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ENVIRONMENT DEPARTMENT
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LANL General (7/1/95)

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Jay Coghlan
 Concerned Citizens for Nuclear Safety
 107 Cienega St.
 Santa Fe, NM 87501

February 4, 1999

Subject: Status of Storm Water Pollution Prevention Plans (SWPPPs) at LANL

Dear Mr. Coghlan:

We are responding to your October 1998 request for information about the present and future status of SWPPPs at LANL. These responses represent our understanding of the regulatory requirements which are implemented by the NMED Surface Water Quality Bureau and the U.S. EPA Region VI Office of Compliance and Enforcement. Should you wish to contact these offices for additional information, the contacts names and numbers are:

EPA Region VI	Permitting Branch	Mr. Brent Larsen	-	214-665-7523
EPA Region VI	Compliance & Enforcement	Mr. Taylor Sharpe	-	214-665-7112
NMED Surface Water Quality Bureau		Mr. Rich Powell	-	505-827 2798

It is our understanding that LANL intends to meet the regulatory requirements of the Multi-Sector General Permit by implementing the measures outlined in the attachment. This is based on notes from a January 15th meeting with Steve Rae (Group Leader) and Mike Alexander (storm water permitting primary contact) of ESH-18, the Water Quality & Hydrology Group. The ESH-18 group is responsible for maintaining and complying with the NPDES storm water permit. If you have any questions regarding this response please contact Ralph Ford-Schmid at 827-1536.

Sincerely,

Steve Yanicak
 NMED, DOE OB, LANL POC

cc: with attachment

Jim Davis, NMED, Chief, SWQB
 Steve Rae, LANL, ESH-18, MS K490
 Joe Vozella, DOE/AIP/POC, MS A316

LANL/Non-HSWA Regulatory



13237

Jay Coghlan
February 4, 1999
Status of SWPPPs at LANL

Overview

Information on modifications to the Multi-Sector General Permit and about the Notice of Termination of the 1992 Baseline Industrial General Permit can be found on the EPA Region 6 Compliance and Enforcement Division Water Enforcement Branch Web page at (<http://www.epa.gov/earth/r6/6en/w/sw/hottpms.htm>).

To summarize the information provided there, all facilities covered under a 1992 Baseline Industrial General Permit, that administratively extended their permit, had their NPDES coverage terminated on September 30, 1998. Those facilities had 90 days (until December 29, 1998) to re-apply for NPDES permit coverage. The facilities were required to submit a Notice of Intent (NOI) to obtain coverage under a Multi-Sector General Permit and will need to update/implement their Storm Water Pollution Prevention Plan (SWPPP) by March 29, 1999. We have included an outline of general SWPPP minimum requirements as Appendix A.

LANL's Status With Regard to Storm Water Permits

- LANL administratively extended their Baseline Industrial General Permit by submitting a NOI before September 9, 1997.
- LANL was covered under the 1992 Baseline Industrial General Permit, NPDES permit No. NMR00A384, until December 29, 1998.
- LANL submitted an NOI to obtain coverage under a Multi-Sector General Permit on December 28, 1998.
- LANL has until March 29, 1999 to update/implement their SWPPP.

To answer your specific questions about LANL:

Questions one and two below combined present and future issues. Our responses will discuss past and current practices (under the Baseline Industrial General Permit) and then address LANL's future strategy under the Multi-Sector General Permit.

1. What is the current and future status of SWPPPs at LANL?
2. What now exists? On what level do SWPPPs exist (i.e., site-wide, tech area-specific, facility specific, and/or PRS-specific)?

Response:

Under the Baseline Industrial General Permit LANL had developed approximately 65 SWPPPs. Of those, 26 SWPPPs are currently active and include the following:

- Facility-Management or Division-Specific SWPPPs. Divisions conducting similar activities at many sites (e.g., DX Division).
- General construction activities. SWPPPs are required for construction activities which disturb ≥ 5.0 acres.

- Treatment Storage and Disposal (TSD) facilities. For example, TA-54, MDA G; TA-54, TRU Waste Retrieval Dome Bldg. 54-226; TRU Waste Temp Storage Domes Buildings 54-227 through 232.
- Asphalt Paving Manufacturer (i.e., TA-3, Asphalt Batch Plant).
- Steam Electric Power Generating Facility (i.e., TA-3 Power Plant).
- Vehicle Maintenance or Equipment Cleaning Areas (i.e., TA-60 Heavy Equipment Storage Area).
- Site-Specific SWPPPs
 - Solid Waste Management Units (SWMUs) with planned or active remediation efforts (e.g., MDA P). When a remediation activity at an Environmental Restoration site was proposed/planned, a SWPPP was developed for the clean-up activities. When the activities were completed, the SWPPP was administratively closed out.
 - active firing sites (e.g., TA-14-027, TA-15-184, TA-39-6 & 39-57)

3. What is anticipated in the future?

Response:

LANL is required to update/implement their current SWPPPs by March 29, 1999 to qualify for a Multi-Sector General Permit. LANL will maintain/update SWPPPs for the TA-3 Power Plant, TA-3 Asphalt Batch Plant, the TA-54 TSD Facilities, TA-60 Equipment Storage and their construction activities. Any new or future facilities or activities which are covered under the Multi-Sector permit will be required to have a SWPPP. No new facilities have been identified by the ESH-18 group at this time.

- Decommission and Demolition (D & D) projects may require site-specific SWPPPs.
- Facility-Management (FM)-Specific SWPPPs will also need to be updated and implemented.
 - Where SWMUs are located within an area under management by a particular FM (e.g., DX-Division), the FM will maintain responsibility for SWPPP implementation.

According to the information provided on the Water Enforcement Branch Web page, "SWMUs usually meet the definition of industrial activity in 40 CFR 122.26(b)(14)(iv-v), thereby requiring an NPDES storm water permit." Therefore, LANL will need to develop and implement a Plan or Plans under the Multi-Sector General Permit for approximately 1095 SWMUS on their Hazardous and Solid Waste Amendments (HSWA) permit. Any new SWMUs added to the HSWA permit will also need to be addressed under the Multi-Sector General Permit.

LANL has indicated they are developing an "umbrella" SWPPP for all SWMUs. The majority

of SWMUs at LANL have had the Standard Operating Procedure (SOP) 2.01 (formerly called AP 4.5) evaluation performed. The procedure was developed with input from NMED to provide a systematic approach to identifying SWMUs or Potential Release Sites which have the potential to adversely impact surface water quality through surface water runoff or erosion. Sites where erosion potential is identified are then evaluated for appropriate Best Management Practices (BMPs) implementation.

- SWMUs with identified erosion processes and BMP recommendations will require site-specific SWPPP development.
- All SWMUs undergoing remediation activities will require site-specific SWPPPs.

LANL is proposing an aggregate approach.

- LANL and the Hazardous and Radioactive Materials Bureau are developing protocols for consolidating sites with similar histories, sources of contaminants and locations. An example is the former TA-3 waste water treatment plant and SWMUs associated with its operation. The multiple SWMUs associated with the past operations of the waste water treatment facility would be consolidated for RCRA permitting/investigation/reporting and for storm water permit requirements.

4. What monitoring exists for all of the above (as generally required by a SWPPP)?

Response:

- Under the previous Baseline Industrial General Permit, LANL was required to monitor quarterly and provide EPA with a biannual Discharge Monitoring Report (DMR). Monitoring was conducted at six stations below TA-54, Area G and one drainage below TA-54 Area L. The TA-55 Plutonium Processing facility had one monitoring station below the nitric acid storage area.
- TA-54 Area G DMRs, submitted to EPA, indicate that grab and composite samples are analyzed for COD, TOC, pH, TDS, TKN, oil & grease, dissolved magnesium, cyanide, PCB (Arochlors), and total metals.
- Although not indicated on these DMRs, LANL has conducted limited-suite radioisotopic analysis for some storm events collected at TA-54, Area G.
- There are no action levels required by EPA for any of the above analytes, only reporting requirements.

5. What effect might the need for a renewed LANL multi-sector general permit (required by EPA within 90 days of the end of the year) have?

Response:

- Monitoring of storm water is required quarterly in the 2nd and 4th year of the Multi-Sector General Permit. 1999 is the fourth year of the permit. LANL is preparing for three quarters of monitoring, starting January 1, 1999.

- The monitoring/reporting requirements include information such as the date & duration of the storm events sampled, rainfall measurements/estimates, time between sampling event and previous measurable (>0.1 inch) storm event, and an estimate of total volume of discharge sampled. Grab samples should be collected from the first 30 minutes of a discharge resulting from a > 0.1 inch storm event at least 72 hours after the previous measurable event.
- The parameters required to be monitored are specific to each industrial activity covered under the Multi-Sector General Permit. A list of parameter benchmark values (Table 5, Federal Register, Vol 60, No. 189, page 50826) is included in Appendix B. These values are not effluent limitations but represent target concentrations for a facility to achieve through implementation of pollution prevention measures at the facility.
- Due to the complex mix of facilities at LANL (e.g., steam plant, landfills, SWMU's, asphalt batch plant), not all benchmark values apply at all sites and will depend upon type of facility being monitored. For example, the asphalt batch plant pollutant of concern is Total Suspended Solids with a benchmark (or cut-off concentration) of 100 mg/L.
- In addition to the applicable monitoring parameters above, the State of New Mexico requires monitoring and reporting of several additional constituents, depending upon the type of facility monitored. These include nitrate + nitrite, total Kjeldahl nitrogen (TKN), and others listed in Appendix B. NMED requires facilities to report monitoring values only. (See FR Vol. 60, No. 189, pp 51256 - 51260).
- LANL also intends to monitor storm water for additional constituents, such as radioisotopes, parameters currently analyzed for by the Environmental Surveillance program, and any constituents of concern identified by the Environmental Restoration Project (SWMU investigations).

Additional Monitoring Under LANL's Environmental Surveillance Program and Watershed Protection and Management Plan

LANL has indicated that as part of their Watershed Protection and Management Plan, they are committed to installing additional gage/monitoring stations in all the major watersheds by March 31, 1999. These stations will have a solar-powered gage station for flow measurements and automatic storm water sampling devices. In addition, each watershed's sub-basins (1st order tributaries), will have stations installed to monitor each tributaries contribution to the overall water quality in the watershed. LANL plans to have a network of 51 gage/monitoring stations in operation this spring.

LANL intends to use the monitoring program, outlined in their "DRAFT" watershed management plan (not yet released), to verify compliance with New Mexico water quality standards. This monitoring will also be used to demonstrate that BMPs and remediation activities are effective in controlling the transport of contaminants into watercourses. If sub-

Jay Coghlan
February 4, 1999
Status of SWPPPs at LANL

basin storm water monitoring indicates upstream contaminant inputs, investigations as to the source(s) will be conducted and remedial actions addressed.

APPENDIX A

SWPPP Minimum Requirements (Federal Register/Vol. 60. No. 189, Friday, September 29, 1995) require documentation of the following:

- *Pollution Prevention Team* Identification of members and responsibilities.
- *Description of Potential Pollutant Sources*
 - *Drainage* (i.e., site map indicating outfall locations and types of discharges contained in the drainage areas of the outfalls)
 - Direction of flow and identification of the types of pollutants likely to be present and identification of flows with a significant potential for causing erosion
 - *Inventory of Exposed Materials*
 - *Spills and Leaks* (updated list of known spills & leaks of toxic or hazardous pollutants at areas exposed to precipitation)
 - *Sampling Data* (summary of past and current sampling data)
 - *Risk Identification and Summary of Potential Pollutant Sources*
 - *Measures and Controls* (description of storm water management controls) including:
 - *Good housekeeping measures*
 - *Preventative Maintenance Program*
 - *Spill Prevention and Response Procedures*
 - *Inspections*
 - *Employee Training*
 - *Record keeping and Internal Reporting Procedures*
 - *Non-storm Water Discharges* (i.e., identify, describe, and/or evaluate)
 - *Sediment and Erosion Control* (identify stabilization measures to be used to limit erosion)
 - *Management of Runoff* (identify practices used to divert, infiltrate, reuse, of otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site).
- *Comprehensive site Compliance Evaluation* (at least once per year)

APPENDIX B

TABLE 5.—PARAMETER BENCHMARK VALUES

Parameter name	Benchmark level	Source
Biochemical Oxygen Demand(5)	30 mg/L	4
Chemical Oxygen Demand	120 mg/L	5
Total Suspended Solids	100 mg/L	7
Oil and Grease	15 mg/L	8
Nitrate + Nitrite Nitrogen	0.68 mg/L	7
Total Phosphorus	2.0 mg/L	6
pH	6.0-8.0 s.u.	4
Acrylonitrile (c)	7.55 mg/L	2
Aluminum, Total (pH 6.5-9)	0.75 mg/L	1
Ammonia	19 mg/L	1
Antimony, Total	0.636 mg/L	9
Arsenic, Total (c)	0.16854 mg/L	9
Benzene	0.01 mg/L	10
Beryllium, Total (c)	0.13 mg/L	2
Butylbenzyl Phthalate	3 mg/L	3
Cadmium, Total (H)	0.0159 mg/L	9
Chloride	860 mg/L	1
Copper, Total (H)	0.0636 mg/L	9
Dimethyl Phthalate	1.0 mg/L	11
Ethylbenzene	3.1 mg/L	3
Fluoranthene	0.042 mg/L	3
Fluoride	1.8 mg/L	6
Iron, Total	1.0 mg/L	12
Lead, Total (H)	0.0816 mg/L	1
Manganese	1.0 mg/L	13
Mercury, Total	0.0024 mg/L	1
Nickel, Total (H)	1.417 mg/L	1
PCB-1016 (c)	0.000127 mg/L	9
PCB-1221 (c)	0.10 mg/L	10
PCB-1232 (c)	0.000318 mg/L	9
PCB-1242 (c)	0.00020 mg/L	10
PCB-1248 (c)	0.002544 mg/L	9
PCB-1254 (c)	0.10 mg/L	10
PCB-1260 (c)	0.000477 mg/L	9
Phenols, Total	1.0 mg/L	11
Pyrene (PAH,c)	0.01 mg/L	10
Selenium, Total (*)	0.2385 mg/L	9
Silver, Total (H)	0.0318 mg/L	9
Toluene	10.0 mg/L	3
Trichloroethylene (c)	0.0027 mg/L	3
Zinc, Total (H)	0.065 mg/L	1

Sources:

1. "EPA Recommended Ambient Water Quality Criteria." Acute Aquatic Life Freshwater.
2. "EPA Recommended Ambient Water Quality Criteria." LOEL Acute Freshwater.
3. "EPA Recommended Ambient Water Quality Criteria." Human Health Criteria for Consumption of Water and Organisms.
4. Secondary Treatment Regulations (40 CFR 133).
5. Factor of 4 times BOD5 concentration—North Carolina benchmark.
6. North Carolina storm water benchmark derived from NC Water Quality Standards.
7. National Urban Runoff Program (NURP) median concentration.
8. Median concentration of Storm Water Effluent Limitation Guideline (40 CFR Part 419).
9. Minimum Level (ML) based upon highest Method Detection Limit (MDL) times a factor of 3.18.
10. Laboratory derived Minimum Level (ML).
11. Discharge limitations and compliance data.
12. "EPA Recommended Ambient Water Quality Criteria." Chronic Aquatic Life Freshwater.
13. Colorado—Chronic Aquatic Life Freshwater—Water Quality Criteria.

Notes:

(*) Limit established for oil and gas exploration and production facilities only.

(c) carcinogen.

(H) hardness dependent.

(PAH) Polynuclear Aromatic Hydrocarbon.

Assumptions:

Receiving water temperature—20 C.

Receiving water pH—7.8.

Receiving water hardness CaCO₃ 100 mg/L.

Receiving water salinity 20 g/kg.

Acute to Chronic Ratio (ACR)—10.