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Author(s): Sandoval, Leonard Frank

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Stormwater Pollution Prevention Plan

TA-60 Material Recycling Facility

Los Alamos National Laboratory

A requirement of the
NPDES MULTISECTOR GENERAL PERMIT
NMR05G000 (LANS)
for Stormwater Discharges Associated with Industrial Activities

Prepared by:
Los Alamos National Laboratory
Environmental Protection Division
ENV-CP (Environmental Compliance Programs)
P.O. Box 1663 MS K490
Los Alamos, New Mexico 87545

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SECTION 1: FACILITY DESCRIPTION AND CONTACT INFORMATION

1.1 Contact Information/Responsible Parties.

Facility Operator(s):

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

Facility Owner(s):

Name: Andrew W. Erickson Utilities and Institutional Facilities, UIF
Address: Los Alamos National Laboratory
City, State, Zip Code: P.O. Box 1663 MS K787 Los Alamos, N.M. 87545
Telephone Number: (505) 665-0106
Email address: erickson@lanl.gov

SWPPP Contact(s):

SWPPP Contact Name: Holly Wheeler
Telephone number: (505) 667-1312
Email address: hbenson@lanl.gov

SWPPP Contact Name: Leonard F. Sandoval
Telephone number: (505) 667-3557
Email address: lesandov@lanl.gov

1.2 Stormwater Pollution Prevention Team

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

Designation of Pollution Prevention Teams

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

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

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

- **Pollution Prevention Team Leader:** The Pollution Prevention Team Leader is identified in Appendix A of this SWPPP. He or she is responsible for revising and updating the SWPPP as required under Section 8 of this SWPPP. The Team Leader or designated representative will assist ENV-CP in performing the annual Comprehensive Site Inspection described in Section 5.2 of this SWPPP. The Team Leader or designated representative will also ensure that the appropriate facility and other LANS personnel receive the training specified in Section 3.8 of this SWPPP.
- **Team Members:** Other members of the team are responsible for the implementation of this SWPPP and the required periodic inspections, as described in Section 5 of this SWPPP. In the event of a spill or release, a team member will ensure it is cleaned up and incorporate documentation of the spill and cleanup process into The Spill Tracking Table located in Appendix J of this SWPPP. Team members will also be selected to assist/represent the Team Leader in performing routine inspections.
- **ENV-CP Technical Advisor:** Supports the facility and provides guidance associated with implementation of the compliance requirements identified in the 2015 MSGP. The ENV-CP Technical Advisor also acts as the institutional point of contact for all interactions with the regulatory authority (EPA) and supervises personnel implementing monitoring requirements for the facility.
- **Deployed Environmental Professional:** Responsible for conducting the routine facility inspections and entering corrective actions into the ENV-CP NPDES MSGP Corrective Action Report database. The DEP is also responsible for tracking and updating the status of corrective actions that cannot be implemented immediately.
- **All Members:** All PPT members are responsible for being familiar with and implementing this SWPPP and for compliance with the 2015 MSGP. PPT Members are also responsible for attending meetings that will be scheduled as needed to discuss revisions of the SWPPP, inspection findings, status of corrective actions and any other topics pertinent to the management of the SWPPP.

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

1.3 Site Description

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

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

1.4 General Location Map

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

1.5 Site Map

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

SECTION 2: POTENTIAL POLLUTANT SOURCES

2.1 Potential Pollutants Associated with Industrial Activity.

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

2.2 Spills and Leaks

Areas of Site Where Potential Spills/Leaks Could Occur

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

Description of Past Spills/Leaks

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

2.3 Unauthorized Non-stormwater Discharges Documentation

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

- Date of evaluation: 7-29-2015
- Description of the evaluation criteria used: A complete MRF site inspection was performed on 7-29-2015. Observation criteria included any evidence of active or inactive non-stormwater discharges.
- List of the drainage points that were directly observed during the evaluation: Single ENV-CP monitoring outfall 60-MRF-1 ID# 029 east of MRF fence- gage station E122.35
- Action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), or documentation that a separate NPDES permit was obtained. None because no unauthorized non-stormwater discharges were identified.

2.4 Salt Storage

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

2.5 Sampling Data Summary

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

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

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

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

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

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

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

SECTION 3: STORMWATER CONTROL MEASURES

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

3.1.1 Minimize Exposure

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

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

3.1.2 Good Housekeeping

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

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

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

3.1.3 Maintenance

At the MRF facility, preventive maintenance is performed on all heavy equipment on a six-month schedule. Also, operators perform a pre-operation inspection on equipment prior to use. These inspections would identify any maintenance issues or leaks that need to be remedied. MRF personnel perform weekly facility rounds at the facility. These rounds would identify any facility maintenance issues associated with the structural BMPs on site. Also, the inspections of the facility by the Stormwater PPT identifies corrective measures necessary for maintaining the structural stormwater controls in proper operating condition. If control measures are in need of routine maintenance, it must be conducted immediately in order to minimize pollutant discharges. If a control measure is found to need repair or replacement, all reasonable steps to prevent or minimize the discharge of pollutants must immediately occur until the final repair or replacement is implemented including cleaning up any contaminated surfaces so that the material will not be discharged during subsequent storm events. Temporary BMPs will be installed to serve as backup controls while a control measure is offline. Final repairs/replacement of stormwater controls should be completed as soon as feasible but must be no later than the timeframe established in Part 4.3 of the 2015 MSGP for corrective actions, i.e., within 14 days or, if that is infeasible, within 45 days. If the completion of stormwater control repairs/replacement will exceed the 45 day timeframe, the site will take the minimum additional time necessary to complete the maintenance, provided that the EPA Regional Office is notified of the intention to exceed 45 days, and documentation of the rationale is contained in this SWPPP. Note: “All reasonable steps” means that the permittee has undertaken initial actions to assess and address the condition causing the corrective action, including for example, cleaning up any exposed material that may be discharged in a storm event (e.g., through sweeping, vacuuming) or making arrangement (i.e., scheduling) for a new best management practice to be installed at a later date. If a control measure was never installed, was installed incorrectly or not in accordance with Part 2 and/or 8 of the 2015 MSGP, or is not being properly operated or maintained site personnel must conduct corrective action as specified in Part 4 of the 2015 MSGP. The retention pond will be cleaned when the depth of sediment and or debris reached two-thirds (2/3) of the depth of the pond and keeping the debris surface at least six inches below the outlet pipe. According to the manufacturing specifications the functional longevity of terra tubes is 1 to 2 years and at the MRF they will be replaced as soon as they deteriorate to the point where they no longer function properly. The catch basin insert filters at the retention pond are replaced once a year and the frequency depends on the amount of runoff, pollutant loading, and interference of debris, i.e. leaves, vegetation, trash etc.

3.1.4 Spill Prevention and Response

The application of good housekeeping procedures and regular visual inspections minimize the probability of a spill or release. Also, LANL’s institutional procedures P 409 *Waste Management* and P 101-14 *Chemical Management* require labeling of wastes, used oils, and chemicals stored on-site to facilitate the proper handling and response if spills or leaks occur.

Operational controls are implemented to minimize the possibility of any accidents resulting in spills or releases off site. In general, the approach to spill clean-up of a known substance is to first contain the spill by securing the spill source and deploying spill containment materials. If secondary containment is being provided (e.g. secondary containment pallets for liquids) it will contain the spill. Small spills are responded

to by the operator involved in the spill or by the operator located in the vicinity. For incidental releases, absorbents are used to pick-up free liquids and the contaminated absorbents are properly disposed. Standard procedures for spill containment and clean up include the use of spill control kits, sorbent pillows, socks, sheets, and granules. Clean-up residues are managed as appropriate and as determined by the facility waste management coordinator and ENV-CP personnel depending on the material spilled. Larger spills or spills of unknown substances require that ENV-CP personnel be contacted to respond to the spill, securing the spill area and contacting LANL's Emergency Management Division.

The Security and Emergency Operations (SEO), Emergency Response Group (SEO-1) has been appointed by the Laboratory Director as the organization responsible for emergency management at the Laboratory. The SEO and SEO-1 group will be notified if a spill cannot be easily controlled with the materials on hand, threatens to escape the facility or enter the environment, needs additional resources, involves an unidentified hazard, involves injuries to personnel, requires fire protection, is beyond the training and skill levels of operational or facility personnel regarding the use of spill control equipment, or personnel are not confident in their ability to carry out spill response activities. The SEO and SEO-1 group can be reached at **667-6211** during regular business hours as well as after hours. If a fire or explosion occurs, or if the potential for such exists, the situation must be reported by dialing 911 from a non-cellular phone or by activating a fire pull box. 911 should also be dialed in the event of an employee injury. In the event of a spill, the Emergency Management Office will notify the individuals or organizations responsible for the completion of spill reports or the fulfillment of regulatory reporting requirements.

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

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

3.1.5 Erosion and Sediment Controls

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

3.1.6 Management of Runoff

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

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

3.1.7 Salt Storage Piles or Piles Containing Salt

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

3.1.8 Dust Generation and Vehicle Tracking of Industrial Materials

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

3.2 Sector-Specific Non-Numeric Effluent Limits

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

3.3 Numeric Effluent Limitations Based on Effluent Limitations Guidelines

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

3.4 Water Quality-based Effluent Limitations and Water Quality Standards

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

SECTION 4: SCHEDULES AND PROCEDURES

4.1 Good Housekeeping

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

4.2 Maintenance

Final repairs/replacement of stormwater controls should be completed as soon as feasible but must be no later than the timeframe established in Part 4.3 of the 2015 MSGP for corrective actions, i.e., within 14 days or, if that is infeasible, within 45 days. If the completion of stormwater control repairs/replacement will exceed the 45 day timeframe, the site will take the minimum additional time necessary to complete the maintenance, provided that the EPA Regional Office is notified of the intention to exceed 45 days, and documentation of the rationale is contained in this SWPPP. Note: "All reasonable steps" means that the permittee has undertaken initial actions to assess and address the condition causing the corrective action, including for example, cleaning up any exposed material that may be discharged in a storm event (e.g., through sweeping, vacuuming) or making arrangement (i.e., scheduling) for a new best management practice to be installed at a later date. If a control measure was never installed, was installed incorrectly or not in accordance with Part 2 and/or 8 of the 2015 MSGP, or is not being properly operated or maintained site personnel must conduct corrective action as specified in Part 4 of the 2015 MSGP. The retention pond will be cleaned when the depth of sediment and or debris reached two-thirds (2/3) of the depth of the pond and keeping the debris surface at least six inches below the outlet pipe. According to the manufacturing specifications the functional longevity of terra tubes is 1 to 2 years and at the MRF they will be replaced as soon as they deteriorate to the point where they no longer function properly. The catch basin insert filters at the retention pond are replaced once a year and the frequency depends on the amount of runoff, pollutant loading, and interference of debris, i.e. leaves, vegetation, trash etc.

4.3 Spill Prevention and Response Procedures

The application of good housekeeping procedures and regular visual inspections minimize the probability of a spill or release. Also, LANL's institutional procedures P 409 *Waste Management* and P 101-14 *Chemical*

Management require labeling of wastes, used oils, and chemicals stored on-site to facilitate the proper handling and response if spills or leaks occur.

Operational controls are implemented to minimize the possibility of any accidents resulting in spills or releases off site. In general, the approach to spill clean-up of a known substance is to first contain the spill by securing the spill source and deploying spill containment materials. A spill kit is located inside office space 60-311. If secondary containment is being provided (e.g. secondary containment pallets for liquids) it will contain the spill. Small spills are responded to by the operator involved in the spill or by the operator located in the vicinity. For incidental releases, absorbents are used to pick-up free liquids and the contaminated absorbents are properly disposed. Standard procedures for spill containment and clean up include the use of spill control kits, sorbent pillows, socks, sheets, and granules. Clean-up residues are managed as appropriate and as determined by the facility waste management coordinator and ENV-CP personnel depending on the material spilled. Larger spills or spills of unknown substances require that ENV-CP personnel be contacted to respond to the spill, securing the spill area and contacting LANL's Emergency Management Division. All unauthorized spills and releases are entered into the ENV-CP MSGP Corrective Action Reporting database.

The Security and Emergency Operations (SEO), Emergency Response Group (SEO-1) has been appointed by the Laboratory Director as the organization responsible for emergency management at the Laboratory. The SEO and SEO-1 group will be notified if a spill cannot be easily controlled with the materials on hand, threatens to escape the facility or enter the environment, needs additional resources, involves an unidentified hazard, involves injuries to personnel, requires fire protection, is beyond the training and skill levels of operational or facility personnel regarding the use of spill control equipment, or personnel are not confident in their ability to carry out spill response activities. The SEO and SEO-1 group can be reached at **667-6211** during regular business hours as well as after hours. If a fire or explosion occurs, or if the potential for such exists, the situation must be reported by dialing 911 from a non-cellular phone or by activating a fire pull box. 911 should also be dialed in the event of an employee injury. In the event of a spill, the Emergency Management Office will notify the individuals or organizations responsible for the completion of spill reports or the fulfillment of regulatory reporting requirements.

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

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

4.4 Erosion and Sediment Control

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

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

4.5 Employee Training

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

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

The training incorporates at a minimum, the following topics:

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

4.6 Inspections and Assessments

4.6.1 Routine Facility Inspections

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

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

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

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

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

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

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

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

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

4.6.2 Quarterly Visual Assessment of Stormwater Discharges

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

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

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

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

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

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

4.7 Monitoring

4.7.1 Stormwater Monitoring

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

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

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

4.7.2 Monitoring Schedule

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

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

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

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

4.7.3 Substantially Identical Outfalls

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

4.7.4 Summary of Monitoring Requirements (Sandia Canyon)

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

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

Procedures:

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

4.7.5 Summary of Monitoring Requirements

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

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

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

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

4.7.6 Monitoring Results

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

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

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

4.7.7 Recordkeeping

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

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

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

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

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

5.1 *Documentation Regarding Endangered Species.*

The Los Alamos National Laboratory (LANL) Threatened and Endangered Species Habitat Management Plan (HMP) was prepared to provide for the protection of federally listed threatened and endangered species and their habitats at LANL. The HMP was designed to be a comprehensive landscape-scale management plan that balances the current operations and future development needs of LANL with the habitat requirements of threatened and endangered species. It also facilitates DOE compliance with the Endangered Species Act and related federal regulations. The HMP received concurrence from the U.S. Fish and Wildlife Service (USFWS) and was first implemented in 1999. All changes to the HMP, such as adding new species or changing requirements, are assessed in a new consultation with the USFWS before being implemented. The HMP provides guidance by species for different types of activities allowed without further review by the USFWS.

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

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

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

5.2 Documentation Regarding Historic Properties

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

- TA-3-22 Power and Steam Plant
- TA-3-38 Metals Fabrication Shop
- TA-3-38 Wood Shop
- TA-3-39 and 102 Metal Shop
- TA-3-66 Sigma Complex
- TA-60 Asphalt Batch Plant
- TA-60-1 Heavy Equipment Yard
- TA-60 Material Recycle Facility
- TA-60 Roads and Grounds
- TA-60-2 Warehouse
- TA-54 Area L
- TA-54 Area G
- TA-54 Maintenance Facility West
- TA-54 RANT

SECTION 7: SWPPP CERTIFICATION

TA-60 Material Recycling Facility STORMWATER POLLUTION PREVENTION PLANT CERTIFICATION STATEMENT

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

Signature: _____



Digitally signed by Andrew Erickson, 141880
DN: cn=Andrew Erickson, 141880, o=Los Alamos National Laboratory,
ou=Facility Operations Director Utility and Institutional Facilities,
email=erickson@lanl.gov, c=US
Date: 2015.09.01 14:43:36 -0600

Date: _____

Andrew W. Erickson

Facility Operations Director
Utilities and Institutional Facilities, UIF

SECTION 8: SWPPP MODIFICATIONS

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

SWPPP ATTACHMENTS

Attach the following documentation to the SWPPP:

Attachment A – General Location Map

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

Attachment B – Site Map

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

Attachment C –2015 MSGP

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

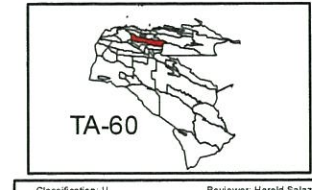


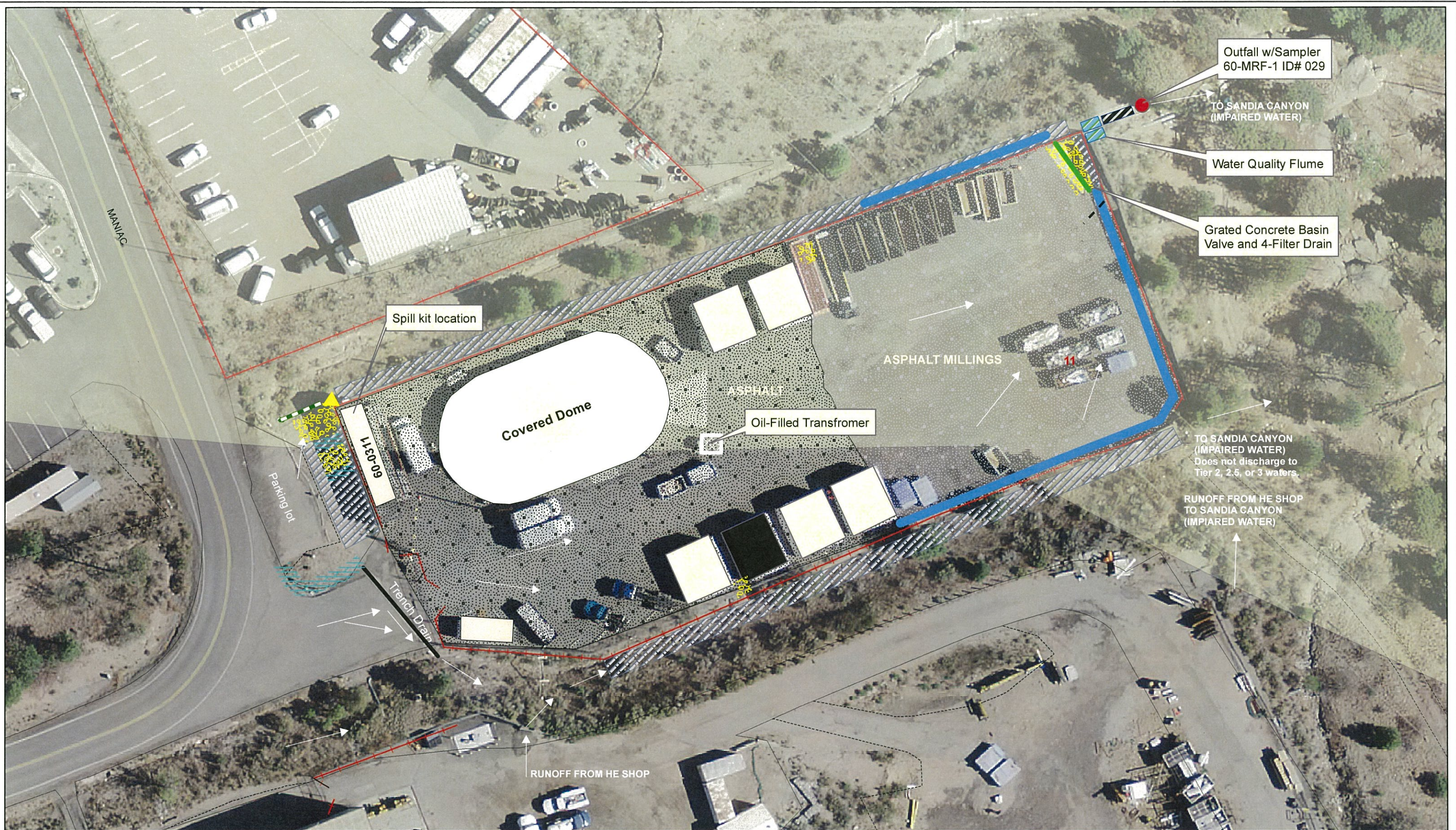
LEGEND

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

LA-UR-15-26793

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





LEGEND

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

Developed Buffer
Mexican Spotted
Owl Habitat

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

