NPDES PERMIT NO. NM0020141
RESPONSE TO COMMENTS

RECEIVED ON THE SUBJECT DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT IN ACCORDANCE WITH REGULATIONS LISTED AT 40 CFR §124.17

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PERMIT ACTION: Final permit decision and response to comments received on the draft reissued NPDES permit publicly noticed on January 29, 2022 and reopened on May 27, 2022.

DATE PREPARED: August 1, 2022

Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations, revised as of July 1st, 2021.

DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

4Q3	Lowest four-day average flow rate expected to occur once every three-years
BAT	Best available technology economically achievable
BCT	Best conventional pollutant control technology
BPT	Best practicable control technology currently available
BMP	Best management plan
BOD	Biochemical oxygen demand (five-day unless noted otherwise)
BPJ	Best professional judgment
CBOD	Carbonaceous biochemical oxygen demand (five-day unless noted otherwise)
CD	Critical dilution
CFR	Code of Federal Regulations
cfs	Cubic feet per second
cfu	Colony forming unit
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FCB	Fecal coliform bacteria
F&WS	United States Fish and Wildlife Service
mg/l	Milligrams per liter
ug/l	Micrograms per liter
MGD	Million gallons per day
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMIP	New Mexico NPDES Permit Implementation Procedures
NMWQS	New Mexico State Standards for Interstate and Intrastate Surface Waters
NPDES	National Pollutant Discharge Elimination System
MQL	Minimum quantification level
O&G	Oil and grease
POTW	Publicly owned treatment works
RP	Reasonable potential
SSM	Sufficiently Sensitive Method
s.u.	Standard units (for parameter pH)
SWQB	Surface Water Quality Bureau
TDS	Total dissolved solids
TMDL	Total maximum daily load
TRC	Total residual chlorine
TSS	Total suspended solids
UAA	Use attainability analysis
USFWS	United States Fish & Wildlife Service
USGS	United States Geological Service
WLA	Wasteload allocation
WET	Whole effluent toxicity
WQCC	New Mexico Water Quality Control Commission
WQMP	Water Quality Management Plan

CHANGES FROM DRAFT PERMIT

There are changes from the draft NPDES permit publicly noticed on January 29, 2022 and reopened on May 27, 2022:

- Contact information of San Ildefonso Pueblo has been added to Part III.D.7.
- Monitoring frequency for aluminum and selenium has been changed to once every six months.
- Proposed limits for dioxin have been removed.
- Proposed monitoring for many pollutants has been removed regarding SSM requirement.
- Limits for methylmercury have been established based on data provided by permittee during comment period.
- Footnote *7 in the final permit has been reworded for clarification.

CONDITION RECEIVED ON THE DRAFT PERMIT

None.

COMMENTS RECEIVED ON THE DRAFT PERMIT

Letter from Shelly Lemon, New Mexico Environment Department (NMED) to Charles Maguire, EPA dated April 28, 2022

Letter from Philo S. Shelton III, P.E., Los Alamos County (Permittee) to Tung Nguyen and Evelyn Rosborough, EPA dated March 30, 2022

Letter from Philo S. Shelton III, P.E., Los Alamos County (Permittee) to Evelyn Rosborough, EPA dated July 8, 2022

RESPONSE TO COMMENTS

Comment 1 (NMED): Under Part III.D.7 Reporting Requirements, 24-hour reporting, NMED suggests that Los Alamos County be required to report any permit exceedance and/or spills, which may endanger health or the environment, to San Ildefonso Pueblo as a downstream entity.

Response 1: EPA agrees and adds the Pueblo to Part III.D.7 of the final permit.

Comment 2 (NMED): NMED recommends a monitoring frequency for aluminum and selenium at once every six months, which is consistent with the other required monitoring related to Sufficiently Sensitive Methods (SSM). NMED agrees with the continued monitoring frequency of once per permit term for adjusted gross alpha and PCBs for this permit.

Response 2: EPA has changed the monitoring frequency for aluminum and selenium to once every six months according to NMED recommendation.

Comment 3 (NMED): NMED requests that EPA consider one of the following reduced monitoring frequency scenarios for dioxin in the final permit: 3/month (interim) and weekly (final); or once/2 weeks (interim) and weekly (final); or 2/month (interim) and 3/month (final); or monthly (interim) and once/2 weeks (final).

NMED agrees with the compliance schedule conditions in Part I.B. that require Los Alamos County to evaluate potential causes, select control options, and construct control mechanisms to achieve final effluent limitations for dioxin, copper, and manganese. The County should investigate potential causes/sources to determine those actions necessary to reduce or eliminate these pollutants in the influent and effluent and comply with the final water quality based effluent limits. For this evaluation, NMED recommends the County evaluate contributing industries and possibly eliminate contributing industries or establish pretreatment requirements to help mitigate or eliminate these pollutants in their discharge.

Response 3: Dioxin limit has been removed from the final permit as discussed in Response 11 below.

NMED recommendation to the County is noted; no change is made in the final permit.

Comment 4 (Permittee): Los Alamos County, Department of Public County (DPU) would request EPA explain what law, code, or case authorizes EPA the authority to include NPDES discharge limits based on in-stream water quality standards without conducting the required TMDL process.

Response 4: Since the permittee did not specify what pollutant(s) it claims EPA proposed changing discharge limits from BAT and technology-based effluent limitations (TBELs) to one requiring in-stream water quality-based effluent limitation (WQBELs), EPA responds this comment in general.

Development of TMDLs is beyond scope of this NPDES permitting action. However, when a TMDL is available, EPA implements the effluent limits consistent with the assigned waste load allocation (WLA) and assumptions used to derive the WLAs (see 40 CFR 122.44(d)(1)(vii)). In the absence of a TMDL, which is currently the case for this facility, EPA still must assess the need for effluent limits based on the State water quality standards and where the discharge has the reasonable potential to cause, or contributes to an in-stream excursion above the allowable ambient concentration of a State numeric criteria within a State water quality standard for an individual pollutant, the permit must contain effluent limits for that pollutant (see 40 CFR 122/44(d)(1)(iii)). If TBELs are not sufficient to meet the water quality standards in the receiving water, the CWA (sections 301(b)(1)(c), and) 302(a) and 402(a)) and NPDES regulations (40 CFR 122.44(d)) require that more stringent WQBELs are be established to attain State WQS. For example:

Pollutant	TBEL	WQBEL	Established limit
pH	6.0 – 9.0 s.u. (40 CFR 133.102)	6.6 – 9.0 s.u. [20.6.4.900.H(6) NMAC]	6.6 – 9.0 s.u.

Comment 5 (Permittee): The permittee requested that EPA respond to how it developed the proposed NPDES permit in-stream water quality-based limitations, and under what authority it used to circumvent the TMDL waste load allocation public process and reveal what the spreadsheet calculations and quality checks that are in the EPA spreadsheet.

Response 5: Continuing to from the Response 4 above, it is important to note that the obligation to include WQBELs based on reasonable potential (see 40 CFR 122.44(d)(1)(iii)) is independent of the obligation to ensure limits are consistent with any "…available wasteload allocation for the discharge…" (emphasis added) in an approved TMDL (see 40 CFR 122.44(d)(1)(vii)(B)). TMDLs are only required to be developed when a waterbody is already impaired and not meeting WQS. NPDES permits are primarily designed to prevent the authorized discharges from causing or contributing to an

impairment in the first place – which would negate the need for a TMDL. For unimpaired waterbodies or prior to development and approval of a TMDL for an impaired waterbody, NPDES permits must still comply with the requirement to establish limits for pollutants with the reasonable potential to cause or contribute to the instream exceedance of water quality standards. However, where a TMDL is available, WQBELs must also be consistent with any assigned wasteload allocations for the discharge and could result in limitations more restrictive that those resulting from the RP analysis or even limits where RP was not found for a particular discharge.

Since NPDES permits are not TMDL development or approval actions, there was no circumvention of the TMDL waste load allocation public process. TMDLs, which are not a permitting action, address necessary pollutant load reductions from both point source and non-point source contributions to restore a particular impaired waterbody and have separate requirements for public review, comment, and EPA approval. All NPDES permits are required to be publicly noticed for at least 30 days and offer the opportunity for public review, comment and to request a public hearing prior to issuance (CWA 402(a) and 40 CFR 124.10). Available for public review and comment during the public comment period are the fact sheet (or statement of basis) explaining the basis for the permit and a draft permit with proposed limits and conditions. If any comments are submitted during the comment period, prior to issuance of a final permit a response to comments document is prepared which identifies provisions, if any, of the draft permit have been changed in the final permit decision, the reasons for the change, and briefly describes and responds to all significant comments on the draft permit. The response to comments document is available with the final permit decision (40 CFR 124.17).

EPA uses a reasonable potential (RP) approach/procedure, showing detailed calculations in Appendix A along with explanations in the fact sheet and NMIP (Sections H, I, J), to determine RP excursions and applicable limits for pollutants per 40 CFR 122.44(d)(1)(i) thru (iii). EPA revised the NMIP (available upon request) in 2012 in consultation with NMED, which is authorized for CWA Section 401 certification. This plan has been implemented since 2012 to write NPDES permits for applicable facilities located in NM. This same approach was also used in the previous permit renewal. As stated in the fact sheet, which was made available for review and comment along with the draft permit, EPA used the effluent data submitted in Form 2A and applicable criteria from NMWQS to do the RP analysis and limitations. The results of the RP analysis were also included with the fact sheet.

Comment 6 (Permittee): DPU request that, pursuant to 40 CFR §122.44, EPA provide their calculations which it considered in setting the proposed permit's in-stream water quality compliance discharge limitations, and that data EPA believes will show that the limits will achieve compliance with the State's listed impairments or prevent degradation.

Response 6: See Response 5 above. Regarding comment about 40 CFR 122.44(d)(1)(vi), "DPU request that EPA provide the data that demonstrates the in-stream permit discharge limits correlate to the NMED's listed impairments." The cited regulation, stating " Where a State has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion …" is not applicable because the newly established limits for copper, manganese and dioxin are based on the established NMWQS criteria for designated uses of the receiving water. Information on the current State's listed water impairments [303(d) List], mentioned in under "TMDL REQUIREMENTS" section of the fact sheet, is not relevant to the established limits. Basis for the established limits is to protect the NMWQS and is addressed in the previous responses.

NMED has designated the immediate receiving stream as intermittent water per 20.6.4.98 NMAC; "intermittent" is defined under 20.6.4.7(I) NMAC. As stated in the fact sheet, the critical low flow, 4Q3 of zero (0), is used in the calculations. The 4Q3 is defined under 20.6.4.11.B NMAC; NMED provides this flow data. The zero flow means no dilution, which the discharge effluent is the instream water under the critical condition. The effluent water quality must meet the applicable criteria at the point of discharge (or end of pipe).

Comment 7 (Permittee): DPU would appreciate a clear and definite answer from EPA as to how any proposed or future in-stream limits be modified based on external State NMED actions regarding § 303d/305b Integrated Report.

Response 7: As mentioned in Response 6 above, causes of impairments in the current 303(d) list do not include copper, manganese and dioxin. If any of these pollutants will be added to the list during this permit term, EPA could reopen the permit, but more likely would address in the next permit reissuance. As indicated in Responses 5 & 6 above, EPA must perform a reasonable potential analysis each time a draft permit is prepared and also take into consideration any approved TMDLs. The WQS, TMDLs, and CWA 303(d) lists that are actually approved as of that date all factor into development of the permit limits and conditions and final permit decision.

Comment 8 (Permittee): DPU request that EPA provide the basis for requiring non-compliance monitoring and sampling for pollutants that have not been demonstrated to show an exceedance or remove these from the permit.

Response 8: Permit requirements for monitoring of parameters that do not have associated limitations is authorized under 40 CFR 122.41(h) "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." For example, flow is not limited, but factors into calculations for loadings and evaluation of proper operation and maintenance and comparison to the stated design flow of the facility. Monitoring for parameters for which a TMDL is needed or for emerging pollutants of concern provides information for future permitting actions. Such monitoring results may also be used to satisfy effluent data requirements for permit reapplications. EPA will re-evaluate the monitored data for thallium in the next permit renewal. Monitored data for 4 parameters listed in the 303(d) are required for NMED to determine source(s) of impairments, which generally include point-source discharger(s) and/or non-point source discharger(s). The data would also help NMED for TMDLs purpose (e.g., wasteload allocations, if any, for this facility). The rest (14 parameters) listed in the table starting on page 7 of Fact Sheet were required monitoring because the submitted test results in Form 2A did not meet the SSM requirement per 40 CFR 122.21(e)(3). As stated on page 9 of the fact sheet, EPA would reconsider the monitoring requirement if additional data meeting the SSM requirement is submitted during the public comment period. When the comment period ended on March 30, 22, EPA did not receive the addition data regarding these 14 parameters. During the reopened comment period, May 27, 2022 to July 11, 2022, EPA received additional data regarding these parameters addressed in Response 11.

Monitoring data of the parameters maybe submitted in the next renewal application. A minimum of 3 samples (except for PCBs required once due to high testing fee) is required in Form 2A. In general, NMED and/or EPA generally collects ambient samples from a water stream but not from a point source discharger.

Comment 9 (Permittee): The permittee requests EPA takes no further action until DPU and EPA are able to discuss the process to determine the limitations for copper, manganese and dioxin. DPU also requests the monitoring frequency for these parameters modified to quarterly for the entire permit term.

Response 9: After extending the public comment period to March 30, 2022, EPA virtually met with NMED and the permittee on April 22, 2022. During the meeting, EPA explained how limitations were determined using RP analysis along with other matters brought up by the permittee. Dioxin is addressed below in Response 11. For DMR purpose, the permittee may report required monitoring/limitation data that are available for a 30-day period as required in Part I.C of the permit. EPA makes no changes in the newly established limitations and monitoring frequencies for copper and manganese as they are consistent with the RP analyses and monitoring mentioned in the NMIP.

Comment 10 (Permittee): DPU would request that it be allowed to submit additional public comment on the NMED State 401 Certification prior to finalizing the proposed permit. If EPA is unable to extend the current comment period to allow the parties to meet and discuss DPU's concern, DPU would request a Public Hearing as the issues above constitute a significant degree of public interest.

Response 10: Commenting on the State 401-Certification is beyond scope of the NPDES permitting action. The State's CWA 401 Certification process is a separate state-run process. In addition, review and appeals of limitations and conditions attributable to State certification must be made through the applicable procedures of the State and may not be made through the NPDES permit procedures (see 40 CFR 124.55(e)). The permit draft was initially published for 30 days starting January 29, 2022 as a typical permit. Upon the permittee's request, EPA extended the comment period for another 30 days to March 30, 2022. EPA provided 60 days in total to fully comment on the permit draft; whereas the permittee mentioned 30 days. After meeting with NMED and the permittee on April 22, 2022, EPA reopened the public comment for 45 days on limited subjects. Comments received during the reopened comment period are addressed below.

Comment 11 (Permittee): Additional test results for specified pollutants were submitted (In July 8 letter) during the reopened public notice starting May 27, 2022. The permittee requests that the sampling frequency for all parameters be modified in the proposed permit to once per year sampling and reporting.

Response 11: EPA had allowed the permittee to resubmit data for dioxin in this reopened period because the tested method for dioxin submitted in the application was not listed/approved under 40 CFR 136.3. After reviewing the additional data and information emailed on June 17, 2022, EPA has determined that the permittee has demonstrated test results for all the parameters specified in the reopened comment period (May 27 to July 11, 2022), except methylmercury, met the SSM requirement per 40 CFR 122.21(e)(3). EPA removes all the specified parameters (including dioxin), except methylmercury, in the final permit.

Methylmercury was analyzed on 5/25/2022 using EPA Method 1630, which is approved under 40 CFR 136.3 and met the SSM requirement; the actual result is scanned against the NMWQS as follows:

Result	NMWQS (20.6.4.900.H)	4Q3 = 0	RP excursion	Limit (Daily max.)	Loading limit

1.67×10^{-4} ug/L	0.3 mg/kg in fish tissue (1.11×10^{-4} ug/L*)	Meaning no dilution and applicable criterion must be met at end of pipe	Yes, due to test result greater than criterion and no dilution available	1.11×10^{-4} ug/L	1.29×10^{-6} lbs./day**

* Using bioaccumulation factor 2.7×10^{6} L/kg (per NMIP): 0.3 mg/kg ÷ 2.7×10^{6} L/kg * 1.0×10^{3} ug/mg = 1.11×10^{-4} ug/L
** Loading limit = concentration limit x design flow (1.4 MGD)

The limit can also be calculated using the same approach in Appendix A of the fact sheet shown below.

To determine if a pollutant has a reasonable potential to exceed a water quality criterion the following calculation is performed with a steady-state mass balance model in the NMIP:

Instream concentration = $((FQ_a \times C_a) + (Q_e \times C_e \times 2.13)) \div (FQ_a + Q_e)$ = ug/L
Where:
C_e is the geometric mean effluent concentration, 1.67×10^{-4} ug/l (dissolved)
C_a is the ambient concentration upstream of discharger, 0 ug/l (dissolved)
Q_e is the effluent flow rate, 1.4 MGD
Q_a is the 4Q3 flow rate, 0 MGD (chronic) and 0.0001 MGD (human health)
F is the fraction of stream allowed for mixing, 1.0

The following formular is used to calculate the allowable daily maximum effluent concentration:

Daily Max. Conc. = $C_s + (C_s - C_a)(FQ_a/Q_e)$
Where: C_s is Applicable water quality standard, 1.11×10^{-4} ug/L

Due to the RP excursion and after consultation with NMED, EPA establishes the limits (i.e., concentration and loading) for methylmercury in the final permit. In a similar manner for manganese, EPA provides a compliance schedule (3 years) for the established limits with an interim limit of 1.67×10^{-4} ug/L daily max based on the submitted data. The measurement frequency for methylmercury is determined with consideration of the testing cost such as: quarterly for interim limit and monthly for final limit.

EPA Comment: No comment other than the permittee's one was received regarding the reopened public notice. On July 28, 2008, NMED declined to re-certify the 401-Certification at its discretion. Consistent with the April 28, 2022, CWA 401 Certification of the draft permit, in a letter from Shelly Lemon, New Mexico Environment Department (NMED) to Charles Maguire, EPA dated August 11, 2022, NMED concurred with changes to the final permit based on comments and data provided during the public comment period.