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Original via FedEx-Copy via Electronic Mail

November 30, 2020

Mr. Charles Maguire, Director
Water Quality Protection Division (6WD)
U. S. Environmental Protection Agency
1201 Elm Street, Suite 500
Dallas, Texas 75202

**Re: State Certification Los Alamos National Laboratory Industrial Wastewater
NPDES Permit No. NM0028355**

Dear Director Maguire:

Enclosed, please find the state certification for the following proposed National Pollutant Discharge Elimination System (NPDES) permit NM0028355, Los Alamos National Laboratory Industrial Wastewater Permit. Comments and conditions are enclosed on separate sheets.

The U.S. Environmental Protection Agency (EPA) proposes to regulate discharges under the above referenced NPDES Individual permit. A state Water Quality Certification is required by the federal Clean Water Act (CWA) Section 401 to ensure that the action is consistent with state law (New Mexico Water Quality Act, New Mexico Statutes Annotated [NMSA] 1978, Sections 74-6-1 to -17) and complies with the State of New Mexico Water Quality Standards at 20.6.2 and 20.6.4 New Mexico Administrative Code (NMAC), Water Quality Management Plan and Continuing Planning Process, including Total Maximum Daily Loads (TMDLs), and Antidegradation Policy.

Pursuant to State regulations for permit certification at 20.6.2.2001 NMAC, EPA jointly with the New Mexico Environment Department (NMED) issued a public notice of the draft permit and announced a public comment period posted on the NMED web site at <https://www.env.nm.gov/surface-water-quality/public-notices/> on November 27, 2019. The NMED public comment period ended on November 2, 2020. NMED received comments from the Buckman Direct Diversion Board and the Permittees, which were considered in this certification.

Sincerely,

for

Shelly Lemon, Bureau Chief
Surface Water Quality Bureau

cc: (w/ enclosures)

Ms. Evelyn Rosborough, USEPA (6WDPN) via e-mail

Mr. Brent Larsen, USEPA (6WDPE) via e-mail

Mr. Isaac Chen, USEPA (6WDPE) via e-mail

Mr. Michael Hazen, ESHQSS, Triad National Security, LLC by email

Mr. Enrique Torres, EPC-DO, Triad National Security, LLC by email

Mr. Michael Saladen, EPC-CP, Triad National Security, LLC by email

Ms. Taunia Van Valkenburg, EPC-CP, Triad National Security, LLC by email

Ms. Jennifer Griffin, EPC-CP, Triad National Security, LLC by email

Mr. Michael Weis, USDOE NA-LA by email

Ms. Karen Armijo, USDOE NA-LA by email

Buckman Direct Diversion Board, via luke@egolflaw.com

Mr. Ken McQueen, Regional Administrator
Environmental Protection Agency
1201 Elm Street, Suite 500
Dallas, TX 75202

November 30, 2020

STATE CERTIFICATION

RE: **NM0028355, Los Alamos National Laboratory Industrial Wastewater**

Dear Regional Administrator McQueen:

The Cabinet Secretary of the New Mexico Environment Department (NMED) has delegated signatory authority for state certifications of federal Clean Water Act permits to the Surface Water Quality Bureau Chief. NMED examined the proposed NPDES permit referenced above. The following conditions are necessary to assure compliance with the applicable provisions of the Clean Water Act Sections 208(e), 301, 302, 303, 306, and 307 and with appropriate requirements of State law. Compliance with the terms and conditions of the permit and this certification will provide reasonable assurance that the permitted activities will be conducted in a manner which will not violate applicable water quality standards or the water quality management plan and will be in compliance with the antidegradation policy.

The State of New Mexico

- certifies that the discharge will comply with the applicable provisions of Sections 208(e), 301, 302, 303, 306 and 307 of the Clean Water Act and with appropriate requirements of State law
- certifies that the discharge will comply with the applicable provisions of Sections 208(e), 301, 302, 303, 306 and 307 of the Clean Water Act and with appropriate requirements of State law upon inclusion of the following conditions in the permit (see attachments)
- denies certification for the reasons stated in the attachment
- waives its right to certify

In order to meet the requirements of State law, including water quality standards and appropriate basin plan as may be amended by the water quality management plan, each of the conditions cited in the draft permit and the State certification shall not be made less stringent, unless changes are in response to formal comments received by EPA and discussed with NMED prior to the finalization of the draft permit.

NMED reserves the right to amend or revoke this certification if such action is necessary to ensure compliance with the State's water quality standards and water quality management plan.

Please contact Sarah Holcomb at (505) 819-9734 if you have any questions concerning this certification. Comments and conditions pertaining to this draft permit are attached.

Sincerely,

Shelly Lemon, Bureau Chief
Surface Water Quality Bureau

**State of New Mexico Comments and Conditions on the Proposed NPDES Permit
Los Alamos National Laboratory Industrial Wastewater
NM0028355
November 30, 2020**

The following conditions are necessary to ensure that discharges allowed under the National Pollutant Discharge Elimination System (NPDES) permit protect State of New Mexico surface water quality standards (WQS) adopted in accordance with Section 303 of the Clean Water Act (CWA) and the New Mexico Water Quality Act (NMSA 1978, §§ 74-6-1 to -17). State of New Mexico (State) WQS are codified in Title 20, Chapter 6, Part 4 of the New Mexico Administrative Code (20.6.4 NMAC), *Standards for Interstate and Intrastate Surface Waters*, as amended by the New Mexico Water Quality Control Commission (WQCC) on May 22, 2020 and most recently approved by the U.S. Environmental Protection Agency (EPA or USEPA) as of July 24, 2020. Additional state WQS are published in Title 20, Chapter 6, Part 2 of the New Mexico Administrative Code (20.6.2 NMAC), *Ground and Surface Water Protection*, as amended by the WQCC most recently on December 21, 2018.

NPDES regulations at 40 CFR § 122.44(d)(1)(i) require that permit "...limitations must control all pollutants or pollutant parameters... which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard..."

40 CFR § 124.53(e) states that, "State certification shall be in writing and shall include: (1) Conditions which are necessary to assure compliance with the applicable provisions of CWA Sections 208(e), 301, 302, 303, 306 and 307 and with appropriate requirements of State law..."

Conditions of Certification:

Condition # 1:

Facilities at outfalls 001, 13S, 027, 022, 055, and 051 (which incorporate facilities operating under NAICS codes listed in the *Final Rule [June 22, 2020]* for TRI Reporting [noted above]) shall monitor and report PFAS in effluent once during the first year of coverage, or when the facility next discharges if no discharge occurs during the first year. Samples shall be analyzed by an accredited lab for all 18 PFAS analytes using EPA Method 537.1 (EPA 2018), and the DoD Quality Systems Manual Method 5.3 (2019) as guidance. Method and analysis shall be sufficiently sensitive to evaluate the New Mexico screening level for PFOA and PFOS.

The PFAS screening level in New Mexico is indicated below. The screening level is not a standard of quality and purity for the surface waters of New Mexico but allows detection and further evaluation of the existence of PFAS in discharges to determine if more attention is warranted.

PFAS Screening Level for New Mexico*	
PFOA + PFOS	0.070 ug/L

* Concentrations of PFOA and PFOS are summed before being compared to the screening level.

If PFOA and/or PFOS are detected above the New Mexico screening level, additional monitoring and reporting shall occur annually and in accordance with the same parameters and methods as required for the first sampling event. In addition, the permittee should take corrective action and identify ways to minimize, reduce, and eliminate PFAS from the industrial activity through product substitution and/or

additional best management practices and operational controls. Results of past monitoring and any corrective actions taken should be documented by the permittee.

The permittee shall submit monitoring results for all 18 PFAS analytes under EPA Method 537.1, as required, to NMED at the following address:

Point Source Program Manager
Surface Water Quality Bureau
New Mexico Environment Department
P.O. Box 5469
Santa Fe, NM 87502-5469

Background for Condition #1

New Mexico regulations (Standards for Interstate and Intrastate Surface Waters) under 20.6.4.13(F) NMAC state: Except as provided in 20.6.4.16 NMAC, surface waters of the state shall be free of toxic pollutants from other than natural causes in amounts, concentrations or combinations that affect the propagation of fish or that are toxic to humans, livestock or other animals, fish or other aquatic organisms, wildlife using aquatic environments for habitations or aquatic organisms for food, or that will or can reasonably be expected to bioaccumulate in tissues of fish, shellfish and other aquatic organisms to levels that will impair the health of aquatic organisms or wildlife or result in unacceptable tastes, odors or health risks to human consumers of aquatic organisms.

New Mexico regulations (Ground and Surface Water Protection) under 20.6.2.7(T)(2)(s) NMAC lists the following perfluorinated chemicals (PFCs) as toxic pollutants: perfluorohexane sulfonic acid (PHHxS), perfluorooctane sulfonate (PFOS), and perfluorooctanoic acid (PFOA).

The EPA revised the Emergency Planning and Community Right-to-Know Act (EPCRA) Section 313 list of reportable chemicals covered by the Toxics Release Inventory (TRI) to include the 172 per- and polyfluoroalkyl substances (PFAS) added by the National Defense Authorization Act.¹

The following is a list of North American Industrial Classification System (NAICS) codes from EPA's Final Rule (June 22, 2020) that may be potentially affected by TRI reporting requirements:²

- *Facilities included in the following NAICS manufacturing codes (corresponding to Standard Industrial Classification (SIC) codes 20 through 39): 311*, 312*, 313*, 314*, 315*, 316, 321, 322, 323*, 324, 325*, 326*, 327, 331, 332, 333, 334*, 335*, 336, 337*, 339*, 111998*, 211130*, 212324*, 212325*, 212393*, 212399*, 488390*, 511110, 511120, 511130, 511140*, 511191, 511199, 512230*, 512250*, 519130*, 541713*, 541715* or 811490*. *Exceptions and/or limitations exist for these NAICS codes.*
- *Facilities included in the following NAICS codes (corresponding to SIC codes other than SIC codes 20 through 39): 212111, 212112, 212113 (corresponds to SIC code 12, Coal Mining (except 1241)); or 212221, 212222, 212230, 212299 (corresponds to SIC code 10, Metal Mining (except 1011, 1081, and 1094)); or 221111, 221112, 221113, 221118, 221121, 221122, 221330 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce) (corresponds to SIC codes 4911, 4931, and 4939, Electric Utilities); or 424690, 425110, 425120 (limited to facilities previously classified in SIC code 5169, Chemicals and Allied Products, Not Elsewhere Classified); or 424710 (corresponds to SIC code 5171, Petroleum Bulk Terminals and Plants); or 562112 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis (previously classified under SIC code 7389, Business Services, NEC)); or 562211, 562212, 562213, 562219, 562920 (limited to facilities regulated under the Resource Conservation and Recovery Act, subtitle C, 42 U.S.C. 6921 et seq.) (corresponds to SIC code 4953, Refuse Systems).*

- *Federal facilities.*

Information prepared by the EPA and the Agency for Toxic Substances and Disease Registry (ATSDR) demonstrates that PFAS are toxic and can pose hazards to human health and the environment.^{3,4} In EPA's PFAS Action Plan⁵ program update, dated February 2020, the Agency recommends using a screening level of 40 parts per trillion (0.040 ug/L) to determine if PFOA and/or PFOS is present at a site and may warrant further attention.

PFAS has been detected in nearly all environmental media. However, there is very limited data on industrial wastewater discharges of PFAS into the environment, in part due to the fact that relatively few facilities have NPDES permit limits or monitoring requirements for PFAS. The EPA identified only 13 industrial facilities that reported PFAS discharges on discharge monitoring reports (DMRs) in 2016 even though the EPA has identified several categories of industry that are likely to discharge PFAS, such as airports, military bases, fire-fighting equipment manufacturers, organic chemical manufacturers, paper and paperboard manufacturers, tanneries and leather treaters, textiles and carpet manufacturers, semiconductor manufacturers, household cleaning product manufacturers, petroleum refining, and landfills.⁶

Other states' PFAS guidance for various surface and groundwater screening levels are indicated in the tables below.^{7,8}

Surface Water PFAS Guidelines in Other States				
	Oregon (ug/L)*	Michigan (ug/L)** DWS/not DWS	Minnesota (ug/L) Rivers	Alaska, Montana (ug/L)***
PFHpA	300	-	-	-
PFOA	24	0.420/12	2.7	0.070
PFOS	300	0.011/0.012	0.007	0.070
PFOSA	0.2	-	-	-
PFNA	1	-	-	-

* The Oregon DEQ wastewater initiation levels were adopted into rule (OAR 340-045-0100, Table A) in 2011. The PFAS are 5 chemicals on a list of 118 persistent priority pollutants for water that Oregon DEQ developed in response to state legislation. *Municipal wastewater treatment plants with effluent exceeding initiation levels are required to develop a pollution prevention plan that becomes a part of their NPDES permit.*

** Michigan's advisory levels are designed to protect human health (non-cancer values) and are based on whether the surface water is a drinking water source (DWS) or not.

*** For these states, concentrations of PFOA and PFOS are summed before being compared to the screening level.

Groundwater PFAS Guidelines in Other States						
	Maine (ug/L)*	New Jersey (ug/L)	New Hampshire (ug/L)**	Colorado, Rhode Island, Delaware (ug/L)*	Illinois (ug/L)***	Minnesota (ug/L)****
PFHpA	-	-	-	-	-	-
PFOA	0.400	0.010	0.012	0.070	0.021	0.035
PFOS	0.400	0.010	0.015	0.070	0.014	0.027
PFOSA	-	-	-	-	-	-
PFNA	-	-	0.011	-	0.021	-

* For these states, concentrations of PFOA and PFOS are summed before being compared to the screening level.

** Proposed rulemaking in New Hampshire covers 4 PFAS, and includes PFHxS = 0.018 ug/L.

*** Proposed rulemaking in Illinois covers 5 PFAS, and includes PFHxS = 0.140 ug/L and PFBS = 140 ug/L.

**** Health-based values (not maximum contaminant levels, or MCLs).

States use a variety of methods to test PFAS analytes in different media. The most widely used are EPA Method 537 (2008, applies to 14 PFAS) and EPA Method 537.1 (2018, applies to 18 PFAS). Some labs perform modifications, like using isotope dilution, to these methods for use in other matrices besides drinking water to account for lower reporting limits or greater accuracy. For example, modifications to Method 537.1 can be applied for non-drinking water media.⁷

Monitoring these toxic contaminants helps provide information about whether they are present in discharges to better control and mitigate PFAS in the environment. As stated on EPA’s PFAS website,⁹ “PFAS can be found in living organisms, including fish, animals, and humans, where PFAS have the ability to build up and persist over time.” Due to the characteristics of these contaminants (i.e., persistence in the environment and the human body, and evidence that exposure to PFAS can lead to adverse human health effects), NMED advocates taking a proactive approach and establishing PFAS sampling and reporting requirements to assure protection of New Mexico’s surface waters, public health and the environment.

- 1 <https://www.epa.gov/toxics-release-inventory-tri-program/list-pfas-added-tri-ndaa>
- 2 <https://www.federalregister.gov/documents/2019/12/04/2019-26034/addition-of-certain-per--and-polyfluoroalkyl-substances-community-right-to-know-toxic-chemical>
- 3 <https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos>
- 4 https://www.atsdr.cdc.gov/pfas/pfas_fact_sheet.html
- 5 https://www.epa.gov/sites/production/files/2020-01/documents/pfas_action_plan_feb2020.pdf
- 6 EPA Office of Water, Preliminary Effluent Guidelines Program Plan 14, October 2019, EPA-821-R-19-005
- 7 <https://www.ecos.org/documents/ecos-white-paper-processes-and-considerations-for-setting-state-pfas-standards/>
- 8 <http://pfas-1.itrcweb.org>
- 9 <https://www.epa.gov/pfas/basic-information-pfas#health>

Condition # 2:

USEPA must continue the requirement in the draft permit to include a monitoring and compliance maximum discharge limit for Polychlorinated Biphenyls (PCBs) of 0.00064 micrograms per Liter (µg/L). The State requires that monitoring and reporting of PCBs be performed in accordance with USEPA published Method 1668C or later revisions. Pursuant to 20.6.4.14(A)(3) NMAC, Method 1668C is a State approved method for testing surface wastewater discharges. Additionally, Method 1668C has a Minimum Quantification Level (MQL) set at or below the applicable and limiting State WQS found in 20.6.4.900(J)(1) NMAC. Further supporting this requirement is that Method 1668C is the only known and least restrictive and readily available laboratory wastewater sampling method that can reasonably assure that the proposed discharges do not exceed the WQS limits of 20.6.4.900(J)(1) NMAC.

For Outfall 03A027 add footnote: EPA published congener Method 1668 Revision and detection limits shall be used for reporting purposes. The permittee is allowed to develop an effluent specific MDL in accordance with Appendix B of 40 CFR Part 136 (instructions in Part II.A of this permit).

Outfall 051 has recently discharged and according to representative effluent characteristics submitted in the application there may be a reasonable potential for the effluent to exceed state WQS and EPA should add an effluent limitation for PCBs at Outfall 051.

Background for Condition #2

Below, NMED provides an explanation for why specific PCB monitoring conditions are necessary for State certification. The following table summarizes the applicable PCB numeric criteria from 20.6.4.900(J)(1) NMAC for the receiving waters of this permit action:

Pollutant	Wildlife Habitat	Aquatic Life			Type of Pollutant
		Acute	Chronic*	Human Health-Organism Only	

PCBs	0.014 µg/L	2 µg/L	0.014 µg/L	0.00064 µg/L	Chronic, Persistent
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Note: * Chronic Aquatic Life Criterion does not apply to Segment 20.6.4.128 with a designated use of Limited Aquatic Life

As PCBs are identified as a persistent pollutant the HH-OO criteria applies to both the coldwater aquatic life use in Segment 20.6.4.126 and the limited aquatic life use in Segment 20.6.4.128, consistent with 20.6.4.11(G) NMAC. USEPA reasonable potential analysis in the Fact Sheet determined that the PCB effluent characteristics at Outfalls 001, 13S and 027 have a reasonable potential to exceed State WQS. The point source discharge permit condition is calculated to meet numeric criteria based on a modified harmonic low flow per State WQS 20.6.4.11 NMAC and as consistent with the New Mexico Implementation Plan (2012).

The following is a summary of a portion of the monitoring and effluent limitation conditions for PCBs in Part I.A of the Draft Permit for Outfalls 001, 13S and 051:

		Concentration		Loading		Sample Type
		Monthly Average	Daily Maximum	Monthly Average and Daily Maximum	Frequency	
				lbs/day		
001	Total PCB (µg/l)	0.00064	0.00064	Report	1/Year	24-hr Composite
13S	Total PCB (µg/l)	0.00064	0.00064	Report	1/Year	24-hr Composite
027	Total PCB (µg/l)	0.00064	0.00064	Report	1/Quarter	Grab

As noted above and below, the Aroclor method is not sufficiently sensitive to assure that the Permittees will comply with the applicable effluent limit for PCBs contained within the permit and thus cannot be used for monitoring or compliance purposes under state law. The following demonstrates the MDL and MQL limits of several PCB testing methods:

Method	MDL	MQL
EPA Method 608 (Aroclor)	0.065 µg/L	0.02145 µg/L
EPA Method 625	30 µg/L	99 µg/L
SM 6410 B	30 µg/L	99 µg/L
EPA Method 1668C	7-30 pg/L	23-99 pg/L (0.000023-0.000099 µg/L)

Notes: EPA Method 1668 Revision A became Revision C in the May 18, 2012 Federal Register notice of 40 CFR Part 136.

The Aroclor method's MQL is two orders of magnitude above the effluent limitation provided in this draft permit as necessary to comply the State WQS. As documented above, the congener method, EPA Method 1668C, is the only method with a sufficiently sensitive detection limit below State WQS for Total PCBs and therefore must be used when it has been determined that PCBs "are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above" State WQS. Again, this condition constitutes "monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with any applicable effluent limitations" consistent with the provisions of the CWA Section 401(d). 33 U.S.C. §1341 (d).

The State received comments from the Permittees. By their letter dated October 28, 2020, Los Alamos National Laboratory (LANL) provided arguments to support the use of the PCB congener method (EPA

Method 1668C) for reporting purposes but not for enforcement or compliance purposes. As detailed below, the State considered these arguments but found them insufficient to support LANL's proposition:

1. *"NMED may only include reference methods that are approved by EPA under 40 CFR Part 136 for determining compliance with effluent limitations. 40 CFR § 136.1 requires the use of EPA Methods 608 or 625 or Standard Methods 6410.B for determining compliance with effluent limits in NPDES permits."* LANL further cites the May 18, 2012 Federal Register publication of the USEPA decision to defer consideration of inclusion of EPA Method 1668C as a 40 CFR Part 136 method in support of this comment.

The State respectfully disagrees. As noted above, the State is requiring this condition in order to assure compliance with the applicable effluent and state water quality limitation which can only be achieved by use of EPA Method 1668C. This conditional action, as previously stated, is consistent with the provisions of the CWA for State Certification at 401(d) and in accordance with 20.6.2.2001 NMAC and 20.6.4.14(A)(3) NMAC.

Furthermore in reviewing USEPA's action in May 2012, to defer adoption of EPA Method 1668C, they included as part of their discussion that "EPA is still evaluating the large number of public comments and intends to make a determination on the approval of this method [1668C] at a later date...[and t]his decision does not negate the merits of this method for the determination of PCB congeners in regulatory programs or for other purposes when analyses are performed by an experienced laboratory." (FR, Vol. 77, No.97, page 29763)

2. *"LANL is the only known facility in New Mexico where use of the Congener Method 1668 is required to determine compliance with an NPDES permit limit."*

LANL is correct that it is the only facility where the use of USEPA Method 1668C is required for compliance purposes, however there is a very specific reason for this. LANL is the only facility whose discharge has been shown to have a reasonable potential to exceed State WQS for PCBs. The State also notes that LANL is not the only NPDES permittee in New Mexico subject to the specific use of USEPA Method 1668C. For example, six other NPDES permits are required to use this method for monitoring and reporting only. These discharge to waters where PCBs have been identified as a probable cause of a water quality impairment, but there was insufficient data to determine if the discharge had a reasonable potential to exceed State WQS or may contribute to a listed impairment. Therefore, based on these facts, use of Method 1668C is the least restrictive means known by the State to assure that the proposed activity will not exceed or contribute to the degradation of state water quality.

Condition #3:

EPA must revise the publicly noticed Reasonable Potential analysis to include all relevant monitoring data submitted as part of the reapplication package and supplemental information updates and comments from the Permittees per the process in the *New Mexico Implementation Guidance (2012)*. As it stands, the public noticed versions of Reasonable Potential analysis for each outfall covered under this permit are not correctly reflected in the draft permit, and according to the Permittees' comments, also are not reflective of monitoring data they submitted or contain other inaccuracies. NMED requires that once revised, EPA discuss the results of the revisions with the Department prior to finalizing the draft permit to ensure that the permit is technically sound and meets the requirements of State law, including the *Standards for Interstate and Intrastate Waters* at 20.6.4 NMAC. NMED reserves the right to revoke and reissue certification if necessary, to ensure compliance with water quality standards.

Based on NMED's review of the Reasonable Potential (RP) spreadsheets public noticed with the draft permit and data submitted to EPA by the Permittees, it appears that limitations for Thallium and PCBs are

necessary at several outfalls. Monitoring requirements shall exist in the final permit at outfalls where there is an impairment in the receiving waterbody, regardless of whether RP exists.

Outfall	Added Limits/Monitoring	Monitoring Frequency
001	Limit for thallium; monitoring for temperature – compliance schedule ok.	1/year
13S	Limit for thallium; monitoring for gross alpha	1/year
03A027	No additional limits or monitoring.	N/A
03A048	No RP for limits but monitoring for all impairments: gross alpha; cyanide; total mercury; PCBs; total selenium	1/year
03A113	EPA did not evaluate RP for PCBs at this outfall. A limit appears necessary.	1/year
03A160	EPA did not evaluate RP for PCBs at this outfall. A limit appears necessary.	1/year
03A181	It appears no RP spreadsheet was drafted for this outfall. Based on data, RP must be determined for copper and PCBs.	1/year
03A199	RP for thallium exists. EPA did not evaluate RP for PCBs.	1/year
03A022	EPA did not evaluate RP for PCBs. Monitoring requirements must stay in the permit for copper.	1/year
05A055	No additional limits or monitoring.	N/A
051	RP exists for Thallium. EPA did not evaluate RP for PCBs.	1/year

Background for Condition #3:

Below is a comparison of the effluent limitations in the administratively continued permit, water quality impairments as noted in the State of New Mexico CWA §303(d) Integrated List, notes on changes at the facility, pollutants detected in the effluent, and exceedances noted in 2015-2020 monitoring as compared to limits in the proposed permit. From this review, it appears that the following limits should either be added or modified in the final permit. Although RP exists for thallium at multiple outfalls EPA did not place limits into the draft permit.

Outfall Number	Description	Receiving Stream - WQ Segment	Impairments	Changes to Facility	Impaired pollutants detected (2C) (ug/L)	RP	2015-2020 monitoring	Metals Monitoring/Limit in 2020 Permit	Needed Limitations or Monitoring in Final Permit based on RP
001	Power Plant, SWWS, SERF, SCC, NMHFL	Sandia Canyon - 126	Aluminum, Total; Copper, Dissolved; Polychlorinated Biphenyls (PCBs); Temperature	added SCC, future add TA55	Cu 5.45, Al <19.3, PCB <0.0422, Temp, Thallium =0.442	Cu, Zn, PCB, TI	Exceed PCB	Total Aluminum-report, Total Copper, Zinc, PCB	Thallium; monitoring for temp – compliance schedule ok.
13S	SWWS	Canada del Buey - 128	Alpha Particles; Polychlorinated Biphenyls (PCBs)		α <1.16 PCB<0.0333, TI =0.6	PCB	No discharge	PCB	Thallium; monitoring for gross alpha (1/year)
03A027	SERF	Sandia Canyon - 126	Aluminum, Total; Copper, Dissolved; Polychlorinated Biphenyls (PCBs); Temperature		Cu 3.15, Al <19.3, PCB <0.0354, Temp	Cu, Zn	Exceed PCB and Cu limit	Total Aluminum, T Copper, PCB, Temperature, Zinc, Phosphorus	No additional limits or monitoring.
03A048	LANSCE	Los Alamos Canyon - 128	Alpha Particles; Cyanide; Mercury, Total; Polychlorinated Biphenyls (PCBs); Selenium, Total		α <1.85, CN<1.67, Hg <0.067, Se <2, PCB <0.0354		No exceed	Phosphorus	No RP for limits but monitoring for all impairments (1/year).
03A113	LEDA	Sandia Canyon - 128	Alpha Particles; Aluminum, Total; Mercury, Total; Polychlorinated Biphenyls (PCBs)		α =2.95, Al<19.3, Hg=0.011, PCB <0.354		Exceed WQS Cu 1x	Total Mercury, Alpha, Total Aluminum, Phosphorus	EPA did not evaluate RP for PCBs at this outfall. A limit appears necessary.
03A160	NMHFL	Ten Site Canyon - 128	Alpha Particles; Polychlorinated Biphenyls (PCBs)		α <0.96, PCB<0.0343	Cr6, Hg, Se, Cy	exceed Cy WQS, 2 exceed Cu WQS	Phosphorus, Mercury, Selenium, Cyanide, Chromium 6	EPA did not evaluate RP for PCBs at this outfall. A limit appears necessary.
03A181	TA-55	Mortandad Canyon - 128	Alpha Particles; Copper, Dissolved; Mercury, Total; Polychlorinated Biphenyls (PCBs)	future to SWWS?	α <0.772, Cu=3.24, Hg<0.067, PCB<0.0378		Cu 0.002	Phosphorus	It appears no RP spreadsheet was drafted for this outfall. Based on data, RP must be determined for copper and PCBs.
03A199	LDCC	Tributary to Sandia Canyon - 126	Aluminum, Total; Copper, Dissolved; Polychlorinated Biphenyls (PCBs); Temperature		Temp, TI 0.282, Al=<19.3, Cu=3.15, PCB<0.0354		ok	Total Aluminum, T Copper, Temperature, Zn, P	RP for Thallium exists. EPA did not evaluate RP for PCBs.

Outfall Number	Description	Receiving Stream - WQ Segment	Impairments	Changes to Facility	Impaired pollutants detected (2C) (ug/L)	RP	2015-2020 monitoring	Metals Monitoring/Limit in 2020 Permit	Needed Limitations or Monitoring in Final Permit based on RP
03A022	Sigma	Mortandad Canyon - 128	Alpha Particles; Copper, Dissolved; Mercury, Total; Polychlorinated Biphenyls (PCBs)	new heat exchanger	$\alpha < 1.14$, Cu=5.46, Hg<0.067, PCB<0.0351		above WQS for copper	Dissolved Copper-report	EPA did not evaluate RP for PCBs. Monitoring requirements must stay in the permit for copper (1/year).
05A055	HEWTF	Canon de Valle - 128	Alpha Particles		not present	Al, Cu, Pb, Se, Zn	No discharge	TNT, RDX, perchlorate, Aluminum, Copper, Lead, Selenium, Zinc	No additional limits or monitoring.
051	RLWTF	Mortandad Canyon - 128	Alpha Particles; Copper, Dissolved; Mercury, Total; Polychlorinated Biphenyls (PCBs)		$\alpha = 2.22$, Cu=11, PCB<0.0378, Hg <0.067	Cu		Dissolved Copper	RP exists for Thallium. EPA did not evaluate RP for PCBs.

Comments that are not Conditions of Certification:

Comment 1: There appears to be a typo in Footnote 5 for Outfall 001. NMED proposes revision to delete last sentence "6T3 Temperature of 20°C (68°F) shall not be exceeded for six or more consecutive hours in a 24-hour period on more than three consecutive days. ~~Daily maximum temperature shall be determined by 6T3 temperature record when 6T3 temperature .~~"

Comment 2:

Please ensure that all of the notices of change submitted by LANL since the 2019 NPDES Permit Re-Application was submitted on March 26, 2019 are incorporated.

- Revision 3 to Outfall 03A048 fact sheet to add a Chlorine monitoring system, submitted July 14, 2020 (EPC-DO: 20-222)
- Revision 3 to the Outfall 001 Flow Diagram which addresses improvements made to reduce the temperature of effluent discharged to the outfall as follows:
 - Piping modification to allow for effluent stored in the Reuse Tank to be routed (as needed) to the power plant cooling tower prior to discharge.
 - Piping modification to allow for blowdown associated with the Strategic Computing Complex (SCC) Cooling Towers to be routed to the Reuse Tank where (as needed) it can either be recycled to SERF or routed to the power plant cooling tower prior to discharge.

This change will not increase the volume or impact the effluent quality (i.e., no new chemicals) other than to reduce the temperature. This change was submitted as a notice of change on July 16, 2020 (EPC-DO: 20-221).

- Renovation of the power plant. This change was submitted as a notice of change on November 26, 2019 (EPC-DO: 19-430). This will increase the volumes at Outfall 001 as indicated below, and were incorporated into the antidegradation calculations.

Potential Future Source	Frequency		Flow Rates and Volumes				Duration (days)
	Days/Week	Months	Average (MGD)	Maximum (MGD)	Average Volume (GPD)	Maximum Volume (GPD)	
SCC Cooling Towers ^{a, b}	7.0	12	0.074	0.201	74,436	201,056	365
<u>Power Plant Co-Generation Renovation</u>	<u>7.0</u>	<u>12</u>	<u>0.170</u>	<u>0.220</u>	<u>169,920</u>	<u>220,320</u>	<u>365</u>
TA-55-006 Cooling Towers^c	7.0	12	0.009	0.032	9,365	31,986	365
Future Outfall 001 <u>Total</u>^c	7.0	12	<u>0.311</u>	<u>0.751</u>	<u>310,595</u>	<u>752,463</u>	365

a. See the permit section provided for Outfall 03A027 for a schematic showing this change.

b. Cooling tower blowdown calculated for the operation of 15 towers.

b-c. Total volume estimate for four source facilities: SWWS Effluent; SERF Effluent; SCC Cooling Towers; and Power Plant Co-Generation Renovation. All four facilities are hydraulically connected and eventually discharge water to Outfall 001 regardless of flow path.

- Startup of 5 additional Cooling Towers at the SCC. This modification was included as a future change in the 2019 NPDES Permit Application submitted March 26, 2019 (see EPC-DO: 19-106).