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 **ENTERED**



BUTCH TONGATE
Cabinet Secretary
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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

August 17, 2017

Todd Shrader, Manager
Carlsbad Field Office
Department of Energy
P.O. Box 3090
Carlsbad, New Mexico 88221-3090

Bruce C. Covert, Project Manager
Nuclear Waste Partnership, LLC
P.O. Box 2078
Carlsbad, New Mexico 88221-2078

**RE: TECHNICAL INCOMPLETENESS DETERMINATION
NOVEMBER 10, 2016 RESPONSE TO JULY 22, 2015 TECHNICAL INCOMPLETENESS
DETERMINATION ON THE MARCH 18, 2013 CLASS 3 PERMIT MODIFICATION REQUEST
WASTE ISOLATION PILOT PLANT
EPA I.D. NUMBER NM4890139088**

Dear Messrs. Shrader and Covert:

On March 18, 2013, the New Mexico Environment Department (“NMED”) received a Class 3 Permit Modification Request (“Request”) to the Waste Isolation Pilot Plant (“WIPP”) Hazardous Waste Facility Permit (“Permit”) from the Department of Energy Carlsbad Field Office (“CBFO”) and Nuclear Waste Partnership (“NWP”, collectively “the Permittees”). The Request included three items: 1) WIPP Panel Closure; 2) Repository Reconfiguration of Panels 9 and 10; and 3) Revise Volatile Organic Compound (“VOC”) Target Analyte List and other changes to the VOC Monitoring Program.

NMED reviewed the Request and issued a Technical Incompleteness Determination (“TID”) on September 20, 2013. The Permittees submitted their responses to address the TID on October 29, 2013. After review of the responses, NMED issued a draft Permit and commenced a 60-day public comment period on February 14, 2014. On March 21, 2014, NMED issued the Permittees a Notification of Draft Permit Withdrawal and closed the public comment period because of the underground fire and radiological release that occurred in February 2014 and the subsequent

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investigations into the incidents. No comments were received during this brief public comment period.

On July 22, 2015, NMED issued a TID on the Request due to the ongoing facility changes resulting from the February 2014 incidents and requested that the Permittees update and resubmit their Request to reflect current conditions at the facility.

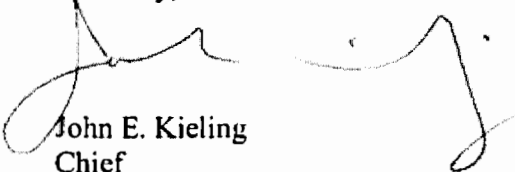
On November 15, 2016, NMED received the Permittees' Response to the July 22, 2015 TID ("Response") and a Revised Class 3 Permit Modification Request for Panel Closure Design ("Revised Request") in a letter dated November 10, 2016. The Revised Request includes Modifications to the WIPP Panel Closure Plan only, which differs from the initial Request because the Revised Request does not contain Repository Reconfiguration of panels 9 and 10 or Changes to the VOC Monitoring Program. The Response and Revised Request are currently being processed by NMED in accordance with the requirements specified in 20.4.1.900 NMAC (incorporating 40 CFR §270.42(c)).

NMED has performed a technical review and has determined the Revised Request to be technically incomplete. The attached comments list the specific additional information requested by NMED. A response by the Permittees is necessary for NMED to consider preparation of a draft permit.

Please submit your responses to the comments to NMED no later than October 18, 2017. A response to some of the comments within this letter may require additional time and for this reason, NMED will consider a request to extend the deadline for portions of the required information if a written request and expected submittal date for each portion is provided prior to the October 18, 2017 deadline. NMED also requests that the Permittees provide a redline-strike-out and clean copy versions of the applicable portions of the Permit.

If you have any questions regarding this matter, please contact Ricardo Maestas of my staff at (505) 476-6050.

Sincerely,



John E. Kieling
Chief

Hazardous Waste Bureau

cc: J.C. Borrego, NMED Deputy Secretary
R. Maestas, NMED HWB
D. Biswell, NMED HWB
S. Lucas-Kamat, NMED DOEOB
L. King, EPA Region 6
T. Peake, EPA ORIA
File: WIPP '17

NMED Comments on November 10, 2016 Response and Revised Request

1. PMR Overview, p. 5; pdf p. 24:

The PMR states: "The bulkhead component of the WPC design functions as an effective closure system, since it prevents the active ventilation of filled panels. Active ventilation removes VOCs from the panels and entrains them in the underground exhaust air. This exhaust air serves as the only pathway for VOCs associated with the hazardous waste to pose a threat to human health or the environment." These statements are not clear when compared to the Permittees' Design Report which indicates that releases are not controlled by the bulkheads during active ventilation of the mine but by the release rates from individual waste containers (DOE-NWP 2016, Appendix E, p. E-159). Please provide clarification.

2. PMR Appendix E, Golder Design Report, p. E-28; pdf p. 494:

The PMR Design Report states: "Based on the calculations of thermal runaway due to nitrate salt-bearing waste, the WPC design requires that the distance between the waste container and the steel bulkhead is at least 22 feet." The cited minimum separation distance between the waste container and the steel bulkhead is based on the exothermic event in Room 7, Panel 7, involving a single waste container (September 30, 2014 Information Regarding the WIPP Nitrate Salt Isolation Plan, Attachment B, Evaluation of Thermal Effects on Panel Closures from Heat Event, Gross 2014b). The adopted design thermal runaway event conservatively consists of the simultaneous ignition of three drums and would result in a greater release of radiant energy than ignition of a single drum (DOE-NWP 2016, p. 13 and p. E-18). Please provide documentation demonstrating that the specified minimum separation distance of 22 feet is sufficient to maintain bulkhead functionality when subjected to the heat effects of the design thermal runaway event, or provide an acceptable alternative specification.

3. PMR Overview, p. 2; pdf p. 21:

The PMR states "These roof falls are likely to continue since the areas will not be maintained once the closures are in place." Roof falls should therefore be considered an 'expected ground condition' under WPC Design Requirement 7. Analysis of the functionality of an ROM salt closure plug in the Design Report assumes progressive settlement of an intact roof beam and does not appear to consider the likelihood of a roof fall occurring above the ROM salt during the 17- to 31-year period when an air gap exists between the salt plug and the drift roof. The stresses on the ROM salt and in the drift roof will not be the same following a roof fall as compared with those associated with progressive downward movement of an intact beam. Please provide an assessment of the extent to which these differences could affect the plug length, consolidation, and air gap closure of the ROM salt.

4. PMR Overview, p. 17; pdf p. 36:

The section entitled "Revision to Remove On-Going Disposal Room VOC Monitoring." states that VOC monitoring is no longer needed as panel closures are installed and closure performance standards are applied. However, the text as written could be interpreted to imply

all VOC monitoring will be discontinued regardless of the timing of each individual panel closure. Please clarify in your response whether disposal room VOC monitoring will be discontinued for each individual panel only when that panel closure is installed, and clarify the timing of the elimination of disposal room VOC monitoring.

- 5. PMR Appendix B, Attachment G, Section G-1a(1), p. B-31; pdf p. 79:**
The Permittees replaced established free release limits of less than 20 disintegrations per 100 square centimeters (dpm/100 cm²) for alpha radioactivity and less than 200 dpm/100 cm² for beta-gamma radioactivity for contaminated container storage units with a statement that DOE-established radiological protection limits would be used. This change was not discussed by the Permittees and it is not clear why the change was made. The DOE-established radiological protection limits do not appear to be defined. Although the Permit does not specifically regulate radionuclides it does have an obligation to ensure that the repository is able to function for the disposal of CH and RH mixed waste. Please clarify why the free release limits were eliminated and replaced with a non-specific limit.
- 6. PMR Appendix B, Attachment G, Section G-1a(1), p. B-31; pdf p. 79:**
The Permittees eliminated the following permit language related to Solid Waste Management Units: "In the event portions of these units which require decontamination cannot be decontaminated, these portions will be removed and the resultant wastes will be managed as appropriately." Please provide justification why this text was removed from the Permit.
- 7. PMR Appendix B, Attachment G, Section G-1d(2), p. B-35; pdf p. 83:**
The Permittees eliminated the reference WIPP facility Safety Analysis Report as the source of the DOE policy to develop a final D&D plan. However, there was no given policy reference to ensure that this D&D plan will be developed. Please explain why the policy reference is not needed in the Permit.
- 8. PMR Appendix B, Attachment G, Section G-1(e)1, p. B-37; pdf p. 85:**
The Permittees eliminated the design requirement for the panel closure system in the first bullet to ensure that the VOC concentrations at the point of compliance will be mitigated to be at least an order of magnitude below the limits at the point of compliance. Please explain why this design requirement is no longer needed.
- 9. PMR Appendix B, Attachment G, Section G-1e(3), p. B-39; pdf p.87:**
Provide clarification concerning "fixing" of contamination to address current practices used at the WIPP.
- 10. PMR Overview, p. 14; pdf p. 33, #6:**
"Unexplained increases in the concentrations of VOCs measured by the Repository VOC Monitoring Program may indicate bulkhead deterioration and will trigger bulkhead inspections." Please indicate the actions the Permittees intend to take to address this.

11. PMR Overview, p. 14; pdf p. 33, #8:

Explain further as to why design requirement "IIb" is obsolete.

12. General:

The October 29, 2013 Permittee Response to NMED Technical Incompleteness Determination, Appendix 1-A, included proposed changes to Permit Part 7, Section 7.3.2. The November 10, 2016 PMR does not contain this proposed change. It appears that this change is still appropriate.