



Original Via Email

February 22, 2022

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

**Re: Modified State Certification Los Alamos National Laboratory Individual Stormwater Permit,
NPDES Permit No. NM0030759**

Dear Director Maguire:

Enclosed, please find the state certification for the following proposed National Pollutant Discharge Elimination System (NPDES) permit NM0030759, Los Alamos National Laboratory Individual Stormwater 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, §§ 74-6-1 to -17), and complies with State of New Mexico Water Quality Standards and the Statewide Water Quality Management Plan and Continuing Planning Process, including Total Maximum Daily Loads and the Antidegradation Policy.

Pursuant to State regulations for permit certification at 20.6.2.2001 New Mexico Administrative Code (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 a previous version of the NMED web site at <https://www.env.nm.gov/surface-water-quality/public-notices/> on November 30, 2019. The NMED public comment period ended on November 2, 2020. NMED received comments from Amigos Bravos, the Buckman Direct Diversion Board, and a private citizen, which were considered in this certification. NMED issued its original 401 Certification on November 30, 2020. Thirty days later, on December 30, 2020, the U.S. Department of Energy National Nuclear Security Administration and Newport News Nuclear BWXT – Los Alamos, LLC (collectively “DOE/N3B”) submitted a petition for review of the Conditions of the original State Certification to the Secretary of the Environment Department pursuant to 20.6.2.2001(H) NMAC. NMED issues this modified certification as a result of the petition for review and resulting Settlement Agreement between NMED and DOE/N3B.

Sincerely,

Shelly Lemon, Bureau Chief
Surface Water Quality Bureau

cc: (w/ enclosures)

Evelyn Rosborough, USEPA (6WDPN), via email Rosborough.Evelyn@epa.gov
Brent Larsen, USEPA (6WDPE), via email Larsen.Brent@epa.gov
Ruben Alayon-Gonzalez, USEPA (6WDPE), via email Alayon-Gonzalez.Ruben@epa.gov
Glenn Morgan, N3B via email glenn.morgan@em-la.doe.gov
Joseph Murdock, N3B via email Joseph.Murdock@em-la.doe.gov
Steve J. Veenis, N3B via email Steve.Veenis@em-la.doe.gov
Michael Mikolanis, USDOE EM-LA via email mikolanis.michael@em.goe.gov
Lee Bishop, USDOE EM-LA via email lee.bishop@em.doe.gov
Buckman Direct Diversion Board, via email luke@egolflaw.com
Rachel Conn, Amigos Bravos via email rconn@amigosbravos.org
Paul Devine, via email pid130@msstate.edu
Jayson Romero, Pueblo of Cochiti, via email Jayson.Romero@cochiti.org
Clarice Madalena, Pueblo of Jemez, via email Clarice.Madalena@jemezueblo.org
Marsha Chavez, Kewa Pueblo, via email marsha.chavez@kewa-nsn.us
Steve Rydeen, Pueblo of Nambe, via email srydeen@nambepueblo.org
Larry Phillips, Jr , Ohkay Owingeh, via email larry.phillips@ohkay.org
Adam Duran, Pueblo of Pojoaque, via email aduran@pojoaque.org
Dino Chavarria, Pueblo of Santa Clara, via e-mail dinoc@santaclarapueblo.org
Pinu'u Stout, Pueblo of San Felipe, via email pstout@sfpueblo.com
Raymond Martinez, Pueblo of San Ildefonso, via email rmartinez@sanipueblo.org
Sage Mountainflower, Pueblo of Tesuque via email sagem@pueblooftesuque.org
Kathryn Becker, Tribal Liaison, NMED, via email Kathryn.Becker@state.nm.us
John Rhoderick, Water Protection Division Director, NMED, via email John.Rhoderick@state.nm.us
John Verheul, Deputy General Counsel, NMED, via e-mail John.Verheul@state.nm.us
Rebecca Roose, Deputy Secretary, NMED, via e-mail Rebecca.Roose@state.nm.us

Dr. Earthea Nance, Regional Administrator
Environmental Protection Agency
1201 Elm Street, Suite 500
Dallas, TX 75202

February 22, 2022

STATE CERTIFICATION

RE: **Los Alamos National Laboratory Individual Stormwater Permit, NM0030759**

Dear Regional Administrator Nance:

The Cabinet Secretary of the New Mexico Environment Department (NMED) delegated signatory authority for state certifications of federal Clean Water Act permits to the Surface Water Quality Bureau Chief. NMED examined the proposed National Pollutant Discharge Elimination System (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 that will not violate applicable State water quality standards and the water quality management plan and will comply with the State's 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, the changes are discussed with NMED, and NMED concurs with the changes prior to the finalization of the proposed permit.

The Department 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 Susan A. Lucas Kamat at (505) 946-8924, if you have any questions concerning this certification.

Sincerely,

Shelly Lemon, Bureau Chief
Surface Water Quality Bureau

State of New Mexico Modified CWA Section 401 State Certification
Los Alamos National Laboratory Individual Stormwater Permit
NPDES Permit No. NM0030759
February 22, 2022

Federal and State Citations

National Pollutant Discharge Elimination System (NPDES) regulations at 40 Code of Federal Regulations (C.F.R.) 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, including State narrative criteria for water quality.”

40 C.F.R. 124.53(e)(1) states that State certification shall be in writing and shall include “conditions which are necessary to assure compliance with the applicable provisions of Clean Water Act (CWA) Sections 208(e), 301, 302, 303, 306 and 307 and with appropriate requirements of State law.”

40 C.F.R. 124.53(e)(2) states that for each condition more stringent than those in the draft permit, “... the certifying State agency shall cite the CWA or State law references upon which that condition is based. Failure to provide such a citation waives the right to certify with respect to that condition.”

40 C.F.R. 124.53(e)(3) states that for each condition less stringent than those in the draft permit, “a statement of the extent to which each condition of the draft permit can be made less stringent without violating the requirements of State law, including water quality standards. Failure to provide this statement for any condition waives the right to certify or object to any less stringent condition which may be established during the EPA permit issuance process.”

New Mexico adopted surface water quality standards (WQS) in accordance with Section 303 of the Clean Water Act (CWA) and the New Mexico Water Quality Act, New Mexico Statutes Annotated (NMSA) 1978, §§ 74-6-1 to -17. State WQS are published 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 most recently amended by the New Mexico Water Quality Control Commission (WQCC) on May 22, 2020 and approved by the U.S. Environmental Protection Agency (EPA) on July 24, 2020. The regulations at 20.6.4.8 NMAC outline the State’s antidegradation policy and implementation plan. Appendix A of the Water Quality Management Plan and Continuing Planning Process (WQMP-CPP) details the antidegradation policy implementation procedures related to and in concurrence with 20.6.4.8 NMAC. The WQCC approved the revised WQMP-CPP on September 21, 2020, and EPA approved the revised WQMP-CPP on October 23, 2020. The WQMP-CPP also includes Appendix B, New Mexico’s list of approved Total Maximum Daily Loads (TMDLs), which was last updated on December 28, 2020. Additional State regulations and standards 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 most recently amended by the WQCC on December 21, 2018.

The following conditions of certification are necessary to ensure that discharges allowed under the NPDES permit will comply with the applicable provisions of the Federal CWA Sections 208(e), 301, 302, 303, 306, and 307 and with appropriate requirements of State law, including the New Mexico Water Quality Act, the State’s water quality standards codified in 20.6.4 NMAC - *Standards for Interstate and Intrastate Surface Waters* and 20.6.2 NMAC - *Ground and Surface Water Protection*, the State’s antidegradation policy and implementation plan, and the statewide water quality management plan.

References to “the permit” are to the November 27, 2019 Los Alamos National Laboratory (LANL) - Storm Water Individual Permit - Draft NPDES Permit No. NM0030759.

These conditions include appendices to assist in organizing information related to the conditions included below. The appendices are as follows:

- Appendix 1: Soil Screening Flow Chart
- Appendix 2: Proposed Site deletions to the draft permit
- Appendix 3: Sites conditioned for addition to the draft permit
- Appendix 4: Target Action Levels (TALs) conditioned for addition to the draft permit
- Appendix 5: Sediment Decision Tree

Condition #1 – Annual Sampling Implementation Plan (SIP):

The Permittees shall consult with the New Mexico Environment Department (NMED) prior to sending the Sampling Implementation Plan (SIP) updates to EPA for review. If a CWA §303(d)/§305(b) Integrated List of Assessed Surface Waters listed impairment is identified as being a Site-related pollutant, then Permittees shall add it to the SIP. The initial SIP shall be publicly noticed for 30 days. EPA should add an approval process for proposed SIP changes after initial SIP implementation.

Background for Condition #1:

The Statewide WQMP-CPP states:

NMED will assure through appropriate review and communication with the permitting authority that permit requirements and effluent limitations are compatible with appropriate state law, protect water quality standards, and implement the WQMP-CPP.

In order to be appropriately protective of state Water Quality Standards, and due to the scope and complexity of sites and site information related to this permit, a static list of monitoring locations and parameters should not be used. The SIP must reflect a dynamic, adaptive process to update sampling suites based on new information with the **approval** of EPA and NMED. The Permittees have also requested a mechanism for feedback on determinations where Pollutants of Concern are no longer an issue at a site.

The current draft permit seems to allow for the Permittees to modify Target Action Levels (TALs) and Background Threshold Values (BTVs) values during the term of the permit (through the SIP process) without **approval** from EPA or NMED. TALs should be and are based (as a conservative measure) on water quality standards, and BTVs should be set to a static number and updated with each permit term as appropriate. The only number that could potentially change is the composite BTV that is derived for each site during the annual SIP process. That is based on the ratio of pervious to impervious area.

Condition #2 – Monitoring Requirements:

TALs shall be added to the permit based on additional or new information. For example, if the receiving waterbody is impaired for a specific constituent, and that constituent was a material historically managed at the Site, the constituent shall be monitored in stormwater. In addition, consistent with Part I.C.2 of the permit (Site Specific Demonstration), if a constituent is present in soils above screening levels, it shall be monitored in stormwater. Specific updates on various TALs are required, as detailed below.

1. Consistent with the updated hardness data submitted with the Permittees’ comments, the TAL table in Appendix C of the draft permit must be adjusted slightly to the following:

Major Canyon	Dissolved Hardness (mg/L)	Total Recoverable Aluminum (ug/L)	Dissolved Cadmium (ug/L)	Dissolved Chromium III (ug/L)	Dissolved Copper (ug/L)	Dissolved Lead (ug/L)	Dissolved Nickel (ug/L)	Dissolved Silver (ug/L)	Dissolved Zinc (ug/L)
Ancho	37.2	883	0.711	253	5.29	21.7	203	0.587	65.1
Chaquehui	26.9	566	0.539	194	3.90	15.1	154	0.336	48.5
Los Alamos/ Pueblo	33.5	765	0.650	233	4.80	19.3	186	0.490	59.2
Mortandad	29.5	643	0.583	210	4.25	16.7	167	0.394	52.7
Pajarito	30.2	664	0.595	214	4.35	17.2	170	0.410	53.9
Sandia	43.0	1077	0.804	285	6.07	25.5	229	0.753	74.3
Water/ Cañon de Valle	47.7	1241	0.879	311	6.69	28.6	250	0.900	81.6

2. In the proposed permit, in Part I.B (Applicable Target Action Levels), the following footnote shall be added to the TAL table for monitoring requirements to specify sample collection procedures for total recoverable aluminum:

The acute and chronic aquatic life criteria for aluminum are based on analysis of total recoverable aluminum in a sample that is filtered to minimize mineral phases as specified by the department. If stream turbidity is greater than 30 NTUs, the sample must be filtered using a 10-µm filter prior to acidification. If there are equipment problems prohibiting the measurement of turbidity in the field and the water has any cloudiness as determined by visual inspection, then the total recoverable aluminum sample should be filtered using a 10-µm filter.

Background for Condition #2:

In the permitting regulations at 40 C.F.R. 122.41(h) it states:

Duty to provide information. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

An objective of New Mexico’s water quality standards:

...is to establish water quality standards that consist of the designated use or uses of surface waters of the state, the water quality criteria necessary to protect the use or uses and an antidegradation policy. 20.6.4.6(A) NMAC.

New Mexico’s *Antidegradation Policy and Implementation Procedure for Regulated Activities* is Appendix A of the Statewide WQMP-CPP, which was approved most recently by EPA on 10-23-2020. The Antidegradation Policy applies Tier 1 protections to all waters. Tier 1 defines the minimum level of protection for all waters and prohibits further degradation of existing water quality where a pollutant of concern does not meet or meets but water quality is not better than applicable water quality criteria.

20.6.4.900(I) NMAC states:

...Hardness-dependent acute and chronic aquatic life criteria for metals... are expressed as a function of dissolved hardness (as mg CaCO₃/L).

20.6.4.900(J) NMAC states:

For aluminum, the criteria are based on analysis of total recoverable aluminum in a sample that is filtered to minimize mineral phases as specified by the department.

The permittees commented that the draft permit should include a process for utilization of soil data, which is included in Appendix 1 to this certification. The draft permit indicates that sampler locations should be updated based on the annual SIP process but is silent on adding TALs where appropriate based on that same soil information. This is an observation also noted by the Buckman Direct Diversion in their comments to NMED.

As clean up campaigns continue to progress and more characterization soil data is available, the data and information must be used to update sampling requirements and locational information for stormwater samplers using an adaptive management approach rather than waiting another five years or more for the permit to be renewed.

Condition #3 – Site-Related Impairments:

Under Part I.B.1.c (Collection of Partial Samples) of the permit, NMED requires that the priority list for each Site include pollutants identified on the CWA §303(d)/§305(b) Integrated List of Assessed Surface Waters that are determined to be Site-related. The table below details the 2020-2022 Integrated List findings for each waterbody located within LANL.

The Permittees are required to monitor for applicable pollutants at Sites discharging to impaired and water quality-limited waters (see table below) if the pollutants are determined to be Site-related, as demonstrated under Part I.C.2 of the permit (Site Specific Demonstration). The Permittees shall document the impaired pollutants listed below on the priority list for each Site in the SIP and shall prioritize these pollutants for analysis in the event a partial sample is collected. Additionally, if there are insufficient data to determine if a pollutant causing an impairment is Site-related or if there are pollutants of concern (POCs) added during the SIP process that were not collected during the previous permit term, the Permittees shall prioritize analysis of the pollutants causing impairments and the added POCs in the event a partial sample is collected.

<u>Canyon Name</u>	<u>Waterbody Segment</u>	<u>2020-2022 Impairments (CWA §303d)</u>
Acid	20.6.4.98	Pueblo to headwaters: adjusted gross alpha, polychlorinated biphenyls (PCBs), dissolved copper, total recoverable aluminum
Ancho	20.6.4.128	<ul style="list-style-type: none"> • North Fork to headwaters: PCBs • Rio Grande to North Fork Ancho: PCBs, total mercury
Arroyo de la Delfe	20.6.4.128	Pajarito to headwaters: dissolved copper, PCBs, total recoverable aluminum, adjusted gross alpha
Bayo	20.6.4.98	San Ildefonso boundary to headwaters: Not assessed.
Canada del Buey	20.6.4.128	within LANL: PCBs, adjusted gross alpha
Canon de Valle	20.6.4.126 (perennial), 20.6.4.128	<ul style="list-style-type: none"> • LANL gage E256 to Burning Ground Spring: PCBs • below LANL gage E256: adjusted gross alpha • upper LANL boundary to headwaters: PCBs, adjusted gross alpha
Chaquehui	20.6.4.128	Within LANL: PCBs
DP	20.6.4.128	<ul style="list-style-type: none"> • Los Alamos Canyon to grade control: PCBs, total recoverable aluminum, adjusted gross alpha • Grade control to upper LANL boundary: dissolved copper, PCBs, total recoverable aluminum, adjusted gross alpha
Fence	20.6.4.128	Not assessed.
Graduation	20.6.4.98	Pueblo Canyon to headwaters: PCBs, dissolved copper
Los Alamos	20.6.4.128	<ul style="list-style-type: none"> • DP to Upper LANL boundary: PCBs, total recoverable cyanide, total recoverable selenium, adjusted gross alpha, total mercury

<u>Canyon Name</u>	<u>Waterbody Segment</u>	<u>2020-2022 Impairments (CWA §303d)</u>
		<ul style="list-style-type: none"> NM-4 to DP Canyon: adjusted gross alpha, PCBs, total recoverable aluminum, total recoverable cyanide, radium 226+228, total mercury
Mortandad	20.6.4.128	within LANL: adjusted gross alpha, PCBs, dissolved copper, total mercury
North Fork Ancho	20.6.4.128	Ancho Canyon to headwaters: adjusted gross alpha, PCBs
Pajarito	20.6.4.126 (Arroyo de la Delfe to Starmers), 20.6.4.128	<ul style="list-style-type: none"> Arroyo de la Delfe to Starmers Spring: fully supporting Within LANL above Starmers Gulch: total recoverable aluminum, adjusted gross alpha Lower LANL boundary to Two Mile: PCBs, total recoverable aluminum, adjusted gross alpha, total recoverable cyanide, dissolved copper Two Mile to Arroyo de la Delfe: PCBs, dissolved silver, dissolved copper, adjusted gross alpha
Potrillo	20.6.4.128	above Water Canyon: adjusted gross alpha
Pratt	20.6.4.128	Not assessed.
Pueblo	20.6.4.98	<ul style="list-style-type: none"> Acid Canyon to headwaters: PCBs, total recoverable aluminum, adjusted gross alpha, dissolved copper Los Alamos Canyon to Los Alamos WWTP: adjusted gross alpha, PCBs, total recoverable aluminum, total recoverable selenium Los Alamos WWTP to Acid Canyon: PCBs, adjusted gross alpha
Rendija	20.6.4.98	Guaje Canyon to headwaters: Not assessed
Sandia	20.6.4.126 (Sigma to Outfall 001), 20.6.4.128	<ul style="list-style-type: none"> Sigma Canyon to NPDES Outfall 001: total recoverable aluminum, PCBs, dissolved copper, temperature within LANL below Sigma: PCBs, total recoverable aluminum, adjusted gross alpha, total mercury, dissolved copper
South Fork Acid	20.6.4.98	Acid Canyon to headwaters: adjusted gross alpha, PCBs, dissolved copper
Ten-Site	20.6.4.128	Mortandad to headwaters: adjusted gross alpha, PCBs.
Three Mile	20.6.4.128	Pajarito to headwaters: adjusted gross alpha
Two Mile	20.6.4.128	Pajarito to headwaters: adjusted gross alpha, PCBs, total recoverable aluminum, dissolved copper
Walnut	20.6.4.98	Pueblo Canyon to headwaters: PCBs, dissolved copper
Water	20.6.4.126 (Area-A Canyon to SR 501), 20.6.4.128	<ul style="list-style-type: none"> Area-A Canyon to NM 501: fully supporting Within LANL below Area-A Canyon: total recoverable aluminum, PCBs, adjusted gross alpha, total mercury Within LANL above NM 501: not assessed

Background for Condition #3:

NPDES regulations at 40 C.F.R. 124.53(e) require that state certification shall include conditions which are necessary to assure compliance with the applicable provisions of CWA and appropriate requirements of state law.

An objective of New Mexico’s water quality standards:

...is to establish water quality standards that consist of the designated use or uses of surface waters of the state, the water quality criteria necessary to protect the use or uses and an antidegradation policy. 20.6.4.6(A) NMAC.

New Mexico’s *Antidegradation Policy and Implementation Procedure for Regulated Activities* is Appendix A of the Statewide WQMP-CPP. The Antidegradation Policy applies Tier 1 protections to all waters. Tier 1 protections include policies and procedures that prohibit degradation that results in the loss of an existing use, or violation of water quality criteria, and prohibit degradation of existing water quality where pollutants of concern do not meet applicable water quality standards (i.e., 303(d) listed pollutants). Tier 1 defines the minimum level of protection for all waters and prohibits further degradation of existing water quality where a pollutant of concern does not meet or meets but water quality is not better than applicable water quality criteria.

The Antidegradation Policy also states that regulated entities may be required to collect data pertaining to impairments (i.e., pollutants of concern). Pollutants of concern are those pollutants reasonably expected to be present in a discharge and may adversely affect the water quality of a receiving water body.

Section V (Effluent Limitations) of the Statewide WQMP-CPP states that Water Quality Based Effluent Limitations (WQBELs) may be developed on a case-by-case basis to protect water quality and may be expressed as chemical-specific, narrative, or whole effluent toxicity requirements. Monitoring the receiving waterbody for a pollutant that may contribute to an existing impairment leads to better stormwater management and cleanup decisions, which will protect water quality.

Condition #4 – Additional Target Action Levels (TALs):

Due to observed levels of constituents in soil data and their potential use during historical industrial activities and associated exposure to precipitation, NMED recommends EPA evaluate additional monitoring requirements in the final permit if the constituents are determined to be Site-related pollutants of concern according to the forthcoming Site Specific Demonstration, as demonstrated under Part I.C.2 of the permit and noted in the Soil Screening Flow Chart (Appendix 1).

NMED requires additional TALs for Site-related constituents be added to the permit (see Appendix 4). EPA may set additional TALs or add constituents for evaluation through the SIP process described in Condition #1.

Background for Condition #4:

The Statewide WQMP-CPP states:

NMED will assure through appropriate review and communication with the permitting authority that permit requirements and effluent limitations are compatible with appropriate state law, protect water quality standards, and implement the WQMP-CPP.

NPDES regulations at 40 C.F.R. 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, including State narrative criteria for water quality.”

According to 40 C.F.R. 122.44(d)(1)(vi), if there are known constituents being discharged from a facility that have the reasonable potential to cause or contribute to a narrative water quality standard violation

where a State has not developed accompanying numeric water quality criteria, EPA must develop effluent limits for those pollutants.

NPDES regulations at 40 C.F.R. 122.44(d)(1)(vii) require the permitting authority to ensure that the level of water quality to be achieved by water quality-based effluent limits is derived from and complies with all applicable water quality standards.

NPDES regulations at 40 C.F.R. 124.53(e) require that the state certification include conditions that are necessary to assure compliance with the applicable provisions of CWA and appropriate requirements of state law.

TALs should be and are based, as a conservative measure, on New Mexico water quality standards.

Condition #5 – Site Deletions:

Sites shall not be deleted from the permit unless the Permittees demonstrate that they can be deleted in accordance with the permit requirements: (a) no industrial activities took place at the Site, (b) Site-related pollutants of concern have never been or will not be exposed to stormwater, (c) installation of permanent control measures results in no exposure, (d) removal of soil containing Site-related pollutants of concern, (e) data evaluated through the Site Specific Demonstration process shows that stormwater and surface soil do not exceed levels of concern, or (f) where the Site meets the no discharge requirements specified in the permit.

Please refer to Appendix 2 for a comprehensive summary of Sites and deletion decisions as compared to deletion requests by both EPA and the Permittees.

Background for Condition #5:

NPDES regulations at 40 C.F.R. 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, including State narrative criteria for water quality.”

NMED deleted “no discharge” sites from the draft permit if the three “no discharge” criteria were met: (1) active samplers are in representative locations, (2) no confirmation sample has been collected after a 25-year, 24-hour return period storm, and (3) inspection records validate full operability of sampler, consistent with site deletion in the draft permit per Part I.C.4.(f). “No discharge” sites do not have the potential to cause or contribute to an excursion above any State water quality standard.

Condition #6 – Additions of Sites to the Permit:

Sites noted in Appendix 3 must be added to the permit based on NMED observations of industrial materials exposed to stormwater through the Sampling Implementation Plan investigations in 2016-2018.

Background for Condition #6:

EPA administered National Pollutant Discharge Elimination System (NPDES) permit programs under 40 C.F.R. 122.26(a)(ii), 122.26(b)(12) and (14) require the following:

40 C.F.R. 122.26(a)(ii) requires that discharges associated with industrial activity must obtain a NPDES permit.

40 C.F.R. 122.26(b)(12) identifies significant materials as the following: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

40 C.F.R. 122.26(b)(14) describes “storm water discharge associated with industrial activity” to mean the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant... For the categories of industries identified in this section, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

When the 2016 Consent Order was initially developed, there was a list of 2093 total Solid Waste Management Units (SWMUs) that were added to the Consent Order. The number of SWMUs that were subsequently included on this permit (405 SWMUs) were a subset of that initial list chosen based on the Permittees’ assessment of whether the site would actually discharge stormwater. During the SIP process, NMED reviewed stormwater monitoring data and site histories, and observed that the predictions used to first select sites for inclusion on the permit was not accurate in predicting which sites would produce runoff. NMED noted additional SWMUs or AOCs that may need to be added to the permit to adequately protect surface waters from legacy activities that have yet to be mitigated, reclaimed, or remediated. These sites are noted in Appendix 3, along with a description of the legacy activity and the constituents that would be of concern in stormwater runoff from the site.

Condition #7 – No Exposure Qualifications:

40 C.F.R. 122.26(g) requires that Permittees claiming “no exposure” of industrial materials to stormwater must complete and sign a certification that there are no discharges of contaminated stormwater. The signed certification must be re-submitted to EPA every five years. The regulation also requires notification to any subsequent Municipal Separate Storm Sewer System (MS4) operator, so there must be a requirement in this permit to copy the certification to the MS4 partners in the upcoming MS4 permit. Sites which are certified in this manner qualify for long-term stewardship.

Background for Condition #7:

40 C.F.R. 122.26(g) Conditional exclusion for “no exposure” of industrial activities and materials to storm water. Discharges composed entirely of storm water are not storm water discharges associated with industrial activity if there is “no exposure” of industrial materials and activities to rain, snow, snowmelt and/or runoff, and the discharger satisfies the conditions in paragraphs (g)(1) through (g)(4) of this section. “No exposure” means that all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product.

Comments that are not Conditions of this Certification

- Footnote *7 of the TAL table in Appendix C of the draft permit indicates that for PCBs, the wildlife habitat value for PCBs will apply to ephemeral waterbodies as defined in the 303(d)/305(b) Integrated Report, and the human health-organism only aquatic life criterion will apply to intermittent and perennial waters. **All inquiries as to whether a waterbody is perennial, intermittent or ephemeral should be answered by the State standards, not the 303(d)/305(b) list.** NMED, DOE and their contractor Triad National Security, LLC, and Amigos Bravos have been working to properly identify waterbodies by hydrological type on the Pajarito Plateau, and this information is being incorporated into New Mexico’s 2020 Triennial Review of water quality standards. Once approved by New Mexico’s Water Quality Control Commission and EPA Region 6, these changes will be effective and memorialized in the *Standards for Interstate and Intrastate Waters, 20.6.4 NMAC*. Additionally, once the amended standards are approved by EPA, the SIP should incorporate the changes and update TALs and monitoring requirements as appropriate. The table below is included to illustrate that considerable differences in hydrology have been observed as a result of the Hydrology Protocol surveys conducted over the past couple of years.

Waterbody	# of Surveys	Perennial (0.00064 ug/L)	Intermittent (0.00064 ug/L)	Ephemeral (0.014 ug/L)
Ancho Canyon	3	X		X
Ancho Canyon Above N. Fork Ancho Canyon	3			X
Arroyo de la Delfe	2	X		X
Canon de Valle	2		X	X
DP Canyon	3	X	X	
Effluent Canyon	1		X	
Fence Canyon	3		X	X
Fish Ladder Canyon	1		X	
Los Alamos Canyon	6	X	X	X
Martin Spring	2		X	X
Mortandad Canyon	3			X
Pajarito Canyon	5	X	X	X
Portrillo Canyon	4			X
Ten Site Canyon	2			X
Two Mile Canyon	4	X	X	
Unnamed Tributary to Water Canyon	1		X	
Water Canyon	6	X	X	X

2. NMED believes that with the flexibility afforded to the Permittee in the proposed Site-Specific Demonstration (SSD) that there is no need for the alternative compliance request provision in the proposed permit. NMED suggests that it be removed to provide clarity on the Permittees' path to compliance, especially considering EPA's resources and ability to respond to alternative compliance requests (EPA did not approve a single alternative compliance request during the previous permit term). The language included in the draft permit providing automatic approval of alternative compliance requests is not appropriate and should be removed.
3. The Permittees submitted Alternative Compliance Requests for 81 sites to EPA under the administratively continued permit that were not approved or dealt with otherwise. These sites should all be addressed via the SSD process before any determinations are made to delete the sites from the permit.
4. NMED Surface Water Quality Bureau and NMED Hazardous Waste Bureau worked with the Permittees to develop a sediment removal decision tree that accounted for both hazardous waste and surface water regulatory requirements for removal of sediments accumulated in stormwater retention facilities. NMED includes this decision tree as supplemental information to this certification to assist in decision making regarding maintenance of BMPs required under this permit. The decision tree is attached as Appendix 6.
5. New Mexico Water Law codified at 19.16.2.15(B) NMAC requires that for water retained for longer than 96 hours, there must be a water right associated with that water. If the water infiltrates or is otherwise discharged, no water right is required. NMED is unclear that the permit requirements as written adequately convey that additional requirement with respect to BMPs such as retention berms and sediment ponds.
6. NMED received comments indicating that a mass balance approach should be taken regarding calculation of pollutant contributions from a site by requiring that flow measurements are taken in addition to water quality data. This would require the Permittees to install additional water quality equipment at every single SMA and would be burdensome. Additionally, no other stormwater permit issued in New Mexico requires mass loading calculations. The approach laid out by EPA to calculate the pollutant contribution by calculating the pollutant concentration upstream and subtracting it from the pollutant concentration downstream, and setting that value less than the TAL is appropriate, considering that the TALs are already conservatively set at the water quality standard.

$$(2) \frac{[V(\text{runoff}) * \text{total catchment area}] - [V(\text{run-on \& precipitation}) * \text{Non-site area}]}{(\text{site area})} \leq \text{TAL}$$

7. Permittees requested in their comments to amend the above formula for the SSD process to the following:

"Composite BTV = [(% impervious SMA area * 90th percentile developed landscape BTV) + (% pervious SMA area * 95-95 UTL 90th percentile undeveloped landscape BTV)]/ 100%"

And they provide the following rationale:

"The Permittees have worked diligently with EPA, NMED, and CCW regarding the development of storm water BTVs, particularly with respect to investigating data stability, data quality, and selecting sampling locations for background that are upwind of the Laboratory yet have similar elevation gradients, soil types, geologic formations, and vegetative cover (Windward, SEP DQO/DQA Document, 2017). During a series of webinars and meetings between September 2018 and January 2019, the Permittees and stakeholders discussed various statistical approaches to use for BTVs, with the Permittees proposing the 95-95 upper tolerance limit (UTL) as the most appropriate statistic for the intended use and population parameters of the background dataset. Indeed, soil/sediment and

groundwater BTVs for environmental cleanup and risk assessments are commonly computed based on the 95-95 UTL which "is designed to contain, but not exceed, a large fraction (95%) of the possible background concentrations within a sampled population, thus providing a reasonable upper limit on what is likely to be observed in background with a 95% degree of confidence" (page 14 of 2019 draft IP). The 95% degree of confidence is considered a good compromise between false positives and false negatives and the UTL provides a predictive setup for future sampling results, unlike upper percentiles which "potentially may lead to a higher number of false positives resulting in unnecessary cleanup (i.e., determining a clean on-site location comparable to background as dirty)" (U.S. EPA Region 9, 2011). CCW is a proponent of a more conservative upper percentile that would lead to approximately 25% false positives (i.e., unnecessary cleanup at 25% of Sites); however, there is no statistical, environmental, or budgetary foundation for this statistic. The Permittees suggest a compromise: the 95-95 UTL BTV for undeveloped landscapes which tend to be associated with naturally occurring constituents, and the 90th percentile BTV for developed landscapes which tend to be associated with anthropogenic-related constituents. U.S. EPA Region 9 (2011), "Statistical Methods used to Establish Background Datasets using Sampled Data Collected from DTLs, and Surface and Subsurface Soils of Three RBRAs of the Two Formations and Compute Estimates of Background Threshold Values Based Upon Established Background Datasets (with and Without Observations) For the Santa Susana Field Laboratory Investigation."

As part of the above-mentioned webinars, NMED was very clear that the state's preference is to use the 90th percentile BTVs. Using the 95-95 UTL is akin to using RCRA soil screening levels, which are not adequately protective of surface water quality standards. NMED urges EPA Region 6 to use the 90th percentile BTVs across the board, and advocates that those BTVs are updated in Appendix C to the permit. NMED has not seen Woodward Environmental's (DOE/N3B's contractor) final BTV report in 2020 and is unable to comment on how much those BTVs may have changed since the information included in the 2019 reapplication materials. All references to 95-95 UTL should **not** be continued forward into the final permit.

8. NMED strongly recommends that additional water quality information for Dissolved Organic Carbon (DOC) and Suspended Sediment Concentration (SSC) are added to the monitoring suite.
9. Appendix C of the permit is incorrectly titled as "Background Threshold Values". NMED believes this should be titled Target Action Levels or TALs.
10. NMED supports changes for inspection triggers from a 0.25-inch storm event to a 0.5-inch storm event. This allows the Permittees to shift resources to actively remediate and focus on sites that are issues instead of spending time and effort to inspect sites that do not experience major runoff damage as a result of a smaller storm.
11. In Part 1.C.1, EPA should delete the following language: Corrective actions will occur if any validated analytical result for a particular POC from a confirmation sample at an individual SMA is greater than the Maximum Target Action Level (MTAL) or if the geomean of all applicable sampling results is greater than the Average Target Action Level (ATAL) or Background Threshold Value (BTV). Target Action Levels and Background Threshold Values are listed in Appendix C and Appendix B to this permit, respectively."

This is an incorrect description of the process proposed to be utilized. The Permittees proposed language that NMED also agrees with: "Target Action Levels (TALs) are based on and equivalent to New Mexico State water quality criteria for the subject pollutants. The applicable TALs are not themselves effluent limitations but are benchmarks to determine the effectiveness of control measures implemented to meet the non-numeric technology-based effluent limitations. **TALs and Background Threshold Values are listed in Appendix B and Appendix C to this permit, respectively.**"

12. Part 1.C.3(c) of the permit states that a site may be requested to be placed in the long term stewardship category if “storm water sample results are greater than HH-OO based TALs, but below Wildlife Habitat TALs for discharges to non-perennial streams.” The Permittees have requested the ability to delete sites that fall into this category. NMED believes these sites should be kept on the permit in the long term stewardship category because we are concerned that the discharge of stormwater containing pollutants that may meet criteria for Wildlife Habitat immediately at the location of the site, may accumulate in sediments and be carried further downstream in subsequent storm events and deposited into the Rio Grande (especially in the case of Los Alamos Canyon) where there is a drinking water use and the aquatic life uses that trigger the lower HH-OO criteria.
13. The Permittees request in Part 1.C.3 to add language allowing them to place RCRA deferred sites into long term stewardship. Generally, their suggestion is acceptable to NMED, but should be clarified that BMPs should still be installed and maintained at these sites to prevent any pollutants of concern from migrating from the site. Some RCRA deferred sites are still active (i.e. firing sites that may have residual contamination from historic activities) and could alternatively be covered under Sector AD of the MSGP, so NMED asks EPA Region 6 to consider that approach for these sites as well.
14. The Permittees request that EPA delete the first sentence of the last paragraph of Part 1.C.4 because they state that there will no longer be stormwater discharges associated with industrial activity. NMED respectfully disagrees and asserts that if the installed permanent control measures are the reason that site-associated pollutants are no longer being discharged in stormwater, then maintenance requirements should exist. EPA should not delete this requirement for certification of maintenance of those permanent control measures from this permit.
15. In Part 1.C.6(a), the draft permit states that if soil disturbance occurs within the Site-affected media, storm water samples collected following these activities shall be monitored for the entire suite of pollutants listed in Appendix B for that site. However, soil disturbance is not defined in this permit. NMED offers the following for clarification. Referencing other CWA stormwater permits, the Construction General Permit defines earth moving as clearing, grading and excavating activities. If any of these activities occur but are not part of BMP installation or are outside of the catchment area of a BMP within site-related media, the Permittees shall reinitiate sampling using the entire suite of pollutants listed in Appendix B for that site.
16. The permit currently states in Part 1.D.1(a) that the Permittees may collect run-on and run-off data for comparison at a site to determine what the site’s contribution is to pollutant loading in runoff. However, the permit does not specifically require the Permittees to do so in a paired sampling setup. Due to the major variabilities between storm events and the differing abilities for a storm to transport sediment and associated pollutants, NMED strongly recommends that EPA modify the language to require that run-on/run-off monitoring is matched from the same storm event. It would not be appropriate to compare monitoring data from a 3-year event to a 100-year event.
17. Part 1.D.1(b)(ii) has a note, which states that if surface runoff from a site will penetrate deeper than three feet, the Permittees may not use this approach; this section talks about removal and replacement of three feet of surface soil with clean fill. The Permittees have requested to delete this note from the permit, but in light of the Permittees’ request to use green infrastructure methods to mitigate runoff, there could be situations where green infrastructure allows the penetration of stormwater to deeper than a depth of three feet. NMED urges caution to EPA in the evaluation of Permittees’ request in this instance.
18. Part 1.E.2.b contains a statement about how the Permittees are to evaluate pollutants of concern that do not have a numeric TAL associated with it, and the Permittees have requested to remove this sentence from the permit. NMED, in Condition #6 above, has done some research to assist EPA with matching up numeric values to new proposed TALs required to be added to the final permit to

protect narrative water quality standards related to toxic pollutants. There should not be a TAL added to the permit without a numeric value associated with it to avoid any confusion about compliance. A TAL can be derived based on Best Professional Judgment or other research, and does not have to be associated with a water quality standard, and cannot be if there is no existing numeric criterion in the *Standards for Interstate and Intrastate Waters* at 20.6.4 NMAC.

19. On page 20 of the draft permit, Part I.H.3: EPA discussed the voluntary watershed protection approach and encourages the Permittees to install watershed controls where appropriate. EPA also solicited comment on whether sediment removal in the watershed-based approach should be considered.

If pollutants have migrated offsite and have deposited in a waterbody that is still subject to state water quality standards, the Permittees should be responsible for removal of those pollutants, but in a manner in which the ecology of the waterbody is protected.

NMED generally supports a watershed-based approach, but the Permit language should include specific criteria for acceptability to demonstrate that a significant reduction in pollutants will occur. Additionally, NMED would like to ensure that appropriate site-specific BMPs are not overlooked in the attempt to comply on a watershed scale.

There are several aspects of this approach that require consideration if this idea is to be included as a compliance path in the reissuance of this Permit. While retention and immobilization of existing pollutants in drainages is desirable and would have positive impacts on downstream water quality, it should not be used as a means to circumvent addressing sites under the Permit in an individual fashion. For example, installation of large capacity detention or retention structures in the lower reaches of the canyons may help to attenuate storm flows and reduce sediment transport, but does not prevent pollutants at individual sites in the upstream watershed to continue to be mobilized off of those sites. Applicable New Mexico water quality standards still apply in these upstream drainages, and discharges that contribute to exceedances of those standards must be mitigated. An example is the recently enlarged and enhanced sediment traps in Mortandad Canyon. These sediment traps will no doubt retain sediment and reduce downstream transport but addressing potential pollutant contributions from individual, upstream Sites should not be overlooked.

In addition to this, consideration of the control and disposition of potentially contaminated sediments which could accumulate in structures designed for watershed-based controls would need to be addressed and a process for characterizing and handling such sediments defined. A current example of this situation is the weir structure and detention ponds located in Los Alamos Canyon immediately upstream of NM State Route 4. This structure has been dredged and accumulated sediments have been removed several times, with the contaminant load and final disposition of this sediment remaining uncertain and in contention.

The proposed permit allows the option of submitting an alternative compliance request for sites where corrective action cannot be completed. NMED cautions EPA about the use of the watershed-based approach in such requests because the proposed permit also states that a watershed-based measure could be considered for compliance under the permit. This approach is not appropriate in all situations. There are some canyons upstream on the Plateau that are perennial and have more stringent water quality standards allocated to them. If a watershed approach were to be used and did not account for those higher quality waters upstream, then those waterbodies could potentially be degraded. NMED SWQB is concerned about the potential use of this approach without more clarification and guidance. NMED suggests the following language:

“While a watershed approach may be appropriate, Permittees must institute control measures with the understanding that upstream waters, higher in the canyons, may have more stringent water quality standards which must still be protected.”

20. NMED agrees with deletion of the following sites:

- a. 00-011(c) [R-SMA-2.05]: This was an alleged former mortar impact site, but evidence of the use of the site for its alleged purpose was never found (evidence of UXO, ordnance, MD, MEC or impact scars).
- b. C-00-020 [R-SMA-0.5]: This was an alleged former mortar impact site, but evidence of the use of the site for its alleged purpose was never found (evidence of UXO, ordnance, MD, MEC or impact scars).
- c. 16-030(c) [CDV-SMA-1.4]: This site was former roof drains from a rest house building at TA-16 that has now been removed. It was never used for the management of hazardous constituents and was never comingled with another process. One stormwater sample has been collected at this SMA and showed a TAL exceedance for silver. This TAL exceedance is clearly associated with another SWMU in this SMA.
- d. 35-016(m) [PRATT-SMA-1.05]: This was a formerly NPDES permitted outfall that never discharged. It was meant to discharge noncontact cooling water from a sodium reactor in support of a cooling system. The sodium reactors were never installed and the cooling tower never operated and there was no discharge.
- e. C-46-001 [CDB-SMA-1]: This was a one-time mercury spill outside of building 46-75. According to the Permittees, the spill was cleaned up immediately and soil samples taken at the site do not show elevated levels of mercury (above background levels). A stormwater sample taken at the SMA sampler did not show TAL exceedances for mercury.
- f. 35-004(h) [PRATT-SMA-1.05]: This was a former hazardous waste satellite accumulation area. Soil was removed in this area to 15 feet and backfilled with clean soil.