November 14, 2023

Theodore A. Wyka, Manager
National Security Administration
Los Alamos National Laboratory
3747 West Jemez Road, A 316
Los Alamos, NM 87544

Jeannette Hyatt, Senior Division Leader
Environment and Waste Programs
Triad National Security, LLC
P.O. Box 1663, MS M969
Los Alamos, NM 87545

RE: APPROVAL AND RESPONSE TO COMMENTS
CLASS 2 PERMIT MODIFICATION FOR THE ADDITION OF NEW HAZARDOUS WASTE MANAGEMENT UNIT AT TECHNICAL AREA 60
LOS ALAMOS NATIONAL LABORATORY
EPA ID#NM0890010515
HWB-LANL-23-014

Dear Theodore Wyka and Jeannette Hyatt:

On March 13, 2023, the New Mexico Environment Department (NMED) received the United States Department of Energy (DOE), Triad National Security (Triad), LLC, and Newport News Nuclear BWXT-Los Alamos, LLC (N3B) (collectively referred to as the Permittees) *Request for Class 2 Permit Modification for the Addition of New Hazardous Waste Management Unit at Technical Area 60* (Request) referenced by EPC-DO-23-086/LA-UR-23-21636. The Request is made in accordance with 40 Code of Federal Regulations (CFR) 270.42, Appendix I, Item F.1.b to add storage and F.1.c to add treatment by macroencapsulation. The Request will result in an increased storage capacity of no greater than 0.3 percent for the Facility and meets the technical requirements for a Class 2 Permit Modification Request.

On March 15, 2023, NMED identified a typographical error, and subsequently, a revised Permit Attachment B form was provided on April 11, 2023. On April 12, 2023, NMED notified the Permittees via email of additional waste code processing errors in the revised Permit Attachment B, Part A Form. On May 18, 2023, the Permittees submitted *Second Correction to Attachment 1 Part A Application Form for the Class 2 Permit Modification to the Los Alamos National Laboratory Hazardous Waste Facility Permit* referenced by EPC-DO-23-155/LA-UR-23-24574 (Second Correction).

On June 28, 2023, NMED determined that the typographical errors were corrected in the Part A Form in the Permit Application. However, NMED sent another *Administratively Incomplete Determination Class 2 Permit Modification for the Addition of a New Hazardous Waste Management Unit at Technical Area 60* since the Permittees did not perform trenching or provide enough documentation of the visual survey of lithography within the 200 ft buffer to determine the presence or absence of Holocene faulting, since the buffered area was covered in pavement.

On August 3, 2023, NMED met with the Permittees to discuss issues with the seismic hazard in accordance with 40 CFR 270.14(b)(11)(ii)(B). On September 18, 2023, NMED met with the Permittees and Dr. Shari Kelley from the NM Bureau of Geology and Mineral Resources to evaluate the risk associated with possible seismic hazards within the 200 ft buffer zone of Technical Area (TA) 60-0017. On September 18, 2023, NMED met with LANL geologist and Dr. Kelley and observed a seismic survey of the unpaved area around the 300-500 ft around TA 60-0017 and both parties did not find evidence of Holocene faulting in that area. On September 19, 2023, NMED received a memorandum of Dr. Kelley's observations.

On October 23, 2023, the Permittees submitted *Response to Administratively Incomplete Determination on Class 2 Permit Modification for the Addition of a New Hazardous Waste Management Unit at Technical Area 60* (Response). NMED has reviewed this response and on October 30, 2023, NMED determined that the Request is now administratively complete in accordance with 20.4.1.900 NMAC, incorporating 40 Code of Federal Regulations (CFR) 270.

NMED has reviewed the Request in accordance with 20.4.1.900 NMAC (incorporating 40 Code of Federal Regulations 270.42(b)) and **hereby approves this modification**.

If new information becomes available that indicates that the storage or treatment of hazardous waste at TA 60-0017 may pose an unacceptable risk to human health or the environment including due to seismic hazards, NMED may modify the Permit or may require additional investigations and/or corrective action at this site.

The Class 2 Request was subject to a 60-day public comment period, that was provided from March 16, 2023, to May 15, 2023; and a public meeting that was held on April 19, 2023. NMED has considered the written comments received during the public comment period. NMED’s response to public comments is attached to this letter and is also available on the webpage listed below.

The New Mexico Hazardous Waste Management Regulation at 20.4.1.901.A(10) NMAC states, "A final permit decision shall become effective thirty (30) days after the notice of the decision has been served on the applicant ... ". Therefore, the effective date of the modification shall be December 14, 2023.

The modified Permit is available on the Hazardous Waste Bureau's website at https://www.env.nm.gov/hazardous-waste/lanl-permit/.

If you have any questions regarding this letter, please contact Siona Briley of my staff at (505) 690-5160 or via email at Siona.Briley@env.nm.gov.

Sincerely,

Ricardo Maestas Digitally signed by Ricardo Maestas
Date: 2023.11.14 14:06:08 -07'00'

Ricardo Maestas
Acting Chief
Hazardous Waste Bureau

Attachment: 1) NMED Response to Public Comments

Cc with Attachment:

N. Dhawan, NMED-HWB
S. Briley, NMED HWB
M. Schatz, NMED HWB
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File: 2023 LANL Permit, Approval and Response to Comments, Request for Class 2 Permit Modification for the Addition of New Hazardous Waste Management Unit at Technical Area 60

LANL-23-014

Attachment 1:

NMED Response to Public Comments

Attachment 1: Response to Comments Matrix

No.	Name, Organization	Comment	NMED Response	Changes Made in Response to Comment
1	Elizabeth Yeats, Individual	l noticed your public notice in the Taos News. It appears a debate occurred on getting rid of the trash. It seems people question the safety of hazardous waste disposal near their homes. Actually, I think no one really cares about such extensive pollution abounding. A car dealership illegally operates in a residential area across the street from my house. At times, the illegal business produces large amounts of chemicals released into the air burning my nose and throat no one cares. Since the industrial revolution, beginning -in the early 1700s with the introduction of the train and factories, pollution entered into our world as an everyday occurrence. Good luck with removing hazardous products safely.	Comment noted.	NA
2	Joni Arends, Concerned Citizens for Nuclear Safety	Concerned Citizens for Nuclear Safety (CCNS) provides the following comments about the proposed new container storage unit (CSU) at Technical Area 60-0017 at Los Alamos National Laboratory (LANL). CCNS has determined the proposed permit modification is not a Class 2. It is a complex proposed modification requiring the New Mexico Environment Department (NMED) to determine whether it requires the more extensive procedures of a Class 3 permit modification request (PMR). 40 CFR § 270.42(b)(6)(i)(C). Key to our request is the fact that the Permittees have not provided accurate seismic analysis as required by the Resource Conservation and Recovery Act (RCRA). 40 CFR § 270.14(b)(11). Los Alamos County is specifically named as a location requiring seismic analyses. Appendix VI of Part 264. The conclusion to the PMR's Attachment 2 Seismic Report for the TA-60 Facility uses inconclusive statements to hide the seismic danger within the Pajarito Fault System and specifically in the young and growing Rendija Canyon Fault and the Guaje Mountain Fault that may terminate in the area of the CSU. We cite inconclusive statements found in the conclusion to the Seismic Report:	NMED has reviewed the Request and has determined that it meets the criteria of 40 CFR 270.42 Appendix I, Items F.1.b and F.1.c. Since the Permittees are proposing to add storage that would increase the storage capacity by 0.3% which is less than the 25% threshold in the regulations. The addition of treatment (by macroencapsulation) would allow for waste to be transported and disposed of off-site. Based on the criteria above, NMED has determined that this modification meets the requirements of a Class 2 Permit Modification Request.	NA

3		(1) The fault appears to terminate southwest of TA-60-0017 near Twomile Canyon. (2) Individual fault traces indicate that TA-60-0017 is likely near the southern terminus of the Rendija Canyon fault zone;	The Permittees have provided a seismic report that does not indicate the presence of Holocene fault lines within 200 feet of the storage unit. In addition, on September 18, 2023, NMED went on a site visit and met with LANL geologists, and Dr. Shari Kelley from the NM Bureau of Geology and Mineral Resources (NM BGMR) to evaluate the risk associated with possible seismic hazards outside of the 200 ft buffer of Technical Area (TA) 60-0017. Based on the information in the seismic report, the available geologic field observations from the literature review on the region, and Dr. Kelley's professional judgment; NMED has determined that the Permittee has demonstrated that no Holocene faults are apparent within 200 ft of TA 60-0017. Dr. Kelley's memorandum documenting her observations at the site visit is provided on the NMED HWB LANL Permit webpage found at the following link:https://www.env.nm.gov/hazardous-waste/lanl-permit/.	NA
4		(3) The faults near TA-60-0017 are likely not to be individually seismogenic and thus the seismic hazard to the location address in this report is low; [CCNS asks: What happens if it isn't?]	The Permittees have met the requirements of 40 CFR 270.14(b)(11), based on the best available knowledge and information. If new information becomes available, that indicates that the storage of hazardous waste at TA-60-0017 may pose an unacceptable risk to human health or the environment due to seismic hazards; NMED may require additional investigations and/or corrective action at this site.	NMED has added the following clarification to the approval letter: "If new information becomes available that indicates that the storage or treatment of hazardous waste at TA-60-0017 may pose an

				unacceptable risk to human health or the environment NMED modify the Permit or may require additional investigations and/or corrective action at this site.”
5		4) In conclusion, while evidence for Holocene faulting is difficult to determine at the TA-60-0017 facility due to infrastructure development and significant surficial disturbance…. [This statement is not true.] ?];	Based on the maps provided by LANL and by 2016 USGS aerial photography, the area within 200 ft of TA 60-0017 appears to be impacted by anthropogenic activities, and the geologic record would be obscured or covered with pavement or buildings.	NA

6		CCNS respectfully requests that the NMED Hazardous Waste Bureau carefully examine the lack of infrastructure development and the absence of significant surficial disturbance at TA-60-0017. See Figure 3-2 (water table contours and sampling locations); Figure 3-5 (surrounding area); Figure 3-7 (SWMUs in the broader area); Figure 3-8 (floodplains); Figure 3-9 (security and access); and Figure 3-10 (surrounding buildings, roads, and traffic signs). TA-60-0017 is a relatively barren area. Other LANL scientists have found evidence of Holocene faulting in the area. For example, former LANL scientists, Gardner and Lewis, were able to map intense fractures in the canyons north and south of TA-60-0017. Their work was cited in the 2011 draft Supplemental Environmental Impact Statement for the Nuclear Facility Portion of the Chemistry and Metallurgy Research Building Replacement Project at LANL, p. 3-25: *"New paleoseismic data argue for three Holocene (past 11,000 years) surface-rupturing earthquakes, including an earthquake on the Pajarito Fault, approximately 1,400 years ago; an earthquake on the Pajarito Fault approximately 5,000 to 6,000 years ago, which is consistent with an event during the same general time frame on the Guaje Mountain Fault; and a third earthquake on both the Pajarito and the Rendija Canyon Faults, approximately 9,000 years ago. This paleoseismic event chronology demonstrates that the Pajarito Fault often ruptures alone, but sometimes ruptures either with the Rendija Canyon Fault or Guaje Mountain Fault.* *When this occurs, the resultant seismic moment and, therefore, the earthquake magnitude is larger than when the main Pajarito Fault ruptures alone. Given the evidence for youthful movement on the Pajarito Fault system, future ruptures should be expected*." In 2011, DOE stated that sometimes the Pajarito Fault ruptures with either the Guaje Mountain Fault or the Rendija Canyon Fault resulting in an earthquake magnitude larger than when the Pajarito Fault ruptures alone. The PMR Seismic Report does not cite this important evidence of the growing seismic danger in Los Alamos County.	NMED and NM BGMR were able to investigate the areas north and south and outside of the 200 ft buffer which were not impacted by human activity. NMED and NM BGMR did not find evidence of faulting within the Holocene in the surface and Tuff formations. The Permittees have met the requirements, in accordance with 40 CFR 270.14(b)(11)(ii).	None

7		Further, CCNS incorporates the attached four maps into these comments to demonstrate the complexity of the PMR and the need for NMED to deny it or determine the PMR must follow the procedures in 40 CFR § 270.42(c) for a Class 3 modification. The maps are available at: http://nuclearactive.org/wp-content/uploads/2014/06/LANLPAJARITO-FAULT-SYSTEM-FIGURES.pdf They are: Figure 1. Map of the Pajarito Fault System and Embudo Fault System –Southwestern Section in Northern New Mexico. Source: Figure 5-4 in LANL 2007PSHA Report. Figure 2. Mapped Faults in the Los Alamos National Laboratory Area.Please Note. The detailed mapping to determine the southward extent of the GM Fault (Guaje Mountain Fault) toward and possibly close to the location of theproposed CMRR Nuclear Weapons Facility has not been performed. Neither has it been done for this proposed PMR for TA-60-0017. Figure 3. Map in 2004 LANL Report by Wohletz showing the proposed location of Rendija Canyon Fault along the western boundary of LANL TA-55 and Guaje Mountain Fault 2500 feet east of the eastern boundary of TA-55.Source: Figure 14 in Wohletz, 2004 (LA-UR-04-8337). Figure 4. West to East Cross-Section D-E' on page 263 in Lewis et al., 2009. Due to the lack of adequate seismic analysis for the proposed CSU as required by RCRA, CCNS urges the NMED to deny the Class 2 permit modification request and require a Class 3 public process.	NMED has reviewed the figures provided on the CCNS website and notes that the Figures are specific to TA-55 and do not depict the proposed unit TA 60-0017. The Class 2 Permit Modification Request already allows for input from the public. The Permittees have met the requirements for public participation 270.42(b) by hosting a public meeting and providing a 60-day comment period. NMED has reviewed the information provided in the seismic report, and finds it complete, no additional seismic studies are required at this time for TA 60-0017, based on the activities proposed in the Class 2 Permit Modification Request.	None