ESHID-603637

CERTIFIED MAIL - RETURN RECEIPT REQUIRED

May 25, 2021

Michael Weis, Manager
National Nuclear Security Administration
Los Alamos Field Office
3747 West Jemez Road, A 316
Los Alamos, New Mexico
87544

Jennifer Payne, Division Leader
Env. Protection and Compliance Division
Los Alamos National Laboratory
P.O. Box 1663, MS-K491
Los Alamos, New Mexico
87544

RE: SECOND NOTICE OF DISAPPROVAL
CLOSURE CERTIFICATION REPORT FOR TECHINICAL AREA 16-399 OPEN BURN UNIT
LOS ALAMOS NATIONAL LABORATORY
EPA ID#NM0890010515
HWB-LANL-20-006

U2100570

Dear Mr. Weis and Ms. Payne:

The New Mexico Environment Department (NMED) has reviewed the United States Department of Energy (DOE) and the Triad National Security, LLC. (Triad) (collectively the Permittees *Response to the Disapproval of Closure Certification Report for Technical Area 16-399 Open Burn Unit* (Revised Report) dated and received March 17, 2021 and referenced by EPC-DO-21-078/LA-UR-21-22037. The *Closure Certification Report for Technical Area 16-399 Open Burn Unit* (Report) was submitted to NMED on February 20, 2020 and is referenced by EPC-DO-20-061/LA-UR-20-20437. NMED sent *Disapproval of Closure Certification Report for Technical Area 16-399 Open Burn Unit* on November 17, 2020.

On January 7, 2021 the Permittees requested a 60-day extension which was granted, and it extended the submittal date to March 18, 2021. The Permittees also provided a revised draft Figure 1-2 electronically on January 20, 2021 depicting additional sampling locations which NMED approved via email on January 20, 2021.

NMED has reviewed the Revised Report and provides additional comments included in Enclosure-1 attached to this letter.

The Permittees must address all comments in Enclosure 1 and submit a revised Report (Revision 2) **within sixty (60) days of receipt of this letter**. Two hard copies of the revised Report, and one electronic copy must be submitted to NMED. As part of the response letter that accompanies the revised Report, the Permittees must include a table that details where all revisions have been made and cross-references NMED numbered comments. In addition, provide a redline-strikeout version (electronic and hard copy) of the revised Report.

If you have any questions regarding this letter, please contact Siona Briley at (505) 476-6049.

Sincerely,

Kevin Pierard

Digitally signed by Kevin Pierard
Date: 2021.05.25 08:36:14 -06'00'

Kevin M. Pierard, Chief
Hazardous Waste Bureau

Attachment:
Enclosure 1-NMED Comments on the Revised Report

Cc w/attachment:
N. Dhawan, NMED HWB
S. Briley, NMED HWB
M. Schatz, NMED HWB
L. King, US EPA Region 6
K. Armijo, NA-LA
A. Duran, EM-LA
E. Torres, Triad
P. Padilla, Triad
adesh-records@lanl.gov
locatesteam@lanl.gov
epccorrespondence@lanl.gov

File: 2021 LANL, TA-16, Second Disapproval Revised Closure Certification Report OB Unit 16-399
LANL-20-006

U2100570

Enclosure 1:

NMED Comments on the Response to the Disapproval of Closure Certification Report for Technical Area 16-399 Open Burn Unit, March 17, 2021

General Comment

The results for both the human health and ecological risk assessments at technical area (TA) 16-399, exceeded acceptable risk levels. For human health risk, the primary risk drivers were dioxin/furans. For ecological risk, dioxin/furans, metals, and explosives drove the risk. As part of a refining effort, the Permittees divided the site into two areas: within the solid waste management unit (SWMU) boundary representing the closure area and outside the SWMU boundary. The rationale provided was that the highest detections for dioxin/furans were outside the SWMU boundary and that the dioxin/furans may not be associated with a release from TA 16-399.

NMED notes that the wind rose provided in the report for TA-6 (Figure 1-1) along with the wind roses submitted as part of the 2013 Class III permit modification request for TA 16-388 (Figure 3-11), prevailing wind during the day is from the southwest to the northeast, while at night, the wind shifts around from the west to the north. While the predominant day wind directions do not appear to indicate the historic transport of contamination to the south and southwest of TA 16-399, winds occasionally blow from the north and northeast during the evening and may mobilize and deposit contaminants in surface soil. Based on the limited information provided in the historic record of burns at the site, wind deposition cannot be ruled out as a possible transport mechanism north and northeast of TA 16-399.

Also, based on the topography of the area, NMED notes that there is potential for runoff to transport contamination downgradient from the TA 16-399 SWMU boundary. Sufficient evidence has not been provided by the Permittees to justify the assertion that dioxin/furans detected outside the SWMU boundary may not be related to SWMU activities and that closure of the site may be obtained by eliminating data collected outside of the SWMU boundary. The Permittees have not provided sufficient lines of evidence to support dividing the site into two areas for closure. The risk must include associated data from soil potentially impacted by historic burning operations.

Specific Comments

1. Section 2.2.2 Comparison to Background, pages 7 and 8:

The second driver to human health risk, after dioxin/furans is barium. NMED notes that a statistical comparison of site concentrations to background was not conducted to determine if site data were representative of background levels. This analysis could indicate several metals, including barium, are within background levels and potentially dropped as constituents of potential concern (COPCs).

2. Section 2.2.5 Result Based on Maximum Exposure Point Concentrations, page 8:

The Exposure Point Concentration (EPC) for dioxin/furans is likely overestimated due to the exclusion of non-detects in the derivation of the 95% upper confidence levels of the means (95UCL). The 95UCLs should be derived incorporating all data, including non-detects, using methods for censored data. Data for each congener should be evaluated with non-detects reported as the method detection level (MDL), and the most appropriate test for censored data applied in ProUCL. Using the 95UCL for each congener, the toxicity equivalency factor (TEF) can be applied, and then an overall toxicity equivalent quotient (TEQ) calculated. The inclusion of the non-detects may drive the EPCs lower, and possibly could result in acceptable risk levels. The Permittees should also apply this comment to the ecological risk calculations. Please also review and apply this comment to Section .3.2 Dioxin Furans, page 17.

3. Section 2.2.6 Results Based on Refined Exposure Point Concentrations, page 9:

Under clean closure, acceptable risk criteria must be met in absence of site controls. As noted in Table 2-9, while industrial and construction worker levels were equal to or below the target cancer level 1E-05 and hazard index (HI) of 1.0, the target levels were exceeded for the residential scenario with an HI of 9. The residential risk is driven by dioxin/furans. The location of the results driving the risk is located to the south, southwest of the SWMU boundary as indicated in Figure 1-5. Limited removals of soil with elevated levels of dioxin/furans (in particular sample locations WST 16-13-29795, RE16-12-17681, WST 16-13-29797) would result in risk levels below residential and allow for clean closure without controls and long-term monitoring.

4. Section 2.2.8 Migration to Groundwater, page 9:

A HI was calculated for the soil-to-groundwater screening evaluation (SL-SSL). NMED notes that only a point-to-point comparison is required, and a separate groundwater HI should not be calculated; since the SL-SSLs may not all be risk-based levels. Several constituents had levels greater than the SL-SSL. The Revised Report indicates that LANL Groundwater Monitoring Plan indicates the TA 16 Burn Ground is a low-priority for potential impact to groundwater due to lack of inventory and large volumes of water. NMED generally agrees that both the removal of source and a lack of water to drive residual contamination downwards, may be used as lines of evidence to counter the SL-SSL groundwater evaluation. These lines of evidence would need to be described in more detail in the revised report before they are accepted by NMED. However, a review of the physical/chemical properties of contaminants is also warranted since some chemicals are highly mobile in small amounts.

5. Section 3.4.8 Data and Area Use Factors, page 23:

a. Based on the methods in the LANL EcoRisk database, it appears that the only difference between the no-observed adverse effect level (NOAEL) ecological screening levels (ESLs) and the lowest observed adverse effect level (LOAEL) ESLs is the NOAEL or LOAEL toxicity reference value (TRV). The dose appears to be calculated the same for both ESL, with the only difference in the ESLs is the type of TRV. Using the methodology outlined in Volume II of the NMED Soil Screening Guidance allows for a refinement of dose in Tier 2 ecological evaluation. This refinement includes the use of average ingestion rates and average body weights. It is not clear if applying the dose calculations from the NMED SSG along with the LOAEL-TRVs and area use factors, would result in lower risks.

b. NMED notes that a statistical comparison of site concentrations to background was not conducted to determine if site data was representative of background levels. This analysis could indicate barium and selenium (risk drivers as noted in Table 3-9) are in fact within background levels and could be dropped as COPCs.

6. Table 3-9, Low Effect Hazard Analysis by Receptor for Exposure Adjusted with Population Area Use Factors, page 84:

NMED notes the adjusted LOAEL-based hazard quotient (HQs) in Table 3-9 are likely to be underestimated. For the initial site-wide evaluation, including the SWMU and areas around the SWMU, baseline risks were incorrectly refined by the Permittees using population areas and an area use factor (Table 3-9). This initial evaluation should address the entire area and represent a baseline assessment without refinement. As such, the area of the site should be reflective of the entire two-acre area as opposed to the refined SWMU-boundary currently proposed.

Please note that if the above cannot be used to demonstrate that clean closure requirements are met, site controls will be required. TA 16-399 is an interim status unit. In order to obtain clean closure, the risk assessment must be shown to be protective of unrestricted human health and ecological risk. In lieu of demonstrating risk below acceptable levels, post closure monitoring plan would be required.

From:	Martinez, Cynthia, NMENV
To:	Weis, Michael Joseph; Payne, Jen
Cc:	Pierard, Kevin, NMENV; Dhawan, Neelam, NMENV; Briley, Siona, NMENV; Schatz, Mitchell, NMENV; "king.laurie@epa.gov"; karen.armijo@nnsa.doe.gov; Arturo.duran@em.doe.gov; Torres, Enrique; Padilla, Patrick L; adesh-records@lanl.gov; locatesteam; epc-correspondence@lanl.gov
Subject:	[EXTERNAL] Letter to Mr. Weis and Ms. Payne
Date:	Tuesday, May 25, 2021 9:12:21 AM
Attachments:	2021-05-25 Second NOD for Closure Report_TA-16-399_May_2021.pdf

Good Morning,
Please see attachment.

Cynthia Martinez
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Bldg.1
Santa Fe, New Mexico 87505-6313