ERID-241229

DEPARTMENT OF ENERGY
National Nuclear Security Administration
Los Alamos Field Office
Los Alamos, New Mexico 87544

MAY 10 2013

John Kieling, Bureau Chief
RCRA Permits Management Program
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Dear Mr. Kieling:

Subject: Request for a Class 1 Permit Modification to the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit, Attachment K EPA ID No. NM0890010515

The purpose of this letter is to request the New Mexico Environment Department- Hazardous Waste Bureau's (NMED-HWB) approval for a Class 1 Permit Modification (requiring prior approval by the NMED-HWB) to the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (Permit) issued to the Department of Energy and Los Alamos National Security, LLC (DOE/LANS) in November 2010. DOE/LANS, collectively known as the Permittees, request to revise Attachment K (*Listing of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs)),* Table K-1 to include two newly identified AOCs, AOC 54-023 and AOC 54-024.

Based on review of waste characterization information for both low-level waste disposal pits and also based on the recent disposal of decontamination water containing hazardous waste constituents at Pit 38, both pits will be added to Table K-1 of the Permit as required by the NMED-HWB.

The proposed modification has been prepared in accordance with the Code of Federal Regulations (CFR), Title 40 § 270.42(a), revised March 1, 2009. This modification meets the requirements set forth in 40 CFR, §270.42 Appendix I, Item A.5 and is hereby being submitted as a Class 1 modification requiring prior approval by the NMED-HWB.

The permit modification request includes this letter and an enclosure containing a description of the proposed permit modification, text edits of Table K-1 (Attachment 1 of the enclosure) and figures depicting the specific change to the SWMU boundary. Accordingly, a signed certification page is also included (Attachment 3 of the enclosure). Three hardcopies and one electronic copy of this submittal will be delivered to the NMED-HWB.

If you have comments or questions regarding this permit modification, please contact Gene Turner of my staff at (505) 667-5794 or Mark Haagenstad, LANS, at (505) 665-2014.

Geoffrey L. Beausoleil
Acting Manager

Enclosure

cc w/enclosure:
Laurie King, Chief (6PD-N)
New Mexico/Federal Facilities Section
Environmental Protection Agency
Region 6 1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

cc w/out enclosure:
Dave Cobrain
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Tim Hall
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

P. Maggiore, EPO, NA-00-LA
G. Turner, EPO, NA-00-LA, MS-A316
C. Beard, PADOPS, LANS, MS-A102
M. Brandt, ADESH, LANS, MS-K491
A. Dorries, ENV-DO, LANS, MS-K491
V. George, REG-DO, LANS, MS-M991
K. Roberts, REG-SP, LANS, MS-M992
K. Johns-Hughes, LTP, LANS, MS-K487
M. Haagenstad, ENV-RCRA, LANS, MS-K404
Records Center, NA-00-LA
Official Contract File, NA-00-LA

EPO-32GT-456-510452

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ENCLOSURE 1

Request for Class1 Permit Modification to the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit, Attachment K West, EPA ID No. NM0890010515

LAUR-13-22880

Date: MAY 1 0 2013

Permit Modification Request Summary

The following submittal has been prepared by the U.S. Department of Energy and Los Alamos National Security, LLC (collectively the Permittees) to request a modification to the November 2010 Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (Permit). This modification has been prepared as a Class 1 permit modification requiring prior approval by the New Mexico Environment Department-Hazardous Waste Bureau (NMED-HWB) (also known as a Class 1* permit modification) as described in the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (20.4.1.900 NMAC) [incorporating Code of Federal Regulations (CFR), Title 40 §§ 270.42 (a)]. LANL's Environmental Protection Agency (EPA) identification number is EPA ID No. NM0890010515.

The permit modification includes revisions to Table K-1, *SWMUs (Solid Waste Management Units) and AOCs (Areas of Concern) Requiring Corrective Action*, which is included in Permit Attachment K, *Listings of SWMUs and AOCs*. The following summary describes the proposed modification and rationale behind the modification and contains a revised version of the relevant page of Table K-1 incorporating the modification (Attachment 1). The Permittees request that the revised Table K-1 be included in the Permit by the NMED-HWB upon approval of this permit modification request.

Pits 38 (AOC 54-023) and 39 (AOC 54-024) were recently designated as areas of concern (AOCs) and shall be included in Table K-1 of Attachment K, *Listings of SWMUs and AOCs*.

Rationale for Proposed Modification

Pits 38 and 39 are disposal units located at the Los Alamos National Laboratory. The Permittees use these two pits for the permanent disposal of low level waste (LLW). The two pits are located within Area G at TA-54, which is situated on Mesita del Buey, an east-west trending mesa bounded by Pajarito Canyon to the South and Cañada de Buey to the North.

Pits 38 and 39 were excavated directly into the Bandelier Tuff. The dimensions for Pit 38 (see Figure 1 of Attachment 2) are approximately 182.8 meters (m) x 24.384m x 10.668m. In 2012 an extension to the pit was constructed along the eastern boundary to provide for future disposal capacity. The approximate dimensions of the extension are 76.200m x 18.288m x 10.668m. LLW disposal began in 1994 and continues to the present day; however, the pit extension has not been used. The existing LLW inventory in Pit 38 includes demolition debris, soil, and a wide range of operational LLW. Based on waste profile forms and associated documentation for all wastes placed in Pit 38 through 2009, it was determined that one waste stream originally characterized as LLW may have been a mixed waste. This particular waste stream contained a water pump, plastic, soil, cement, personal protective equipment, and absorbent generated during the excavation of the pump. Further review of the analytical data attached to the original waste profile form indicated the potential for total mercury and total chromium to exceed the toxicity characteristic threshold, thereby resulting in the potential disposal of a mixed low level waste (MLLW) stream (LANL 2013 232357). Additionally, more recent disposal practices for decontamination water containing hazardous constituents were documented. In accordance with the *Response to Solid Waste Management Unit Assessment Report for the Pit 38 Newly Identified Area of Concern*, letter dated January 11, 2013 from the New Mexico Environment Department; Pit 38 will be added to Table K-1.

Pit 39 is an irregularly shaped pit approximately 88m x 69m x 14m (see Figure 2 of Attachment 2). Disposal of LLW occurred in Pit 39 between August of 1993 and October of 2006. An operational cover was placed over the pit in November 2009. The existing LLW inventory in Pit 39 includes laboratory trash, contaminated soil, building debris, and scrap metal. Based on a review conducted in 2009, it was determined that two potentially MLLW packages from one waste stream that was originally characterized as LLW may have been a mixed waste. In 1997, a secondary containment pallet was disposed of in Pit 39. The waste profile for the pallet indicates the pallet collected material from a leaking drum. The pallet was emptied and the remaining absorbent was disposed of, potentially resulting in mixed waste disposal (LANL 2013 239224).

Finally, it should be noted that the potentially MLLW stream packages placed in pits 38 and 39 contained hazardous constituents other than those identified in 2005.

References

LANL (Los Alamos National Laboratory), September 2005. "Investigation Report for Material Disposal Area G, Consolidated Unit 54-013(b)-99, at Technical Area 54," Los Alamos National Laboratory document LA-UR-05-6398, Los Alamos, New Mexico. (LANL 2005, 090513)

LANL (Los Alamos National Laboratory), January 2013. "Solid Waste Management Unit Assessment Report for the Pit 38 Newly Identified Area of Concern," Los Alamos National Laboratory document LA-UR-12-27006, Los Alamos, New Mexico. (LANL 2013, 232357)

LANL (Los Alamos National Laboratory), March 2013. "Solid Waste Management Unit Assessment Report for the Pit 39 Newly Identified Area of Concern," Los Alamos National Laboratory document LA-UR-13-21997, Los Alamos, New Mexico. (LANL 2013, 239224)

Attachment 1

Proposed Redline-Strikeout Revisions to the Los Alamos National Laboratory Hazardous Waste Facility Permit

Table K-1

SWMUs and AOCs Requiring Corrective Action

SWMU	54-006	MDA L
SWMU	54-007(a)	Former Septic system (includes SWMU 54-007 (misc))
AOC	54-007(d)	Former Septic system (includes SWMU 54-007(misc))
AOC	54-012(a)	Former drum compactor
SWMU	54-012(b)	Drum crusher
SWMU	54-013(b)	Vehicle Monitoring/Decontamination area (MDA G)
AOC	54-014(a)	Storage Shafts at MDA L
SWMU	54-014(b)	Pit 9 (MDA G)
SWMU	54-014(c)	Shafts 200-233 (MDA G)
SWMU	54-014(d)	Storage trenches A, B, C, and D (MDA G)
AOC	54-015(b)	Storage Area
SWMU	54-015(k)	Layer of TRU waste
AOC	54-016(b)	Sump
SWMU	54-017	Disposal Pits (MDA G)
SWMU	54-018	Disposal Pits (MDA G)
SWMU	54-019	Disposal Pits (MDA G)
SWMU	54-020	Disposal Shafts MDA G
AOC	54-023	Disposal Pit 38 (MDA G)
AOC	54-024	Disposal Pit 39 (MDA G)
	TA-55	
SWMU	55-008	Sumps and tanks
	TA-57	
AOC	57-001(b)	Former Settling ponds
AOC	57-001(c)	Former Settling ponds
AOC	57-002	Sludge pit
AOC	57-004(a)	Former Settling ponds
AOC	57-004(b)	Former Settling ponds
AOC	57-006	Former Drum and contents
AOC	57-007	Leach field
	TA-59	
AOC	59-004	Outfall from Building 59-1
AOC	C-59-001	Transformer
	TA-60	
SWMU	60-002	Storage area
AOC	60-004(b)	Storage area
AOC	60-004(c)	Storage area
AOC	60-004(d)	Storage area
AOC	60-004(e)	Storage area
AOC	60-004(f)	Storage area
SWMU	60-005(a)	Surface impoundment
SWMU	60-006(a)	Septic Ssytem
SWMU	60-007(a)	Operational Release
SWMU	60-007(b)	Operational Release

Attachment 2

Figures Illustrating Dimensions for Pits 38 and 39 at Technical Area 54

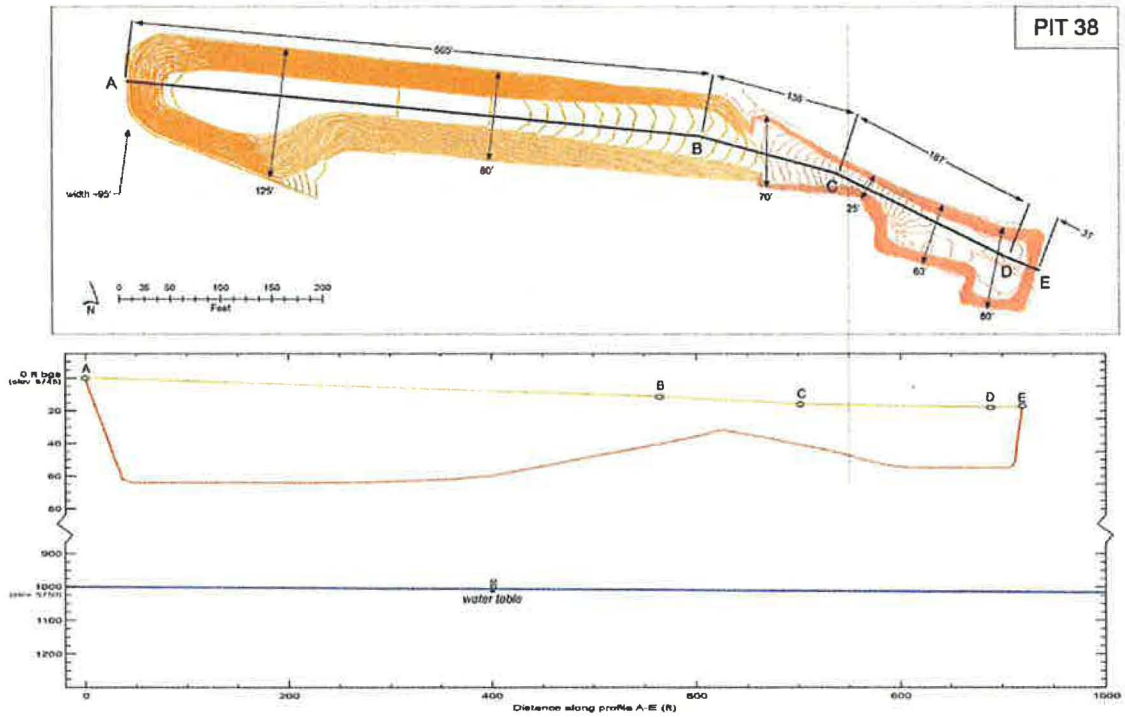


Figure 1 Pit 38 Plan view and cross-sectional view

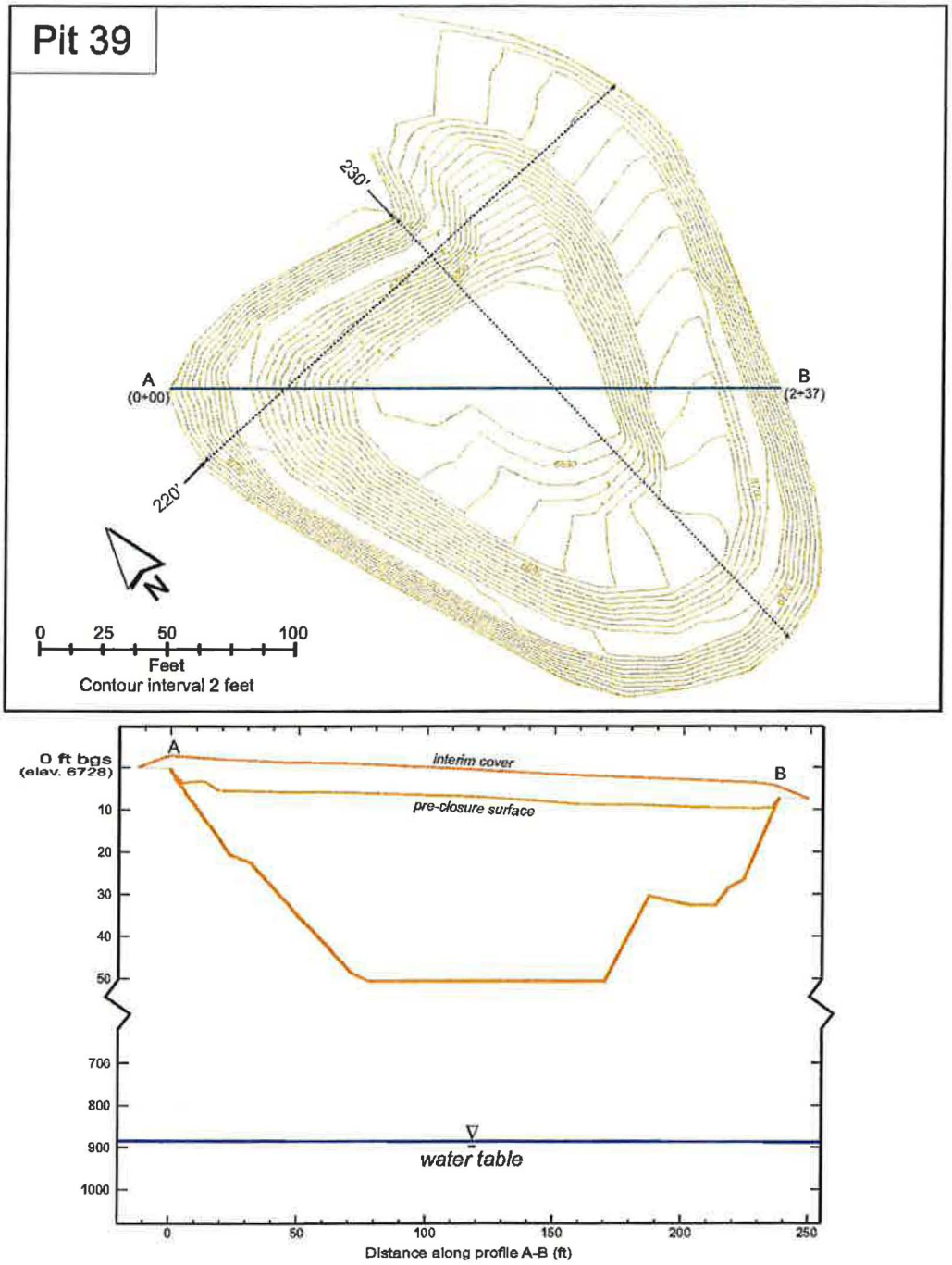


Figure 2 Pit 39 Plan view and cross-sectional view.

Attachment 3

Certification

Document: Table K-1 Class 1 Permit Modification
Date: April 2013

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure 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 and imprisonment for knowing violations.

5/8/13

Alison M. Dorries
Division Leader
Environmental Protection Division
Los Alamos National Laboratory
Operator

Date Signed

10/04/2013

Geoffrey L. Beausoleil
Manager (acting)
Los Alamos Field Office
National Nuclear Security Administration
U.S. Department of Energy
Owner/Operator

Date Signed