



**DEPARTMENT OF ENERGY**  
Environmental Management Los Alamos Field Office (EM-LA)  
Los Alamos, New Mexico 87544

EMLA-2020-1585-02-001

September 16, 2020

Mr. Kevin Pierard  
Bureau Chief  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505-6313

**Subject:** Response to the New Mexico Environment Department's Draft Comments on the 2020 Annual Periodic Monitoring Report for the Chromium Investigation Monitoring Group, Mortandad Canyon and Sandia Canyon Watersheds, Dated July 30, 2020

Dear Mr. Pierard:

The U.S. Department of Energy (DOE) Environmental Management Los Alamos Field Office (EM-LA) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B) are providing responses to the New Mexico Environment Department's draft comments on the "2020 Annual Periodic Monitoring Report for the Chromium Investigation Monitoring Group, Mortandad Canyon and Sandia Canyon Watersheds," dated July 30, 2020.

These comment responses are submitted in accordance with Section XXIII(E) of the June 2016 Compliance Order on Consent, as modified on February 27, 2017.

If you have any questions, please contact Steve Veenis at (505) 309-1362 (steve.veenis@em-la.doe.gov) or Hai Shen at (505) 257-7943 (hai.shen@em.doe.gov).

Sincerely,

**Arturo Duran**

Digitally signed by Arturo  
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Date: 2020.09.15 10:01:07  
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Arturo Q. Duran  
Compliance and Permitting Manager  
Environmental Management  
Los Alamos Field Office

CC (letter and enclosure[s] emailed):

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Raymond Martinez, San Ildefonso Pueblo, NM  
Dino Chavarria, Santa Clara Pueblo, NM  
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**Pamela T. Maestas**

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**From:** Martinez, Cynthia, NMENV <cynthia.martinez1@state.nm.us>  
**Sent:** Wednesday, September 16, 2020 10:20 AM  
**To:** Pamela T. Maestas  
**Subject:** RE: Submittal to NMED on 9/16/2020 of Chromium PMR Comment Response

Good Morning,  
Received...  
Thank you

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**From:** Pamela T. Maestas <pamela.maestas@em-la.doe.gov>  
**Sent:** Wednesday, September 16, 2020 10:16 AM  
**To:** Pierard, Kevin, NMENV <Kevin.Pierard@state.nm.us>  
**Cc:** Dhawan, Neelam, NMENV <neelam.dhawan@state.nm.us>; Emily M. Day <Emily.Day@em-la.doe.gov>; Regulatory Documentation <RegDocs@EM-LA.DOE.GOV>; Martinez, Cynthia, NMENV <cynthia.martinez1@state.nm.us>; cheryl.rodriguez@em.doe.gov; Cheryl W. Fountain <Cheryl.Fountain@EM-LA.DOE.GOV>  
**Subject:** [EXT] Submittal to NMED on 9/16/2020 of Chromium PMR Comment Response

Mr. Pierard,  
Attached for submittal is a pdf of the following:

- Response to the New Mexico Environment Department's Draft Comments on the 2020 Annual Periodic Monitoring Report for the Chromium Investigation Monitoring Group, Mortandad Canyon and Sandia Canyon Watersheds, Dated July 30, 2020 (EMLA-2020-1585-02-001, letter and enclosure)

Please acknowledge receipt of this submittal by responding to this email.  
Let me know if you have any questions.  
Thank you.

**Pamela T. Maestas**  
**Regulatory Documentation Manager**  
Newport News Nuclear BWXT-Los Alamos, LLC  
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Los Alamos, NM 87544

**Response to the New Mexico Environment Department's Draft Comments on the  
2020 Annual Periodic Monitoring Report for the Chromium Investigation Monitoring Group,  
Mortandad Canyon and Sandia Canyon Watersheds, May 2020, HWB-LANL-20-032,  
Dated July 30, 2020**

**INTRODUCTION**

To facilitate review of this response, the New Mexico Environment Department's (NMED's) comments are included verbatim. The U.S. Department of Energy (DOE) Environmental Management Los Alamos Field Office responses follow each NMED comment. All information associated with analyses of radionuclides is voluntarily provided to NMED in accordance with DOE policy.

**SPECIFIC COMMENTS**

**NMED Comment**

**1. Section 5.2.2.1 Perched-Intermediate Monitoring Wells, MCOI-5, Page 10:**

- a. **DOE Statement:** "At MCOI-5, 1,4-dioxane concentrations were detected over the NMED tap water screening level (screening value) of 4.59 µg/L during the May 8, 2019, sampling event with a concentration of 22.9 µg/L."

**NMED Comment:** The Report indicates that 1,4-dioxane was detected above the screening value at MCOI-5 in the third quarter of MY2019 and it was included in Table C-1. Table 3.4-1 of the approved MY2020 IFGMP indicates low-level 1,4-dioxane was proposed for annual analysis at MCOI-5 presumably during the first quarter of MY2020 when the other wells were sampled. However, Table C-1 does not include the results for low-level 1,4-dioxane for MCOI-5 from first quarter and the deviation is neither reported in Table 2.1-1 nor discussed in the text. Please revise the Report to include the result for this analysis in Section 5.2.2.1 and Table C-1 or provide a justification for not meeting the objectives of approved MY2020 IFGMP.

- b. **DOE Statement:** "At MCOI-5, nitrate-nitrite as nitrogen concentrations were detected above the EPA MCL screening value of 10 mg/L during the January 11, 2019; May 8, 2019; and July 24, 2019, sampling events with the respective concentrations of 14.0 mg/L, 12.5 mg/L, and 11.6 mg/L. ...At MCOI-5, perchlorate concentrations were detected above the NMED tap water screening level of 13.8 µg/L during the January 11, 2019; May 8, 2019; and July 24, 2019, sampling events with the respective concentrations of 213.0 µg/L, 170.0 µg/L, and 151.0 µg/L."

**NMED Comment:** The Report indicates that nitrate-nitrite as nitrogen and perchlorate were detected at MCOI-5 during the last three quarters of MY2019. Table 3.4-1 of the MY2020 IFGMP indicates that these parameters were to be sampled and analyzed quarterly at MCOI-5 starting with the first quarter of MY2020. However, Table C-1 does not include the results for first quarter for these parameters (i.e., metals, inorganics, volatile and semi-volatile organics) at MCOI-5 and the deviations are not reported in Table 2.1-1 or discussed in the text. Please revise the Report to include the results for these analyses in Section 5.2.2.1 and Table C-1 or provide justification for not meeting the objectives of MY2020 IFGMP.

## DOE Response

- 1.a. Low-level 1,4-dioxane was scheduled to be sampled in monitoring year (MY) 2020 quarter 1 for annual sampling at MCOI-5. Because of limited water, a prioritized suite was collected at MCOI-5 on November 13, 2019. The prioritized suite consisted only of per- and polyfluoroalkyl substances (PFAS), and did not include low-level 1,4-dioxane.

Table 2.1-1 of the report will be modified to include the following:

Sampling Event		Watershed	Monitoring Location	Observation/Deviation	Cause	Comments
Monitoring Year	Quarter					
Quarterly Sampling						
2020	1	Mortandad	MCOI-5	Limited analytical data will be available for this site.	A prioritized suite was collected.	A prioritized suite consisting only of PFAS was collected because of limited available water.

Because the prioritized analytical suite did not include low-level 1,4-dioxane analysis, these results will not be included in Appendix C, Table C-1 on page C-11.

- 1.b. General inorganics, which include nitrate-nitrite as nitrogen and perchlorate, were scheduled to be analyzed in MY 2020 quarter 1. Because of limited water, a prioritized suite was collected at MCOI-5 on November 13, 2019. The prioritized suite consisted only of PFAS and did not include general inorganics.

Table 2.1-1 of the report will be modified to include the following (same as comment 1a):

Sampling Event		Watershed	Monitoring Location	Observation/Deviation	Cause	Comments
Monitoring Year	Quarter					
Quarterly Sampling						
2020	1	Mortandad	MCOI-5	Limited analytical data will be available for this site.	A prioritized suite was collected.	A prioritized suite consisting only of PFAS was collected because of limited available water.

Because the prioritized analytical suite did not include general inorganics, these results will not be included in Appendix C, Table C-1 on page C-11.

**NMED Comment**

**2. Section 6.3, Data Gaps, Page 13; Table 2.1-1, Chromium Investigation Monitoring Group PME Observations and Deviations, Page 33:**

**DOE Statement:** “Table 2.1-1 summarizes the deviations from the planned monitoring scope for this PMR.”

**NMED Comment:** Table 2.1-1 does not include deviations for the first quarter of MY2020 regarding the non-reporting of detections at MCOI-5 (Comment No. 1). If there were deviations from the IFGMP sampling objectives for MCOI-5 during this event, please revise Table 2.1-1 to include these deviations.

**DOE Response**

2. Because of limited water, a prioritized suite was collected at MCOI-5 on November 13, 2019. The prioritized suite consisted only of PFAS.

Table 2.1-1 of the report will be modified to include the following (same as comment 1a and 1b):

Sampling Event		Watershed	Monitoring Location	Observation/Deviation	Cause	Comments
Monitoring Year	Quarter					
Quarterly Sampling						
2020	1	Mortandad	MCOI-5	Limited analytical data will be available for this site.	A prioritized suite was collected.	A prioritized suite consisting only of PFAS was collected because of limited available water.

**NMED Comment**

**3. Table 5.2-1, Chromium Investigation Monitoring Group Results Above Screening Values, Page 47:**

**NMED Comment:** Please revise the table to include a narrative in Section 5.2.2.1 to report the low-level 1,4-dioxane detection of 28.3 ug/L in MCOI-6 during the first quarter MY2020 sampling event.

**DOE Response**

3. Currently, text for MCOI-6 in section 5.2.2.1 includes the low-level 1,4-dioxane detection of 28.3 µg/L obtained during the MY 2020 quarter 1 sampling event. The text currently states:

“A concentration of 28.3 µg/L for the November 14, 2019, event was obtained using a low-level selected ion monitoring (SIM) method, and had a 4× dilution factor. This is the first year that the low-level method was used, and focused validation is ongoing.”

DOE proposes leaving the text as is.

**NMED Comment**

**4. Appendix C, Table C-1 Analytical Results from the Periodic Monitoring Event Reported in this Periodic Monitoring Report, Page C-11.**

**NMED Comments:** Please revise Appendix C to include the results or a justification for not reporting the following results in Appendix C Table C-1; these were proposed for sampling in approved MY2019 and MY2020 IFGMPs:

- a. There are no first quarter MY2020 sampling results reported for MCOI-5 for metals, semi-annual VOCs and SVOCs, general inorganics, and annual tritium and radionuclides as indicated in Table 3.4-1 of the MY2019 and the MY2020 IFGMPs, and no annual results reported for low-level 1,4-dioxane (Comment No. 1) and low-level nitrosamines, as indicated in Table 3.4-1 of the MY2020 IFGMP.
- b. There are no sampling results reported for prometon for all wells except for R-61 S1 as proposed in Table 3.4-1 of the MY2020 IFGMP.
- c. There are no results reported for low-level tritium for the fourth quarter MY2019 and for the first quarter MY2020 for the Chromium Interim Measures monitoring wells as proposed in Table 3.4-1 of the approved MY2019 and MY2020 IFGMPs.
- d. There are no annual results reported for low-level tritium at SCI-1, R-1, R-13 and R-15 as proposed in Table 3.4-1 of the approved MY2019 and MY2020 IFGMPs.

**DOE Response**

- 4.a. Because of limited water, a prioritized suite was collected at MCOI-5 on November 13, 2019. The prioritized suite consisted only of PFAS and did not include metals, volatile organic compounds (VOCs), semivolatle organic compounds (SVOCs), general inorganics, tritium and radionuclides, low-level 1,4-dioxane, and low-level nitrosamines.

Table 2.1-1 of the report will be modified to include the following (same as comment 1a, 1b, and 2):

Sampling Event		Watershed	Monitoring Location	Observation/Deviation	Cause	Comments
Monitoring Year	Quarter					
<b>Quarterly Sampling</b>						
2020	1	Mortandad	MCOI-5	Limited analytical data will be available for this site.	A prioritized suite was collected.	A prioritized suite consisting only of PFAS was collected because of limited available water.

Because the prioritized analytical suite did not include metals, VOCs, SVOCs, general inorganics, tritium and radionuclides, low-level 1,4-dioxane, and low-level nitrosamines, these results will not be included in Appendix C, Table C-1, on page C-11.

- 4.b. Prometon and sulfolane were added to the New Mexico Water Quality Control Commission toxic pollutants list in December 2018. General Engineering Laboratories, LLC (GELC) was contracted to

perform the analysis; however, they were not certified under the U.S. Department of Energy Consolidated Audit Program (DOECAP). GELC became DOECAP certified by December 24, 2019.

As a result, prometon and sulfolane results from samples collected before GELC was DOECAP certified for prometon and sulfolane analyses (between October 1, 2019, and December 24, 2019) were held within the Environmental Information Management System (EIM) until the samples were reanalyzed and reported under GEL's DOECAP prometon and sulfolane certifications. The hold flag on the prometon and sulfolane results within EIM was not removed. As a result, the data were held within EIM and not included in the data pull for this report.

All wells scheduled to be analyzed for prometon and sulfolane were successfully sampled and analyzed with the exception of MCOI-5, R-70 Screen 1 (S1), and R-70 Screen 2 (S2). MCOI-5 will be added to the deviation table (same as comment 1a, 1b, and 2). R-70 S1 and R-70 S2 were canceled because of mechanical issues and are listed in Table 2.1-1 as a deviation.

R-61 Screen 1 (S1) was sampled on November 20, 2019, and analyzed on December 30, 2019. These data were not held and are included in the report.

Appendix C will be revised to include the prometon and sulfolane data that were previously held within EIM as part of Revision 1 of the periodic monitoring report.

- 4.c. Low-level tritium results for the fourth quarter of MY 2019 and for the first quarter of MY 2020 for the chromium interim measures monitoring wells were incorrectly coded as "screening" for the analytical laboratory quality control (QC) reporting option, and therefore were not included as part of the periodic monitoring report (PMR).

The laboratory QC reporting option has been corrected to "standard." Appendix C will be revised to include the low-level tritium results as part of Revision 1 of the periodic monitoring report.

- 4.d. Low-level tritium results for SCI-1, R-1, R-13, and R-15 were incorrectly coded as "screening" for the laboratory QC reporting option and therefore were not included as part of the PMR.

The laboratory QC reporting option has been corrected to "standard." Appendix C will be revised to include the low-level tritium results as part of Revision 1 of the periodic monitoring report.