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Department of Energy  
National Nuclear Security Administration  
Sandia Field Office  
P.O. Box 5400  
Albuquerque, NM 87185

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Mr. Dave Cobrain  
Program Manager  
New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Dr. East, Bldg. 1  
Santa Fe, New Mexico 87505-6313

NMED  
Hazardous Waste Bureau

Subject: New Mexico Environment Department's Public Notice No. 17-11 of November 17, 2017, *Intent to Approve a Permit Modification Corrective Action Complete Determination, Six Solid Waste Management Units, Resource Conservation and Recovery Act Hazardous Waste Permit for Sandia National Laboratories/New Mexico (SNL/NM), EPA ID Number NM5890110518, HWB-SNL-16-009*

Dear Mr. Cobrain:

The Department of Energy, National Nuclear Security Administration, and National Technology and Engineering Solutions of Sandia, LLC, the Permittees for Sandia National Laboratories, respectfully submit the enclosed comments in opposition relating to New Mexico Environment Department (NMED) Public Notice No. 17-11.

As further described in the enclosure, the Permittees oppose the imposition of long-term controls at Solid Waste Management Unit (SWMU) 68 that are based solely on the presence of radiological constituents at the site, as NMED lacks jurisdiction with respect to radiological constituents. The Permittees also object to NMED's risk assessment methodology for Feature 58B/8Y within SWMUs 8 and 58, and for Feature 58FF within SWMU 58. Finally, the Permittees object to imposition of long-term controls for Feature 58B/8Y within SWMUs 8 and 58.

Pursuant to the New Mexico Hazardous Waste Management Regulations (20.4.1.901 NMAC), the Permittees respectfully request a public hearing. In accordance with the regulations, in the event NMED and the Permittees are able to resolve these issues, the Permittees plan to withdraw the request for a hearing.

If you have questions, please contact David Rast of our staff at (505) 845-5349.

Sincerely,

  
Jeffrey P. Harrell  
Manager

Enclosure  
cc: See Page 2

**U. S. Department of Energy  
National Technology & Engineering Solutions of Sandia LLC  
Public Comments**

**Intent to Approve a Permit Modification  
Issued November 17, 2017**

**Sandia National Laboratories  
Albuquerque, New Mexico  
EPA ID No. NM5890110518**

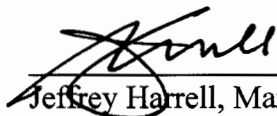
**CERTIFICATION STATEMENT**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.



\_\_\_\_\_  
Carol L. J. Adkins, Director  
National Technology & Engineering Solutions of Sandia, LLC  
Albuquerque, New Mexico  
Operator

12/20/17  
Date Signed



\_\_\_\_\_  
Jeffrey Harrell, Manager  
U.S. Department of Energy  
National Nuclear Security Administration  
Sandia Field Office  
Owner

1/11/18  
Date Signed

**Enclosure**

**Intent to Approve a Permit Modification  
Corrective Action Complete Determination for  
Six Solid Waste Management Units**

**Sandia National Laboratories  
NM5890110518**

**Comments**

**U.S. Department of Energy  
National Technology & Engineering Solutions of Sandia LLC**

**COMMENTS ON NEW MEXICO ENVIRONMENT DEPARTMENT PUBLIC NOTICE No. 17-11  
CORRECTIVE ACTION COMPLETE STATUS SOLID WASTE MANAGEMENT UNITS 68, 58B/8Y, 58FF**

The Department of Energy (DOE) and National Technology & Engineering Solutions of Sandia, LLC (NTESS), collectively the Permittees, have comments on the New Mexico Environment Department (NMED) Hazardous Waste Bureau's Public Notice No. 17-11; intent to approve a permit modification to the Resource Conservation and Recovery Act Facility Operating Permit for Sandia National Laboratories.

The comments address proposed modifications to Tables K-3 and K-4 in Permit Attachment K, and Table M-1 in Permit Attachment M, as summarized in the following table.

No.	Permit Section	Text of NMED Proposed Modification					Permittees' Requested Revision	Discussion
1	Table K-3	58B/8Y	Debris Pile and Pit Area		11/17		Delete this row from Table K-3.	Please see discussion regarding the risk assessment methodology used to determine that controls are warranted in the attached comments on Public Notice 17-11.
2	Table K-3	OU-1334 68	Central Coyote Test Area Old Burn Site		11/17		Delete these two rows from Table K-3.	Please see discussion regarding regulation of radiological constituents in the attached comments on Public Notice 17-11.
3	Table K-4	8	Open Dump (Coyote Canyon Blast Area)	11/17		SWMU 58B/8Y within SWMU 8 industrial land use only	Delete this row from Table K-3.	Please see Comment 1 above and discussion regarding the risk assessment methodology used to determine that controls are warranted in the attached comments on Public Notice 17-11.
4	Table K-4	OU-1334 68	Central Coyote Test Area Old Burn Site		11/17		Add these two rows to Table K-4.	Please see Comment 2 above and discussion regarding regulation of radiological constituents in the attached comments on Public Notice 17-11.
5	Table M-1	58B/8Y	Maintained and tracked	Industrial	2 signs on perimeter	Annual Feature within SWMU 8	Delete this row from Table M-1.	Please see Comment 1 above and discussion regarding the risk assessment methodology used to determine that controls are warranted in the attached comments on Public Notice 17-11.
6	Table M-1	68	Old Burn Site	Maintained and tracked	Industrial	Annual	Delete this row from Table M-1.	Please see Comment 2 above and discussion regarding regulation of radiological constituents in the attached comments on Public Notice 17-11.

**COMMENTS ON  
NEW MEXICO ENVIRONMENT DEPARTMENT  
PUBLIC NOTICE No. 17-11  
CORRECTIVE ACTION COMPLETE STATUS  
SOLID WASTE MANAGEMENT UNITS 68, 58B/8Y, 58FF**

The Department of Energy (DOE) and National Technology & Engineering Solutions of Sandia, LLC (NTESS), hereinafter referred to as the Permittees, have comments on the New Mexico Environment Department (NMED) Hazardous Waste Bureau intent to place land-use restrictions on Solid Waste Management Unit (SWMU) 68 and Feature 58B/8Y within SWMUs 8 and 58. In addition, the Permittees have comments regarding the risk methodology applied to SWMU 58, Feature 58FF. The NMED intent is documented in Public Notice No. 17-11, dated November 17, 2017 and titled "Notice of Public Comment Period and Intent to Approve a Modification to the U.S. Department of Energy/National Technology and Engineering Solutions of Sandia LLC RCRA Permit for Sandia National Laboratories."

SWMU 68 was issued a letter of Corrective Action Complete (CAC) Without Controls on October 26, 2005 (NMED October 2005), prior to this NMED intention dated November 17, 2017.

The following comments detail the Permittees opposition of the NMED intent to impose land use restrictions on SWMU 68 and Feature 58B/8Y within SWMUs 8 and 58, as well as the bases for those decisions as documented in the Fact Sheet/Statement of Basis (SOB) attached to the November 17, 2017 public notice. Additionally, these comments further address the risk methodology applied to SWMU 58, Feature 58FF.

The bold text, at the start of each site-specific section, is a portion of the textual information provided in the SOB that is used for determining the acceptable land use scenario for each site. The comments from the Permittees follows the bold text.

**SWMU 68, Old Burn Site, Central Coyote Test Area**

**For the radiological COCs (cesium-137, thorium-232, uranium-235 and uranium-238) a total effective dose equivalent (TEDE) was calculated that results in a TEDE of 3.2 millirem (mrem)/year (yr). The estimated excess cancer risk of 4.3E-5 is not acceptable for residential land use. Most of the dose is due to short-lived radionuclides that will decay to acceptable levels in a relatively short time period. In August 2003, the DOE approved unrestricted radiological release for sites using 25 mrem/yr as the threshold guidance. However, the estimated excess cancer risk is not acceptable for a residential land-use scenario.**

**In conclusion, the chemical human health and ecological risks are acceptable under a residential land-use scenario; however, the presence of radionuclide activities that exceed the acceptable annual dose equivalent for residential exposure limit the future land use to industrial use only.**

The Permittees oppose any NMED intent to regulate radiological constituents. This opposition is based on the lack of NMED jurisdiction, as acknowledged by the 2004 Compliance Order on Consent (NMED 2004), which states: "The requirements of this Order do not apply to radionuclides..." DOE has agreed to voluntarily provide information to the NMED on radiological constituents and continues to provide that information, but such information is not subject to enforcement under the Order (see Section III.A of the Consent Order).

Furthermore, as noted in the April 30, 2006 letter from Patty Wagner to James Bearzi (DOE 2006), the radiological risk concerns of any given site are the jurisdiction of the DOE, not NMED. This division of authority was also expressed by the NMED in a letter dated 01/08/2007 regarding Environmental Restoration (ER) Site 28-2 which indicated that radiological risk will not be considered in Corrective Action Complete determinations (NMED January 2007). Please note that the pertinent reference value that has been agreed to between NMED and DOE in 1998 regarding the discussion of radiological aspects of No Further Action (NFA) documents is dose, not risk [SNL/NM January 1998].

The TEDE for SWMU 68 is less than the residential standard of 75 millirem per year. The radiological standards have been met at this site for residential land use and should be stated as such in a correction to the SOB. This site meets the radiological dose requirements, and the nonradiological risk is acceptable for a residential land-use scenario. Therefore, SWMU 68 should be listed in Table K-4 of the Permit as CAC Without Controls, and should not be included in Permit Attachment M.

#### **SWMUs 8 and 58, Feature 58B/8Y, Debris Pile and Pit Area**

**For the nonradiological COCs under the industrial land-use scenario, the HI is 0.13, which is less than the NMED standard HI of 1. The excess cancer risk is 4E-7, which is less than the cumulative excess lifetime cancer risk of 1E-5. These risk calculations indicate an acceptable risk to human health from nonradiological COCs for an industrial land-use scenario.**

**For the nonradiological COCs under the residential land-use scenario, the calculated HI is 1.47, which is above the acceptable NMED hazard index of 1 (Table 5). The excess cancer risk is 1E-6, which is less than the acceptable cumulative excess lifetime cancer risk of 1E-5. The HI is above the NMED guideline for the residential land-use scenario and maximum concentrations were used in the risk calculation because there were not adequate numbers of samples collected to permit average concentrations to be used in the risk calculation.**

The Permittees do not agree with the risk assessment methodology used to evaluate the risk associated with nonradiological COCs at this site. For the residential land-use scenario the site

has been adequately characterized, and average concentrations are more representative of the actual site conditions. Using the upper confidence limit (UCL) of the mean concentrations leads to a total hazard index (HI) of 0.71 which is below NMED guidelines. In addition, none of the individual hazard quotients for noncarcinogens exceed 1.0 at maximum concentrations.

The Permittees recommend a risk-based determination of CAC without Controls for Feature 58B/8Y.

### **SWMU 58, Feature 58FF, Fire Brick**

**Although the estimated excess cancer risk is above the NMED guideline for the industrial land-use scenario, maximum concentrations were used in the risk calculation. The total excess cancer risk based on the UCLs of the mean concentrations for the main contributors to excess cancer risk which include arsenic (9.51 mg/kg, which is below background and eliminated from further evaluation), beryllium (5.87 mg/kg), and nickel (135 mg/kg), is 8E-9 (Table 6). Therefore, the total excess cancer risk value for the industrial land-use scenario is less than the acceptable excess cancer risk for carcinogens of 1-E-05 for industrial land use..**

**The calculated risk for the nonradiological COCs indicate that the site does not meet the risk levels for the residential land-use scenario HI=8.07 and excess cancer risk is 3E-4. Therefore the site does not qualify for corrective action complete without control and site use must be restricted to industrial land use only.**

**In conclusion, based upon the Feature 58FF field investigation data, human health risk is acceptable for an industrial land-use scenario.**

The Permittees agree with the NMED conclusion that Feature 58FF is acceptable for industrial land use. However, the Permittees do not agree with the risk assessment methodology used to evaluate the risk associated with nonradiological COCs at this site.

For the residential land-use scenario the site has been adequately characterized, and average concentrations are more representative of the actual site conditions. For the residential land-use scenario, using the UCL of the mean concentrations provides more realistic concentrations in the risk calculations that more accurately depict actual site conditions. Based on this methodology the total and incremental HI, and incremental estimated excess cancer risk values are below NMED guidelines for residential land-use. Regardless, the Permittees agree that Feature 58FF should be CAC with controls because lead is present in the soil at levels that exceed the EPA residential screening levels.

## References

Dinwiddie, R.S. (New Mexico Environment Department), September 1997. Letter to M.J. Zamorski (U.S. Department of Energy), "Request for Supplemental Information: Background Concentrations Report, SNL/KAFB." September 24, 1997.

Department of Energy (DOE), April 2006, Letter from Patty Wagner to Bearzi, "Re: Request for Reconsideration of Denial of Proposal for No Further Action for SWMU 28-2," National Nuclear Security Administration, Sandia Site Office, Albuquerque, NM.

DOE, see U.S. Department of Energy.

IT Corporation, March 1996. "Background Concentrations of Constituents of Concern to the Sandia National Laboratories/New Mexico Environmental Restoration Project and the Kirtland Air Force Base Installation Restoration Program," IT Corporation, Albuquerque, NM.

New Mexico Environment Department (NMED), April 2004. "Compliance Order on Consent Pursuant to New Mexico Hazardous Waste Act 74-4-10," New Mexico Environment Department, Santa Fe, New Mexico. April 29, 2004.

New Mexico Environment Department (NMED), October 2005. Letter from James P. Bearzi to Patty Wagner and Peter B. Davies, "Re: Notice of Approval: Final Investigation Report and Proposal for Corrective Action Complete solid Waste Management Unit 68 Old Burn Site, September 2005, Sandia National Laboratories, EPA ID# NM5890110518, HWB-SNL-05-022," State of New Mexico Environment Department, Hazardous Waste Bureau, Santa Fe, New Mexico. October 26, 2005.

New Mexico Environment Department (NMED), June 2006. "Technical Background Document for Development of Soil Screening Levels, Revision 4.0," Hazardous Waste Bureau, Ground Water Quality Bureau, and Voluntary Remediation Program, New Mexico Environment Department, Santa Fe, New Mexico.

New Mexico Environment Department (NMED), January 2007. Letter from James P. Bearzi to Patty Wagner and Peter B. Davies, "Re: Corrective Action Complete and Request for Reconsideration of Denial of Proposal for No Further Action for SWMU 28-2, April 3, 2006, Sandia National Laboratory, EPA ID # NM 5890110518, SNL-04-023," State of New Mexico Environment Department, Hazardous Waste Bureau, Santa Fe, New Mexico. January 8, 2007.

NMED, see New Mexico Environment Department.

Sandia National Laboratories/New Mexico (SNL/NM), January 1998. "RESRAD Input Parameter Assumptions and Justification, Participants: B. Toth, NMED, S. Kruse, NMED, S. Hoier, SNL, C. Brown, SNL, and E. Oms, DOE/KAO," Environmental Restoration Project, Sandia National Laboratories Albuquerque, New Mexico. January 26, 1998.

SNL/NM, see Sandia National Laboratories/New Mexico.