



REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

NPDES Permit No NM0031054

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Los Alamos National Security, LLC
Management Contractor for Operations
Los Alamos, New Mexico 87544

and

U.S. Department of Energy
Los Alamos Area Office
Los Alamos, New Mexico 87544

is authorized to discharge from a facility located at Los Alamos National Labs, Los Alamos, Los Alamos County, New Mexico

to receiving waters named: Canon de Valle and S-Site Canyon, thence to an intermittent portion of Water Canyon thence to the Rio Grande in Waterbody Segment No's. 20.6.4.128 and 20.6.4.126 of the Rio Grande Basin from outfalls located on waters at the following coordinates:

Outfall 001 (Martin Spring): Latitude 35° 50' 33" North, Longitude 106° 20' 11" West,
Outfall 002 (SWSG Spring): Latitude 35° 50' 33" North, Longitude 106° 20' 12" West,
Outfall 003 (Burning Ground Spring): Latitude 35° 50' 60" North, Longitude 106° 20' 18" West,

in accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II, and Part III hereof.

This is a first time permit.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight

Issued on

Prepared by

Miguel I. Flores
Director
Water Quality Protection Division (6WQ)

Laurence E. Giglio
Environmental Engineer
Permits & Technical Section (6WQ-PP)

(This page intentionally left blank)

PART I – REQUIREMENTS FOR NPDES PERMITS

SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS

1. OUTFALL 001 - FINAL Effluent Limits – Intermittent Flow

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated groundwater from Martin Spring to S-Site Canyon thence to Water Canyon thence to the Rio Grande, in Segment Number 20.6.4.128, from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
		Standard Units			
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	00400	6.0	9.0	Twice/Month (*T)	Grab

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		lbs/day, unless noted		ug/l, unless noted (*M)			
POLLUTANT	STORET CODE	30-DAY AVG	DAILY MAX	30-DAY AVG	DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	50050	Report MGD	Report MGD	***	***	Twice/Month (*T)	Estimate (*E)
RDX (*R)	81364	Report	Report	6.1 ug/l	Report	Twice/Month (*T)	Grab
TOC (*Y) Prior to Carbon Unit	00680	Report	Report	Report	Report	Twice/Month (*T)	Grab
TOC (*Y) After Carbon Unit	00680	Report	Report	Report	Report	Twice/Month (*T)	Grab
Cadmium	01027	Report	Report	0.28 ug/l	0.42 ug/l	Twice/Month (*T)	Grab
Copper	01042	Report	Report	6.42 ug/l	9.63 ug/l	Twice/Month (*T)	Grab
Silver	01077	Report	Report	0.13 ug/l	0.20 ug/l	Twice/Month (*T)	Grab
Hexachlorobenzene	39700	Report	Report	0.0032 ug/l	0.0048 ug/l	Twice/Month (*T)	Grab
PCB (*G)	39156	Report	Report	Report (*G)	Report (*G)	Once/Year (*T)	Grab
Adjusted Gross Alpha	80029	Report	Report	Report	Report	Once/Quarter (*T)	Grab
Aluminum, Total	01105	Report	Report	Report	Report	Twice/Month (*T)	Grab
Aluminum, Dissolved	01106	Report	Report	Report	Report	Twice/Month (*T)	Grab

Footnotes:

- *T When discharging.
- *M See **Appendix A of Part II** of the permit for minimum quantification limits.
- *E "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. Flow may be estimated using sound analytical techniques.
- *R Royal Demolition Explosive (hexahydro-1, 3, 5-trinitro-1, 3, 5-triazine)
- *Y Total Organic Carbon
- *G PCB Testing shall be one time during the first 12-months after the permit effective date. Test shall use Method 1668A, as revised: Chlorinated Biphenyl Congeners in Water, Soil, Sediment and Tissue by High Resolution Gas Chromatography/High Resolution Mass Spectrometry (HRGC/HRMS).

2. OUTFALL 002 - FINAL Effluent Limits – Intermittent Flow

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated groundwater from SWSC Spring to Canon de Valle thence to Water Canyon thence to the Rio Grande, in Segment Number 20.6.4.128, from Outfall 002. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
		Standard Units			
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	00400	6.0	9.0	Twice/Month (*T)	Grab

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		lbs/day, unless noted		ug/l, unless noted (*M)			
POLLUTANT	STORET CODE	30-DAY AVG	DAILY MAX	30-DAY AVG	DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	50050	Report MGD	Report MGD	***	***	Twice/Month (*T)	Estimate (*E)
RDX (*R)	81364	Report	Report	6.1 ug/l	Report	Twice/Month (*T)	Grab
TOC *(Y) Before Carbon Unit	00680	Report	Report	Report	Report	Twice/Month (*T)	Grab
TOC *(Y) After Carbon Unit	00680	Report	Report	Report	Report	Twice/Month (*T)	Grab
Copper	01042	Report	Report	6.42 ug/l	9.63 ug/l	Twice/Month (*T)	Grab
Silver	01077	Report	Report	0.13 ug/l	0.20 ug/l	Twice/Month (*T)	Grab
Thallium	01059	Report	Report	0.52 ug/l	0.77 ug/l	Twice/Month (*T)	Grab
Hexachlorobenzene	39700	Report	Report	0.0032 ug/l	0.0048 ug/l	Twice/Month (*T)	Grab
PCB (*G)	39156	Report	Report	Report (*G)	Report (*G)	Once/Year (*T)	Grab
Adjusted Gross Alpha	80029	Report	Report	Report	Report	Once/Quarter (*T)	Grab
Aluminum, Total	01105	Report	Report	Report	Report	Twice/Month (*T)	Grab
Aluminum, Dissolved	01106	Report	Report	Report	Report	Twice/Month (*T)	Grab

Footnotes:

- *T When discharging.
- *M See **Appendix A of Part II** of the permit for minimum quantification limits.
- *E "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. Flow may be estimated using sound analytical techniques.
- *R Royal Demolition Explosive (hexahydro-1, 3, 5-trinitro-1, 3, 5-triazine)
- *Y Total Organic Carbon
- *G PCB Testing shall be one time during the first 12-months after the permit effective date. Test shall use Method 1668A, as revised: Chlorinated Biphenyl Congeners in Water, Soil, Sediment and Tissue by High Resolution Gas Chromatography/High Resolution Mass Spectrometry (HRGC/HRMS).

3. OUTFALL 003 - FINAL Effluent Limits – Intermittent Flow

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated groundwater from Burning Ground Spring to Canon de Valle thence to Water Canyon thence to the Rio Grande, in Segment Number 20.6.4.126, from Outfall 003. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
		Standard Units			
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	00400	6.6	8.8	Twice/Month (*T)	Grab

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		lbs/day, unless noted		ug/l, unless noted (*M)			
POLLUTANT	STORET CODE	30-DAY AVG	DAILY MAX	30-DAY AVG	DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	50050	Report MGD	Report MGD	***	***	Twice/Month (*T)	Estimate (*E)
RDX (*R)	81364	Report	Report	6.1 ug/l	Report	Twice/Month (*T)	Grab
TOC (*Y) Prior to Carbon Unit	00680	Report	Report	Report	Report	Twice/Month (*T)	Grab
TOC (*Y) After Carbon Unit	00680	Report	Report	Report	Report	Twice/Month (*T)	Grab
Copper	01042	Report	Report	4.93 ug/l	7.39 ug/l	Twice/Month (*T)	Grab
Lead	01051	Report	Report	1.71 ug/l	2.56 ug/l	Twice/Month (*T)	Grab
Silver	01077	Report	Report	0.13 ug/l	0.20 ug/l	Twice/Month (*T)	Grab
Thallium	01059	Report	Report	0.52 ug/l	0.77 ug/l	Twice/Month (*T)	Grab
Bis (2-chloroethyl) Ether	34273	Report	Report	5.81 ug/l	8.72 ug/l	Twice/Month (*T)	Grab
3,3 Dichlorobenzidine	34631	Report	Report	0.31 ug/l	0.46 ug/l	Twice/Month (*T)	Grab
Hexachlorobenzene	39700	Report	Report	0.0032 ug/l	0.0048 ug/l	Twice/Month (*T)	Grab
PCB (*G)	39156	Report	Report	Report (*G)	Report (*G)	Once/Year (*T)	Grab
Adjusted Gross Alpha	80029	Report	Report	Report	Report	Once/Quarter (*T)	Grab
Aluminum, Total	01105	Report	Report	Report	Report	Twice/Month (*T)	Grab
Aluminum, Dissolved	01106	Report	Report	Report	Report	Twice/Month (*T)	Grab

Footnotes:

- *T When discharging.
- *M See **Appendix A of Part II** of the permit for minimum quantification limits.
- *E "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. Flow may be estimated using sound analytical techniques.
- *R Royal Demolition Explosive (hexahydro-1, 3, 5-trinitro-1, 3, 5-triazine)
- *Y Total Organic Carbon
- *G PCB Testing shall be one time during the first 12-months after the permit effective date. Test shall use Method 1668A, as revised: Chlorinated Biphenyl Congeners in Water, Soil, Sediment and Tissue by High Resolution Gas Chromatography/High Resolution Mass Spectrometry (HRGC/HRMS).

4. SAMPLE LOCATIONS

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge after the final treatment unit and prior to the receiving stream.

5. FLOATING SOLIDS, OIL AND GREASE

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

B. SCHEDULE OF COMPLIANCE

The permittee is required to submit to New Mexico Environment Department (NMED) within thirty (30) months from the permit effective date a comprehensive Site-Specific Numeric Criteria Study (Study) for consideration of natural pollutant levels as provided for in Standards for Interstate and Intrastate Surface Waters (Standards) Subsection's D and E of 20.6.4.10 of the New Mexico Administrative Code. The Study shall address aluminum and other criteria the applicant can scientifically defend using methods described in the Standards. The Study would need approval by the New Mexico Water Control Commission with input provided by the NMED and then approved by the EPA. Terms and conditions of site specific pollutants may be placed in this or future permits in accordance with standard permit reopener conditions contained in this permit.

C. MONITORING AND REPORTING (MINOR DISCHARGERS)

Monitoring results must be reported either using the electronic or paper Discharge Monitoring Report (DMR) approved formats to EPA. If using paper DMR forms, the report shall be also sent to NMED and shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period. See Part III, D.4 of the permit.

1. Reporting periods shall end on the last day of the months March, June, September, and December.
2. The permittee is required to submit regular quarterly reports as described above postmarked no later than the 28th day of the month following each reporting period.

PART II - OTHER CONDITIONS

A. MINIMUM QUANTIFICATION LEVEL (MQL)

See list of MQL's at Appendix A of Part II below. For pollutants listed on Appendix A of Part II below with MQL's, analyses must be performed to the listed MQL. If any individual analytical test result is less than the MQL listed, a value of zero (0) may be used for that pollutant result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

In addition, any additional pollutant sampling for purposes of this permit, including renewal applications or any other reporting, shall be tested to the MQL shown on the attached Appendix A of Part II.

PCB Reporting: This section replaces and supersedes the MQL for PCBs listed in Appendix A of Part II as referenced above. For the test requirement as shown in Section A of Part I of the permit above, the detection limits addressed in Method 1668A, as revised: Chlorinated Biphenyl Congeners in Water, Soil, Sediment and Tissue by High Resolution Gas Chromatography/High Resolution Mass Spectrometry (HRGC/HRMS) shall be used.

The permittee may develop an effluent specific method detection limit (MDL) in accordance with Appendix B to 40 CFR §136. For any pollutant for which the permittee determines an effluent specific MDL, the permittee shall send to the EPA Region 6 NPDES Permits Branch (6WQ-P) a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent specific MDL was correctly calculated. An effluent specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

$$\text{MQL} = 3.3 \times \text{MDL}$$

Upon written approval by the EPA Region 6 NPDES Permits Branch (6WQ-P), the effluent specific MQL may be utilized by the permittee for all future Discharge Monitoring Report (DMR) reporting requirements until/or unless changes are required for adoption of a lower MQL.

B. CO-PERMITTEES

The Los Alamos National Security (LANS) and the U.S. Department of Energy (DOE) are co-permittees for the Los Alamos National Laboratory (LANL) NPDES permit. EPA may take enforcement actions as appropriate against either LANS or DOE or both.

C. 24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, and NMED within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

Cadmium
Copper
Lead
Silver
Thallium
Hexachlorobenzene
Bis (2-chloroethyl) Ether
3,3 Dichlorobenzidine

D. PERMIT MODIFICATION AND REOPENER

In accordance with 40 CFR Part 122.44(d), the permit may be reopened and modified during the life of the permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised, or new water quality standards are established and/or remanded.

In accordance with 40 CFR Part 122.62(a)(2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit modifications shall reflect the results of any of these actions and shall follow regulations listed at 40 CFR Part 124.5.