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2016 Multi-Sector General Permit Annual Report – DOE/SFO

Sandia National Laboratories/NM

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2015 NPDES Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activity (MSGP) Forms

United States Environmental Protection Agency
1200 Pennsylvania Ave, NW Washington, DC 20460

Permit Information (* indicates form required data)

What action would you like to take? *

New Industrial Stormwater Annual Report

Please select the NPDES ID corresponding to the facility for which you would like to submit an Annual Report and click the Submit button.

NPDES ID *

NMR053114: DOE Sandia Field Office

Confirm NPDES ID: NMR053114: DOE Sandia Field Office *

Facility Information

Facility Name

Sandia National Laboratories

Street

1515 Eubank Blvd SE

Supplemental address

City

Albuquerque

State

New Mexico

Zip Code

87123

First Name

Karen

Middle Name

L

Last Name

Agogino

Telephone Number

5058456100

Summary of past year's inspections, assessments, and corrective actions

1. Provide a summary of your past year's routine facility inspection documentation (see Part 3.1.2 of the permit). In addition, if you are an operator of an airport facility (Sector S) that is subject to the airport effluent limitations guidelines, and are complying with the MSGP Part 8.S.8.1 effluent limitation through the use of non-urea-containing deicers, provide a statement certifying that you do not use airfield pavement deicers containing urea (e.g., "I certify that [name of airport] is in compliance with the effluent limitation guideline for airfield pavement deicing by not using airfield pavement deicers that contain urea."). [Note: Operators of airport facilities that are complying with Part 8.S.8.1 by meeting the numeric effluent limitation for ammonia do not need to include this statement.] *

A. For detailed descriptions of the 22 sites at Sandia National Laboratories (SNL) permitted under the MSGP, refer to the SNL Stormwater Pollution Prevention Plan (SWPPP) viewable at: <https://repository.unm.edu/handle/1928/29607>. Seventeen of the 22 sites had no findings identified during the 2016 Routine Site Inspections. Findings (i.e.; requiring new or modified control measures) identified on the remaining 5 sites are summarized below. The findings described in this section did not result in any formal corrective actions as required in Parts 4.1 and 4.2 of the MSGP:

The Long Sled Track, Solid Waste Management Unit (SWMU) 83 and the Short Sled Track, SWMU 240: Industrial debris from previous testing activities has been identified in site inspection reports on both sites. In August 2016 the "TA III Group 1530 Clean-up Campaign NEPA NM16-0283" initiated removal of industrial materials from the Long Sled Track. Removal of materials from The Short Sled Track is currently in the planning phase under the same clean-up project. With safety/health, and environmental regulatory concerns to address, this project will extend through 2017 and beyond.
Solid Waste Collection and Recycle Center: Trash on ground was identified during the September 12, 2016 Inspection and removed by September 30, 2016.

TA-V Sandlot: Control measures (rip rap) installed in 2015 were evaluated as needing improvement based on observations of further erosion and sedimentation identified during site inspection. There have been no exceedances of benchmark values in analytical results from samples collected at this outfall under the 2015 MSGP. A Service Request to SNL Facilities was submitted in August, 2016 to install additional sediment controls. The project is currently in the design phase. Every effort will be made to complete this project before July 1, 2017 (wet season).

The Thermal Treatment Unit (TTU) – sediments have accumulated around the sampler location as a result of de-vegetated land during construction of engineered stormwater controls installed in 2015. Stabilization (applied mulch) of de-vegetated area should result in new vegetation in 2017 or will be re-evaluated. A coir mat was installed in 2016 but was inadequate; additional coir matting will be installed before the July 1, 2017 (wet season).

2. Provide a summary of your past year's quarterly visual assessment documentation (see Part 3.2.2 of the permit) *

B. For details on Visual Assessment procedures and documentation, refer to the SNL SWPPP viewable at: <https://repository.unm.edu/handle/1928/29607>. The visual assessment observations reflect a wet season characterized by intense storm events separated by longer-than-average periods of dryer conditions. This is reflected both by the number of outfalls that received no discharge and by the moderate to heavy sediments and organics associated with discharges during the intense storm events. No pollutants such as oil, foam or unusual odors, were identified during any of the assessments. In addition, no "four-sample-average benchmark exceedances" occurred at any of the sample locations for these outfalls. There were no sites where significant sedimentation or erosion occurred beyond the site outfall or reached waters of the U.S. For all 17 outfalls assessed during each of the four monitoring periods, there were 8 assessments at 6 outfall locations that identified moderate to heavy sediments and organics. Four of these occurred during a single storm event in October that, at certain outfalls, exceeded a 1/10 year annual exceedance probability (NOAA Precipitation Frequency Data Server). At two sites, TA-V Sandlot and the Thermal Test Unit, observations during the site inspection evaluated together with visual assessments resulted in plans to improve control measures. Refer to Part 1 above for details

3. For any four-sample (minimum) average benchmark monitoring exceedance, if after reviewing the selection, design, installation and implementation of your control measures and considering whether any modifications are necessary to meet the effluent limits in the permit, you determine that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice, provide your rationale for why you believe no further reductions are achievable (see Part 6.2.1.2 of the permit). Enter "NA" if not applicable. *

C. N/A: There were no "four-sample-average benchmark exceedances" that occurred at any of the sample locations at the permitted sites with the exception of magnesium where values fell within natural background levels as discussed in Appendix I of SWPPP viewable at <https://repository.unm.edu/handle/1928/29607>.

4. Provide a summary of your past year's corrective action documentation (See Part 4.4 of the permit). (Note: If corrective action is not yet completed at the time of submission of this annual report, you must describe the status of any outstanding corrective action(s).) Also describe any incidents of noncompliance in the past year or currently ongoing, or if none, provide a statement that you are in compliance with the permit. *

D. No formal corrective actions resulted from analytical data results; routine site inspections or visual assessments completed in compliance with the MSGP for permitted sites at SNL. No corrective actions resulted in modifications to the SNL SWPPP as required under Part 5.3 of the Permit. Corrective actions that were reported for 2016 consisted of four unauthorized releases from cooling towers at four different locations (Bldgs. 810, 827, 858J and 864). At three of the locations, discharges were caused by mechanical failure of different components. The remaining release was caused by a frozen valve. The release at Bldg. 858J is the only Corrective Action for a location where activities are covered under the MSGP Permit. Information on releases at the remaining three locations on SNL is provided in this section for informational purposes. The releases are summarized as follows:

Bldg. 810: Frozen valve caused a discharge of cooling tower water on January 16, 2016. A volume of 1000 gallons was discharged to the ground, with an estimated 100 gallons reaching the storm drain before freezing. Corrective actions: heating tape applied to lines, system brought back into operation the next day.

Bldg. 858J: A broken valve actuator caused a discharge of cooling water on July 13, 2016. A volume of 2020 gallons was discharged to a concrete channel. No water reached beyond the channel as a result of rip-rap and other engineered stormwater controls at the mouth of the channel. Corrective actions: Adjacent tower brought on-line within 15 minutes returning system to normal operating conditions. Actuator repaired, evaluated and replaced in October, 2016. Stormwater training was completed by first responders and custodial team.

Bldg. 827: An electro pneumatic relay failure during exchange of water between two cooling towers caused a release on August 2, 2016. A volume of 300 gallons discharged into the building. Custodial services vacuumed and pumped an estimated 60 gallons to the storm drain. Corrective Actions: Backup system used until replacement part was installed on August 9th. Limit switch adjusted to limit bypass valve flow. Auto shut-down system upgraded and building redesign in progress to include new mechanical room structure. Stormwater Training completed by first responders and custodial team.

Bldg. 864: A failed solenoid valve caused a discharge of cooling tower water on December 3, 2016. Preliminary reporting estimates 600 gallons discharged to ground surface. Additional details will be available in the MSGP Corrective Action Report to be certified following submission of this Annual Report.

In response to multiple unauthorized discharges from cooling towers, SNL Facilities personnel chartered an ongoing corrective action plan, drafted in February of 2016: "FMOG Tower Water Discharge to Ground Mitigation Plan Charter", to mitigate cooling tower over flows throughout SNL/NM. Starting with an assessment of all cooling tower operations at SNL, the group has identified the following solutions with regards to sump overflow and discharge to ground:

- Each cooling tower sump will have redundant level sensors installed.
- Level sensors will be pressure sensor type or tilt switch type sensors.
- Low Level Lockout System installed where sumps are located inside a building.
- When feasible sumps will be piped to the sanitary sewer system and a flow indicator or switch will be installed.
- Programming will alarm if the makeup valve is on for longer than a set period of time and the level sensor does not show a change in position.

As of December 15, 2016, ninety-seven percent of the objectives in the Charter have been completed, with sensor systems and valve components upgraded and standardized in 35 of 36 buildings. Team efforts to reduce cooling tower overflows will continue into 2017.

Certification Information

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