL # 60RG-7 ID# 041

POTENTIAL RELEASE SITES (PRS) SOURCE STATEMENT:
Los Alamos National Laboratory, Waste & Environmental Services Division, GIS/Geotechnical Services Group, EP2008-0224; 1:2,500 Scale Data; 30 May 2008.

LA-UR-15-26794

MORTANDAD CANYON IMPAIRED RECEIVING WATER (no TMDL)

LEGEND

- CONSTRUCTION MATERIAL PILE
- 00 MSGP SAMPLER
- SPILL
- RUN ON POINT
- VEHICLE STORAGE
- FENCE
- DIRECTION OF FLOW
- EQUIPMENT STORAGE
- EARTHEN BERM
- SIGMA MESA STAGING AREA BOUNDARY
- PAVED ROAD
- 20 FT CONTOURS
- WATTLE
- 50' WIDE VEGETATIVE BUFFER STRIP
- DRAIN PIPE
- CLEAN FILL PILE
- SHED
- GRAVEL
- PRS
- OUT FALL
- ROCK RUN DOWN
- WEIR
- ASPHLAT MILLING STAGING AREA

0 90 180 360 Feet

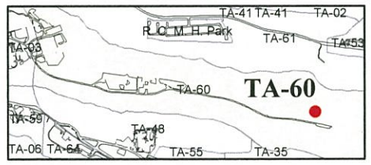
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60-RG-10 ID# 039
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02
01
POTHOLING STAGING AREA
CLEAN FILL YARDS
CLEAN FILL YARDS
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- CONSTRUCTION MATERIAL PILE
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- CLEAN FILL PILE
- SHED
- GRAVEL
- PRS
- OUT FALL
- ROCK RUN DOWN
- WEIR
- ASPHLAT MILLING STAGING AREA
- DEVELOPED BUFFER MEXICAN SPOTTED OWL HABITAT

0 90 180 360
Feet

UTILITIES AND INSTITUTIONAL FACILITIES

U07001.rev1

Classification: U Reviewer: H. Salazar Date: 24-AUG-2015