



November 29, 2021

Arturo Duran, Designated Agency Manager
U.S. Department of Energy
Environmental Management
Los Alamos Field Office
1200 Trinity Drive, Suite 400
Los Alamos, NM 87544

**RE: APPROVAL
PHASE II INVESTIGATION WORK PLAN FOR THREEMILE CANYON AGGREGATE AREA,
REVISION 3
EPA ID #NM0890010515
HWB-LANL-21-015**

Dear Arturo Duran:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) *Phase II Investigation Work Plan for Threemile Canyon Aggregate Area, Revision 3 (Revised IWP)*, dated October 2021 and referenced by EM2021-0579. The revised IWP was received on October 21, 2021.

Phase II Investigation Work Plan for Threemile Canyon Aggregate Area, Revision 2 was submitted in March 2021 (EM2021-0021). NMED reviewed the IWP and provided comments to DOE on April 29, 2021. DOE's responses to NMED's comments were submitted on June 17, 2021 and approved by NMED July 21, 2021. NMED comments have been incorporated in Revision 3 of the IWP. NMED comments and DOE responses are provided as an Attachment to this letter.

Phase II investigation work plan for Threemile Canyon Aggregate Area was a proposed milestone for Appendix B of the Consent Order for federal fiscal year 2021. NMED hereby issues approval of Revised IWP.

If you have any questions, please contact Mitchell Schatz at 505-690-5910.

Sincerely,

Rick Shean

Digitally signed by Rick Shean
Date: 2021.11.29 12:44:26
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Rick Shean
Chief
Hazard Waste Bureau

Attachment: Threemile_Ph2_IWP_R2_NMED_Comment_Resp_060821

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File: 2021 LANL, Approval SIR for Phase II IWP for Threemile Canyon Aggregate Area, Rev. 3
LANL-21-015

**Response to Draft New Mexico Environment Department Comments on the
Phase II Investigation Work Plan for Threemile Canyon Aggregate Area, Revision 2,
Dated April 29, 2021**

INTRODUCTION

To facilitate review of this response, the New Mexico Environment Department's (NMED's) comments are included verbatim (in italics). The U.S. Department of Energy (DOE) Environmental Management Los Alamos Field Office responses follow each NMED comment.

GENERAL COMMENTS

NMED Comment

1. *The Executive Summary stated that the human health and ecological risk assessments were performed for all 25 sites. However, these statements are misleading because the risk assessments were conducted for the sites that need additional sampling/investigations. These assessments should be considered preliminary and the statements drawing conclusions on incomplete data sets must be revised to indicate such. Without including all the sampling necessary to complete the risk evaluation of the solid waste management unit (SWMU) or area of concern (AOC), the risk assessments performed are incomplete and should not be used to make conclusive statements. Risk assessments for each of the SWMU and AOC requiring additional sampling must be revised after investigations are complete.*

DOE Response

1. The Executive Summary states, "Human health and ecological risk assessments were performed for all 25 sites." This statement is a fact and was not intended to be misleading as indicated by NMED in their comment. The approved supplemental investigation report (SIR) provided risk assessments for all 25 sites (N3B 2018, 700033; NMED 2018, 700058). The risk assessments reflect the risk based on all currently available data. Risk assessments were performed to evaluate the potential risk to human health or the environment at each site in order to inform recommendations for the sites. The risk assessments not only assisted in determining if additional sampling was warranted, they also identified if site cleanups were required. Based on the results presented in the SIR, five sites were recommended for additional sampling to define the extent of contamination for one or more inorganic and/or organic chemical(s). In addition, the SIR recommended removal of contaminated soil at two sites that posed an unacceptable risk under the industrial scenario (as well as to ecological receptors at one site). These two cleanups were performed in 2019 as part of the Known Cleanup Sites (Above SSLs) Campaign under the 2016 Consent Order. As indicated in section 11.1 of the SIR, the data collected during the Phase II investigation will be used to confirm the extent of contamination has been defined and the human health and ecological risk-screening assessments will be revised (N3B 2018, 700033; NMED 2018, 700058). The purpose of performing risk assessments for sites for which extent was not defined or additional sampling was warranted was to determine if risk exists at each site, and to propose the necessary cleanups if warranted. The only conclusive statements made regarding sites that need additional investigation or cleanup is the need for additional investigation or cleanup. Conclusive statements supporting corrective action complete were only made for those sites not needing additional investigation or cleanup. Therefore, no change to the text in the Phase II Investigation Work Plan (IWP) is necessary.

NMED Comment

2. *It was stated that SWMU 15-007(c) and SWMU-15-008(b) were sampled, corrective actions conducted, and the associated risk assessments were completed as part of the Known Cleanup Sites (Above SSLs) Campaign. Although the activities performed at each of the SWMUs was documented and submitted in a completion letter report, a review of the document has not been conducted. Please note that NMED will provide comments when investigation report documenting cleanup activities at these sites is submitted in future.*

DOE Response

2. As indicated in sections 4.1.3 and 4.2.3, the results of the corrective actions, including a revised evaluation of nature and extent of contamination and risk for solid waste management units (SWMUs) 15-007(c) and 15-008(b) will be documented in the Phase II investigation report for Threemile Canyon Aggregate Area. NMED's comment regarding their review of these sites is noted, and no change to the text in the Phase II IWP is necessary.

SPECIFIC COMMENTS

NMED Comment

3. Section 4.5.3, Proposed Activities at SWMU 15-010(b), page 9

The proposed sampling locations specify that: "A borehole will be advanced as close as possible to the middle of the tank sidewall (location 10b-5 in Figure 4.5-1)." This sampling location will only address the area adjacent to middle of tank sidewall on one side. The proposed activities clarify that the settling tank will be inspected for liquids and emptied if any liquid or sludge remains in the tank. It is then stated that: "After the tank has been emptied, it will be inspected for visual evidence of cracks, and the depth to the bottom of the tank, tank inlet, and take outlet will be measured." However, the proposed activities do not include additional sampling locations needed if the tank is inspected and determined to have cracks. Sampling only adjacent to the middle of the tank sidewall will not address the potential seepage of contamination from any cracks that may be discovered. If cracks in the settling tank are present at the time of the inspection as described in Section 4.5.3, additional samples must be collected at varying depths below the tank to determine if contaminant seepage occurred and to define the extent of vertical and lateral potential contamination.

DOE Response

3. As stated in section 4.5.3, the settling tank will be inspected for visual evidence of cracks. If cracks are noted during the visual inspection, additional samples will be collected at varying depths below the tank to determine if contaminant seepage occurred. The text in section 4.5.3 will be revised to include the following sentence: "If cracks are observed during visual inspection, a borehole will be advanced on both sides of the tank, as close as possible to the sidewall and adjacent to the crack location."

NMED Comment

4. Section 5.1, Sampling Locations page 10

The proposed sampling locations discussed on page 10 states: "If any proposed sampling locations are moved because of field conditions, utilities, or other unexpected reasons, the new locations will be surveyed immediately following sample collections, as described in section 5.2." Any deviations from the approved Investigation Work Plan must be documented in the Investigation Report.

DOE Response

4. The text in section 5.1 will be modified to include the following sentence at the end of the paragraph: "Any changes to sampling locations, other than minor adjustments (i.e., several feet or less) will be documented in the Phase II investigation report as deviations from this work plan."

NMED Comment

5. Section 5.7, Quality Assurance/Quality Control Samples page 13

The quality assurance/quality control samples discussed on page 13 states: "Field duplicate samples and field rinsate blanks will be collected at an overall frequency of at least 1 for every 10 regular samples or as directed by the current version of N3B-ER-SOP-20235, 'Sample Containers, Preservation, and Field Quality Control.'" Clarify that the field duplicate samples and field rinsate blank samples will be collected at a frequency of at least one for each SWMU or AOC sampled. For instance, the sampling discussed for AOC 15-008(g) has an additional 8 samples proposed and SWMU 15-009(b) with an additional 4 samples proposed. It must be clarified that for each of the SWMU and AOC a field duplicate sample and field rinsate blank will be collected, even if the frequency is less than the stated 1 for every 10 regular samples.

DOE Response

5. The text will be revised to indicate at least 1 field duplicate sample and 1 equipment rinsate will be collected at each SWMU/area of concern (AOC). The second sentence in section 5.7 will be revised as follows: "Field duplicate samples and equipment rinsate blanks will be collected at an overall frequency of at least 1 for every 10 regular samples at each SWMU/AOC, or as directed by the current version of N3B-ER-SOP-20235, 'Sample Containers, Preservation, and Field Quality Control.' At least 1 field duplicate sample and 1 equipment rinsate blank sample will be collected at each site."

NMED Comment

6. Table 4.5-1, Proposed Sampling and Analysis at SWMU 15-010(b) page 32

The proposed sampling depths for sampling locations 10b-1, 10b-2, 10b-3, 10b-4, and 10b-5 are listed at 0-1 ft and 5-6 ft. To be able to conduct appropriate ecological risk assessment, samples must be collected from 4-5 ft below the pipe, inlet, outlet, and tank, respectively.

DOE Response

6. The proposed sampling depths for sampling locations 10b-1, 10b-2, 10b-3, 10b-4, and 10b-5 are listed in Table 4.5-1 as 0–1 ft and 5–6 ft below the pipe, inlet, outlet, and tank. These samples are not proposed to be collected based on ground surface depths. The depths below the pipe, inlet, outlet, and tank are as specified in the approved IWP for Threemile Canyon Aggregate Area (LANL 2008, 105673; NMED 2008, 104256). As indicated in section 4.5.2, these samples were not collected during the Phase I investigation and the purpose of the Phase II sampling is to provide these missing data. Since the depths identified are below the pipe, inlet, outlet, and tank, the data collected may not be relevant to conducting an ecological risk assessment, although the pipe, inlet, and outlet may be encountered at less than 5.0 ft below ground surface. Therefore, no change to the text in the Phase II IWP is necessary.

REFERENCES

- LANL (Los Alamos National Laboratory), October 2008. "Investigation Work Plan for Threemile Canyon Aggregate Area, Revision 1," Los Alamos National Laboratory document LA-UR-08-6727, Los Alamos, New Mexico. (LANL 2008, 105673)
- N3B (Newport News Nuclear BWXT-Los Alamos, LLC), July 2018. "Supplemental Investigation Report for Threemile Canyon Aggregate Area, Revision 1," Newport News Nuclear BWXT-Los Alamos, LLC, document EM2018-0011, Los Alamos, New Mexico. (N3B 2018, 700033)
- NMED (New Mexico Environment Department), November 20, 2008. "Approval with Modifications for Investigation Work Plan for Threemile Canyon Aggregate Area, Revision 1," New Mexico Environment Department letter to D. Gregory (DOE-LASO) and D. McInroy (LANL) from J.P. Bearzi (NMED-HWB), Santa Fe, New Mexico. (NMED 2008, 104256)
- NMED (New Mexico Environment Department), August 28, 2018. "Approval, Supplemental Investigation Report for Threemile Canyon Aggregate Area, Revision 1," New Mexico Environment Department letter to D. Hintze (DOE-EM-LA) and N. Lombardo (N3B) from J.E. Kieling (NMED-HWB), Santa Fe, New Mexico. (NMED 2018, 700058)