National Nuclear Security Administration
Sandia Site Office
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RECEIVED
JAN 23 2008

Mr. John Kieling
Manager, Permits Management Program
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Dr. East, Bldg 1
Santa Fe, New Mexico 87505

Subject: Comments on Draft Hazardous Waste Facility Permit NM5890110518 for Sandia National Laboratories/New Mexico (SNL/NM)

Reference: Letter dated April 8, 2004; Everet Beckner (HQ) to The Honorable Ron Curry (NMED); "Sharing of Radionuclide Information with States"

Dear Mr. Kieling:

On behalf of the Department of Energy (DOE) and Sandia Corporation (Sandia), DOE is submitting the enclosed comments on the New Mexico Environment Department (NMED) proposal to issue a final Hazardous Waste Permit (Permit) for SNL/NM. The associated public notice, dated August 20, 2007, established a public comment period ending on October 19, 2007. In a public notice dated October 16, 2007, NMED extended the period for 60 days in response to a request from DOE and Sandia. In a second public notice dated December 13, 2007, NMED extended the period for an additional 30 days in response to a request from interested citizens; the comment period ends on January 17, 2008.

DOE and Sandia oppose the issuance of the Permit as drafted and offer a number of comments, both general and specific. The general comments express our significant concerns with the draft Permit, and each specific comment includes alternate language to address the specific issue. In addition, we are providing numerous comments to address errors in the draft Permit.

We note that many of the photographs and figures are out of date and do not reflect the most recent material submitted to NMED; we will provide updated photographs and figures to NMED at a later date under separate cover.

With this notice of opposition and the associated comments within the enclosures, the Permittees, DOE and Sandia, request that a public hearing be scheduled to address theses outstanding issues. DOE and Sandia hope to reach resolution with NMED in advance of a hearing and, if this is accomplished, will immediately withdraw the hearing request.

SNL1067

As described in NNSA letter to NMED dated April 8, 2004, DOE/SNL has voluntarily provided radiological information collected during the investigation of suspected contaminated sites. DOE/SNL will continue to voluntarily provide radiological data according to long-standing DOE policy which is described in the joint guidance developed by the National Association of Attorneys General (NAAG) and the NAAG/DOE Working Group, "Sharing of Radionuclide Information with States," dated September 1998.

If you have any questions regarding this submittal, please contact me at (505) 845-6036 or David Rast of my staff at (505) 845-5349.

Sincerely,

Dan Pellegrino

Daniel Pellegrino
Assistant Manager
Environment, Safety, Health & Quality Assurance

Enclosures (24)

cc w/enclosures:
J. Bearzi, NMED HWB
W. Moats, NMED HWB
C. Amindyas, NMED HWB
L. King, EPA, Region 6
T. Skibitski, NMED-OB-DOE
M. Reynolds, NNSA/SSO
D. Rast, NNSA/SSO
SSO Legal File

cc w/o enclosures:
M. Hazen, SNL/NM, Org. 4000, MS-0143
A. Blumberg, SNL/NM, Org. 11100, MS-0141
P. Newman, SNL/NM, Org. 4100, MS-0342
R. Brandhuber, SNL/NM, Org. 4130, MS-1037
T. Cooper, SNL/NM, Org. 4133, MS-1042
J. Thompson, SNL/NM, Org. 4139, MS-1151
A. Reiser, SNL/NM, Org. 4133, MS-1042
SNL ES&H and Security Record Center, SNL/NM, Org. 9612, MS-0651
P. Wagner, SSO

Enclosure A

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

GENERAL COMMENTS

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

DOE/Sandia General Comments on the Draft Hazardous Waste Facility Permit for Sandia National Laboratories, New Mexico Permit No. NM5890110518

Comment G-A. Regulation of Hazardous Waste vs. Mixed Waste

Source, special nuclear, and byproduct material are not regulated under the New Mexico Hazardous Waste Act (NMHWA) or the regulations in 20 NMAC 4.1 that govern activities that are described in this draft Permit. Therefore, DOE/Sandia believe the draft Permit need only specify materials regulated under the draft Permit and, accordingly, radionuclides do not require discussion within the documentation. The presence of radionuclides is indicated in the DOE/Sandia Part A and Part B Permit Applications (referred to in these comments as the Application) where it is appropriate with respect to compliance with the requirements of the Federal Facilities Compliance Order, with the requirements of 40 CFR 264, Subpart CC, and with respect to protection of Unit workers and members of the public during waste management operations, including characterization, storage, and treatment.

With the exception of the TTU and CAMU, the draft Permit is to reflect management of hazardous waste and mixed waste at each Permitted Unit, rather than limiting any Unit to only hazardous or mixed waste management. Furthermore, the draft Permit mentions either hazardous wastes or mixed wastes in numerous requirements that are applicable to both (e.g., the title of Table 9-1 in Permit Attachment 9).

Please revise the draft Permit to indicate management of both hazardous waste and mixed waste at all Permitted Units except the TTU and CAMU. Please revise requirements and Permit Conditions throughout to indicate applicability to both hazardous and mixed wastes.

Comment G-B. Scope of Permit

The Permit should be limited to hazardous waste management operations that require a permit, and allow management practices that are included within the regulations. Additionally, the Permit should not include conditions for operations that are subject to requirements of other regulations or permits.

As generators of hazardous waste, DOE/Sandia are responsible for compliance with the requirements of 40 CFR 261, 262, and some parts of 40 CFR 265. Some of these include:

- Determining whether an item/material is a solid waste
- Determining whether the solid waste item/material is a hazardous waste
- Managing the waste properly while it is on site
- Arranging for storage, treatment, and/or disposal of the waste in compliance with all applicable regulations
- Keeping records and reporting waste generation and management activities

DOE/Sandia note that a permit is not required for any of these activities but mere compliance with the regulations. Therefore, items such as these do not necessarily require inclusion within the Permit except to the extent needed for operations that are conducted under the Permit.

The regulations include numerous exclusions for items and materials that are managed by particular methods, and also include many options for storage, treatment, and/or disposal of the waste. Each of these exclusions and options includes specifications that render it protective of human health and the

environment [e.g., shredded circuit boards being recycled are not hazardous waste provided they are managed as specified in 40 CFR 261.4(a)(14)].

DOE/Sandia also perform hazardous waste storage and treatment activities at SNL/NM that DO require a permit. The presence of a permit does not affect DOE/Sandia's duty to comply with the requirements for waste generators. Thus DOE/Sandia are able to select an available exclusion or management option that is applicable to wastes generated at SNL/NM, including wastes generated at the Permitted Units.

In particular, 40 CFR 261.4(a)(1)(ii) specifies that any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly-owned treatment works for treatment is not a solid waste. This is applicable to operations at SNL/NM, including operations at the Thermal Treatment Unit (TTU) and the Corrective Action Management Unit (CAMU).

Comment G-C. Consistency Between Permit and Regulations

Where the NMED has incorporated the Federal RCRA regulations as written, the language presented in this draft Permit must then be identical to the rule. New Mexico statutes, Section 74-4-4 NMSA, prohibit more stringent requirements than the Federal RCRA regulations as amended, unless the Environmental Improvement Board determines, after notice and public hearing, that such federal regulations are not sufficient to protect public health and the environment. Revising the language of the incorporated Federal regulation is also inconsistent with the omnibus authority under RCRA Section 3005(c)(3) to protect public health and the environment.

Comment G-D. Liability Coverage Requirement for Sandia Corporation

Section 2.22 of the draft Permit contains a requirement that Sandia maintain liability coverage and is contrary to Sections 2.21, 7.9, 15.10 and 16.10. Sandia is exempt from all financial responsibility requirements under Subpart H for post-closure care. (See Section 127 of Public Law 108-199: "Funds appropriated in this, or any other Act hereafter, may not be obligated to pay, on behalf of the United States or a contractor or subcontractor of the United States, to post a bond or fulfill any other financial responsibility requirement relating to closure or post-closure care and monitoring of Sandia National Laboratories and properties held or managed by Sandia National Laboratories prior to implementation of closure or post-closure monitoring. The State of New Mexico or any other entity may not enforce against the United States or a contractor or subcontractor of the United States, in this year or any other fiscal year, a requirement to post bond or any other financial responsibility requirement relating to closure or post-closure care and monitoring of Sandia National Laboratories in New Mexico and properties held or managed by Sandia National Laboratories in New Mexico."). The intention of Congress for this exemption was due to the fact that this would involve setting aside public monies for any such effort. Furthermore, it is clear that the regulation specifies demonstrating "financial responsibility." As this Permit is related to the closure of Permitted Units at SNL/NM and post-closure care of the CAMU, this is a financial responsibility in which Sandia remains exempt.

DOE/Sandia General Comments on the Draft Hazardous Waste Facility Permit for Sandia National Laboratories, New Mexico Permit No. NM5890110518

Comment G-E. Consistency between Permit and Compliance Order on Consent

The draft Permit provides overlap and inconsistencies with the Compliance Order on Consent (COOC) in a number of areas, the most critical example being the applicability of Permit Part 6, Corrective Action. Part 6 should be revised to clearly delineate the division of authority between the draft Permit and the COOC as Section III.W.4 of the COOC explicitly prohibits the renewed Permit from including requirements that are duplicative of the COOC. The following areas are of particular concern to DOE/Sandia:

1. The draft Permit contains provisions related to completion of corrective action at the Mixed Waste Landfill (MWL), which is regulated under the COOC. As stated above, the COOC explicitly prohibits the renewed Permit from including requirements that are duplicative of the COOC; these requirements should be removed from the draft Permit.

2. Tables 6-3 and 6-4 of Part 6 identify solid waste management units that have been designated Corrective Action Complete without Controls and Corrective Action Complete with Controls, respectively. Many of the entries to the tables contain errors or are inconsistent with the administrative record for decisions made under both the COOC and under the HSWA Module. These tables should be revised to incorporate the most current accurate information.

3. The draft Permit contains provisions related to cleanup levels for perchlorate. Perchlorate is regulated under the COOC; the cited authority is the NM Solid Waste Act. DOE/Sandia voluntarily agreed to perchlorate screening, only as specified in the Consent Order. Because perchlorate is not a regulated hazardous waste or hazardous constituent under RCRA, RCRA corrective action authority does not extend to cleanup of perchlorate. DOE and Sandia expressly contest the regulation of perchlorate under this Permit. All requirements related to perchlorate should be deleted from the draft Permit.

4. The draft Permit includes the presumption that a residential risk standard is appropriate for all sites. The presumption that cleanup levels must achieve a residential risk standard is not more protective of human health and the environment and is inconsistent with the corrective action program established in the COOC. Section 6.13 of the draft Permit contains cleanup levels for specified contaminants and media (based on a residential scenario) and a process for requesting a variance from a particular residential-based cleanup level; this Section should be revised to remove the presumption.

5. The draft Permit Sections 6.8.1 through 6.8.5 contain requirements for facility-wide reports documenting information related to: the general facility, potential receptors, surface water and sediment contamination, air contamination and subsurface gas. These reports are unnecessary and are inconsistent with the site-specific corrective actions conducted under the COOC; they should be removed from the draft Permit.

Comment G-F. Restrictions on Storage and/or Treatment Capacity at Permitted Units

DOE/Sandia do not understand or agree with NMED's arbitrary and unexplained reduction in the maximum storage capacity and/or treatment capacity for each Permitted Unit.

The reduced capacities are not consistent with the current permitted capacities as specified in Permit NM5890110518-1 (for the HWMU), Permit NM5890110518-2 (for the TTU), and the current Application (for the RMWMU, AHCU, and MSB). Furthermore, DOE/Sandia note that all storage and/or treatment capacities and configurations in the existing Permits and the Application were determined in full compliance with the requirements of 40 CFR 264 Subparts I and X, with consideration of the following:

- the physical size and characteristics of each waste management area,
- requirements for secondary containment, and
- the general characteristics of the wastes and nature of each treatment operation.

In some cases, the new limits render the treatment processes unworkable (e.g., macroencapsulation at the RMWMU).

The information provided in the Application is consistent with current operations; and DOE/Sandia note these operations have been performed for over 15 years without harm to human health or the environment.

The maximum storage capacity and the maximum treatment capacity for each type of treatment (as applicable) at each Permitted Unit should be revised to reflect the capacities in the current Permits and in the Application.

Comment G-G. Unnecessarily Prescriptive Requirements and Level of Detail

The Application includes descriptions of typical features of the Permitted Units or typical operations as illustrations of ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. The descriptions are typical rather than specific or prescriptive because of the wide variety of hazardous and mixed wastes managed at the Permitted Units.

The draft Permit includes numerous prescriptive requirements that limit DOE/Sandia's ability to adjust the operations. In all cases, the prescriptive requirements will reduce operational effectiveness and in many cases the requirements will limit DOE/Sandia's ability to protect human health and the environment.

DOE/Sandia are particularly concerned about the prescriptive requirement for NMED approval of a detailed plan prior to each treatment operation. Each detailed treatment plan will necessitate a lengthy review before NMED approval. As this approval is required before treatment can begin, it is highly unlikely that the wastes will be treated within one year and, therefore, this Permit Condition may impact the ability of DOE/Sandia to comply with the requirements of 40 CFR 268.50. Additionally, the pre-

approval requirement will limit DOE/Sandia's ability to adjust the operations in response to conditions that may be encountered when the plan is implemented.

Because of the variety of wastes and the need for flexibility in the operations, DOE/Sandia request that NMED limit prescriptive requirements to compliance with the regulations. The individual aspects of waste management activities are documented in the Operating Record and are available for NMED review and inspection in accordance with 40 CFR 270.30(i) and Permit Part 1, Condition 1.16.

Comment G-H. Meaning of DOE/Sandia Comments on Draft Permit

DOE/Sandia have carefully reviewed the draft Permit and prepared numerous general and specific comments addressing various topics (e.g., inaccuracies, out-of-date information, inconsistencies, and prescriptive requirements). In many cases the text that is addressed in the comment appears in more than one place in the draft Permit. In each of these cases the comment applies to all instances, whether or not they are individually identified.

Comment G-I. Application of 40 CFR 264 Subpart CC Standards to Storage of Mixed Waste in Containers

The applicability of 40 CFR 264 Subpart CC (Subpart CC) entitled "Air Emission Standards for Tanks, Surface Impoundments, and Containers" to mixed wastes has been and is still deferred pending the resolution of inconsistencies between the Atomic Energy Act (AEA) and RCRA requirements.

NMED's application of the Subpart CC standards throughout the draft Permit implies that the terminology "hazardous waste management unit" and "waste management unit," as used in the cited regulation, are the same. The former term, although similar, is defined in 40 CFR 260.10 as "a contiguous area of land on or in which hazardous waste is placed. . . A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are placed." The latter term has been used in a more general sense by the EPA to include discrete containers in Subpart CC.

DOE/Sandia note that the phrase "the waste management unit" is used in conjunction with "**a** tank, surface impoundment, or container" or "**each** ... container" (emphasis added) throughout 40 CFR 264 Subpart CC. This indicates that individual containers (rather than entire container storage areas) are the units that are subject to the air emissions standards.

DOE/Sandia also note that the term "waste management unit" does not appear to have been modified in 40 CFR 264.1080(b)(6) since the original regulation was promulgated on December 6, 1994. Sections IV.F and VII.A.1.d (*Federal Register*, Vol. 59, December 6, 1994, pages 62903 and 62914) of the preamble to the rule contain explanatory language that indicates the temporary deferral for radioactive mixed wastes was to be applied on the basis of individual containers. Section IV.F states that ". . the EPA has decided to temporarily defer application of Subpart CC standards to tanks, containers, and surface impoundments which are being used solely to manage radioactive mixed wastes . ." DOE/Sandia note the similarity of the explanation with the actual text of 40 CFR 264.1080(b)(6). The technical basis for the deferral is explained in Section VII.A.1.d using drums and venting as an example of non-compatibility

with radioactive mixed waste handling procedures. The subsequent discussion clarifying the use of the term "solely" in the specific regulation (*Federal Register*, Vol. 61, February 9, 1996, page 4904) does not address or change the use of the term "waste management unit."

In addition to the general discussion in the preamble of the December 6, 1994 final rule (Federal Register, Vol. 59, December 6, 1994, pages 62896 through 62953), EPA directly addresses the issue of exemptions in the Background Information Document "Hazardous Waste Treatment, Storage and Disposal Facilities (TSDF) - Background Information for Promulgated Organic Air Emission Standards for Tanks, Surface Impoundments, and Containers", EPA-453/R-94-076b, November 1994. The first comment in Section 6.2.1 (page 6-13):

> "states that exemption from the subpart CC air emission control requirements should be determined on the basis of the hazardous waste placed in an individual tank or container rather than in all of the units that comprise a 'hazardous waste management unit' as proposed in the rule."

In the response, EPA states that:

> "The purpose of the subpart CC standards is to control organic air emissions from TSDF tanks, surface impoundments, and containers that manage hazardous waste . . .The EPA recognizes that, according to the RCRA definition of a 'hazardous waste management unit,' it is possible to have a situation in which a hazardous waste management unit includes both exempt and nonexempt containers. For example, drums containing hazardous waste that was generated by different sources could be stored on the same pad at a TSDF. The drums and pad constitute a hazardous waste management unit. Some of the drums stored in this hazardous waste management unit could contain hazardous waste that has a volatile organic concentration at the point of waste origination less than 200 ppmw. In this case, the EPA does not intend that these drums be required to use air emission controls under the subpart CC standards simply because the drums are physically located in the same hazardous waste management unit with drums containing hazardous waste that has a volatile organic concentration at the point of waste origination greater than or equal to 100 ppmw. Therefore, the EPA clarified the regulatory language of the final subpart CC standards by deleting the term 'hazardous waste management unit' from the rule and, instead uses the terms 'tank', surface impoundment,' and 'container.'"

Overall, the title of the regulation and the examples and discussions used throughout the developmental language for the regulation appear to limit the Subpart CC requirement to containers rather than container storage units. Although the Subpart CC requirements cannot be applied to mixed waste through conditions in the Permit until the technical basis for the mixed waste deferral in 40 CFR 264.1080(b)(6) are resolved, DOE/Sandia manage this waste in a substantially equivalent manner, except for those instances where the Subpart CC requirements are in opposition to AEA requirements.

DOE/Sandia General Comments on the Draft Hazardous Waste Facility Permit for Sandia National Laboratories, New Mexico Permit No. NM5890110518

Comment G-J. Closure Plans and Approach to Closure

NMED states in Permit Part 2, Condition 2.20.2, that the closure plan submitted by DOE/Sandia is inadequate. The closure plan included in the Application (Appendix F and Section 7 in each Unit-specific module) fully addresses all the requirements of 40 CFR 264 Subpart G, the additional requirements for container storage units in 40 CFR 264.178, the requirements for miscellaneous units in 40 CFR 264 Subpart X, and the requirements for closure of thermal treatment units in 40 CFR 265.381.

DOE/Sandia note the closure plans in the Application use the same methodology that NMED approved for closure of the High Bay Waste Storage Facility at SNL/NM in 2005-2006. An important part of that closure methodology is consideration of the history of the Unit and waste management activities during development of the closure plan. DOE/Sandia considered Unit history in identifying the surfaces and areas most likely to be contaminated (floors, secondary containment areas, interior fume hood surfaces, and initial runs of exhaust ducts) and in selecting indicator parameters for verifying completion of closure. DOE/Sandia selected Unit-specific indicator parameters that are non-volatile constituents present in many of the wastes commonly treated and/or stored at each Unit. Wastes managed at each Unit often exhibit hazardous waste characteristics of ignitability, corrosivity, and/or reactivity or contain volatile organic compounds; these are of limited value as indicator parameters due to their volatility or other properties.

In the case of container storage units where there is no history of a release or evidence of any release of hazardous waste constituents, DOE/Sandia do not consider it appropriate to assume that all surfaces are contaminated and hazardous waste constituents from all wastes managed at the Unit are constituents of concern for closure, as NMED has done in Permit Part 2, Section 2.20.2 and throughout Permit Attachment 15.

Enclosure B

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT PART 1

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-1	1.3	1	Whenever the Permit cites a provision of 20.4.1 NMAC or Title 40 Code of Federal Regulations (40 C.F.R.) the Permit shall be deemed to incorporate the citation by reference, including all subordinate provisions of the cited provision, and make binding the full text of the cited provision. Hazardous waste management regulations are frequently cited throughout this Permit. The federal hazardous waste management regulations, 40 C.F.R. Parts 260 through 273, are generally cited rather than the New Mexico Hazardous Waste Management Regulations, 20.4.1 NMAC. The federal regulations are cited because only the federal regulations set forth the detailed regulatory requirements; the State regulations incorporate by reference, with certain exceptions, the federal regulations in their entirety.	DOE/Sandia note 40 CFR 270.14 is cited in numerous Permit Attachments addressing specific requirements for operation of the Permitted Units. However, this provision addresses contents of permit applications and is not directly relevant to the requirements of 40 CFR 264 that the Permittees are required to meet in operating the Units. Please delete references to 40 CFR 270.14 throughout the draft Permit except in reference to permit applications.
PP1-2	1.5	2	This Permit and 40 C.F.R. Parts 264, 266 and 268 establish the minimum requirements for the design, construction, operation, and maintenance of the 10 hazardous waste management units. Any language in an Attachment, which states or implies discretion to not comply with the minimum requirements of this Permit or 40 C.F.R. § 270.32(b)(1) is not effective and the requirements of this Permit and 40 C.F.R. § 270.32(b)(1) shall control.	DOE/Sandia note that 40 CFR 270.32(b)(1) includes specifications applicable to NMED's preparation of the Permit; it does not establish the minimum requirements for design, construction, operation, and maintenance of hazardous waste management units. Further, DOE/Sandia did not note any instances of language in a Permit Attachment which states or implies discretion to not comply with the minimum requirements of this Permit or the parts of 40 CFR 264, 266, and 268 that are applicable to operations and Units that require a Permit. Please revise to read: This Permit and requirements of 40 C.F.R. Parts 264, 266 and 268 that are applicable to operation of the Permitted Units establish the minimum requirements for the design, construction, operation, and maintenance of the 10 hazardous waste management units.
PP1-3	1.6	2	**"Area of Concern"** (AOC) means any area which is not a solid waste management unit where a release of a hazardous or mixed waste or hazardous constituent has occurred, is suspected to have occurred, or may occur, regardless of the frequency or duration of the release. An area of concern includes areas and structures at which releases of hazardous or mixed waste or hazardous constituents were not remediated, including one time and accidental events.	Please replace this definition with the definition of AOC as it appears in the COOC for clarity and consistency to read as follows: **Area of Concern** or "AOC" means any area that may have had a release of a hazardous waste or hazardous constituent, which is not a Solid Waste Management Unit.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-4	1.6	3	**"Facility"** means the Sandia National Laboratories including all contiguous land, and structures, other appurtenances, and improvements on the land. The Facility includes five Technical Areas (TAs) located within Kirtland Air Force Base (KAFB) and several remote test areas located on KAFB and adjacent U.S. Forest Service lands: Foothills Test Area, Central Coyote Test Area, Southwest Test Area, and Canyons Test Area. Within KAFB, the Facility comprises 2,820 acres (4.4 square miles).	DOE/Sandia note the five TAs comprise approximately 2,842 acres; this is the area stated in the Application and in Permit Attachment 1. The remote test areas comprise approximately 5,630 acres within KAFB, and approximately 6,582 acres in the adjacent lands withdrawn from the US Forest Service. The definition of Facility in the draft Permit includes the TAs and the remote test areas; the total area is approximately 15,054 acres (23.5 square miles). Accordingly, please revise to read: **"Facility"** means the Sandia National Laboratories including all contiguous land, and structures, other appurtenances, and improvements on the land. The Facility includes five Technical Areas (TAs) located within Kirtland Air Force Base (KAFB) and several remote test areas located on KAFB and adjacent lands withdrawn from the U.S. Forest Service: Foothills Test Area, Central Coyote Test Area, Southwest Test Area, and Canyons Test Area. Within KAFB and the adjacent lands withdrawn from the U.S. Forest Service, the Facility comprises approximately 15,054 acres (23.5 square miles).
PP1-5	1.6	3	**"Hazardous Waste"** means a solid waste, or combination of solid wastes, that is not excluded from regulation under 40 C.F.R. § 261.4(b), and that either is listed in 40 C.F.R. Part 261, Subpart D, exhibits any of the characteristics identified in 40 C.F.R. Part 261, Subpart C, or is a mixture of solid waste and one or more wastes listed in 40 C.F.R. Part 261, Subpart D. However, for purposes of corrective action, "hazardous waste" shall have the meaning set forth in HWA § 74-4-3(K).	Please replace this definition with the definition of hazardous waste as it appears in the COOC for clarity and consistency to read as follows: **"Hazardous Waste"** means any solid waste or combination of solid wastes which because of its quantity, concentration, or physical, chemical, or infectious characteristics meets the description set forth in NMSA 1978, § 74-4-3(K), and is listed as a hazardous waste or exhibits a hazardous waste characteristic under 40 C.F.R. Part 261 (incorporated by 20.4.1.200 NMAC).
PP1-6	1.6	3	"**Remediation Waste**" means all solid, hazardous, and mixed wastes, and all media (including groundwater, surface water, soil, and sediment) and debris, which contain listed hazardous wastes or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements.	Please revise this definition to clarify that remediation waste it is not limited to hazardous waste but includes all solid wastes and contaminated media associated with corrective action: "**Remediation Waste**" means all solid, hazardous, and mixed wastes, and all media (including groundwater, surface water, soil, and sediment) and debris, that are managed for implementing cleanup.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-7	1.7	5	The Permittees operate or conduct post-closure care at the following 11 Permitted Units. 1. HWMU -- used for storage and packing of hazardous wastes generated during Facility operations and corrective action activities. The HWMU is located south of Technical Area I (TA-I), which is described in Permit Attachment 3. 2 *(not included in comment)* 3. RMWMU -- used for treatment, storage, and packaging of mixed and radioactive wastes generated during Facility operations and corrective action activities. These are described in Permit Attachment 5. 4. AHCU -- used for treatment, packaging, and storage of mixed and radioactive wastes generated during Facility operations and corrective action activities, as described in Permit Attachment 6. 5. MSB -- Bunkers 37034, 37045, 37057, 37058 and 37118 used for storage of mixed and radioactive wastes generated during Facility operations and corrective action activities (See Attachment 7). 6. CAMU -- containment cell that contains approximately 31,800 cubic yards of remediation wastes that were generated as part of corrective action activities at the Facility's Chemical Waste Landfill (CWL), a hazardous waste landfill located adjacent to the CAMU. The CWL is to be permitted for post-closure care as a stand-alone Unit.	Management of radioactive wastes is not regulated under this Permit, as discussed in General Comment G-A. Therefore, DOE/Sandia do not believe this Permit needs to specify whether radionuclides are present or absent in RCRA-regulated waste managed at any of the Permitted Units. Limiting to either hazardous or mixed waste does not adequately cover operations at most of the Permitted Units. Each of the five Manzano Storage Bunkers is a separate Unit, and Bunker 37058 should be 37055. Please revise as follows: The Permittees operate or conduct post-closure care at the following 11 Permitted Units. 1. HWMU -- used for storage and packing of hazardous and mixed wastes generated during Facility operations and corrective action activities. The HWMU is located south of Technical Area I (TA-I), and is described in Permit Attachment 3. 3. RMWMU -- used for treatment, storage, and packaging of hazardous and mixed wastes generated during Facility operations and corrective action activities. These are described in Permit Attachment 5. 4. AHCU -- used for treatment, packaging, and storage of hazardous and mixed wastes generated during Facility operations and corrective action activities, as described in Permit Attachment 6. 5. MSB -- Bunkers 37034, 37045, 37055, 37057 and 37118; each used for storage of hazardous and mixed wastes generated during Facility operations and corrective action activities (See Attachment 7). 6. CAMU -- long-term storage in a containment cell that contains approximately 31,800 cubic yards of remediation wastes that were generated as part of corrective action activities at the Facility's Chemical Waste Landfill (CWL), a hazardous waste landfill located adjacent to the CAMU. The CAMU is described in Permit Attachment 16. 7. CWL -- post-closure care of the landfill will be regulated under a separate permit.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-8	1.7.2	6	This Permit is based on the information submitted in the Part B Permit application dated February 2002 and subsequent information, referred to as the Application.	DOE/Sandia note the draft Permit is also based on information submitted in the Part A included with the Part B Permit Application. For example, Attachment 8 – Authorized Wastes is from the Part A form. Please revise as follows: This Permit is based on the information submitted in the Part A and Part B Permit Applications dated February 2002 and subsequent information, referred to as the Application.
PP1-9	1.8.5	7	The Permittees shall submit a Permit modification request, in compliance with all requirements of 40 C.F.R. § 270.42 and 20.4.1.900 NMAC, at least 180 calendar days prior to the proposed effective date of transfer of ownership of any land which is part of the Facility. The Permit modification request may be submitted as a Class 3 Permit modification, or the Permittees may request a determination that the modification is a Class 1 or 2 pursuant to the requirements of 40 C.F.R. § 270.42(d). In addition to the requirements of 40 C.F.R. § 270.42 and 20.4.1.900 NMAC, a Permit modification request for transfer of land that is part of the Facility shall:	Consistent with the land transfer language of Part 6, Section 6.2.1 and Section III.Y.1 of the COOC, please limit the applicability of this section to that regulated under this Permit as follows: The Permittees shall submit a Permit modification request, in compliance with all requirements of 40 C.F.R. § 270.42 and 20.4.1.900 NMAC, at least 180 calendar days prior to the proposed effective date of transfer of ownership of any Facility property that is subject to any requirement under this Permit. The Permit modification request may be submitted as a Class 3 Permit modification, or the Permittees may request a determination that the modification is a Class 1 or 2 pursuant to the requirements of 40 C.F.R. § 270.42(d). In addition to the requirements of 40 C.F.R. § 270.42 and 20.4.1.900 NMAC, a Permit modification request for transfer of Facility property that is subject to any requirement under this Permit shall:
PP1-10	1.8.9	9	The Department may review this Permit five (5) years after the effective date of Permit issuance, and may modify this Permit as necessary pursuant to Section 74-4-4.2 of the HWA and 40 C.F.R. §§ 270.41(a)(5) and 270.50(d). Such modification(s) shall not extend the effective term of this Permit as specified in Permit Condition 1.8.2. Nothing in this Section (1.8.9) of Permit Part 1 shall preclude the Department from reviewing and, in accordance with applicable requirements, modifying the Permit at any time during its term.	40 C.F.R. §§ 270.41(a)(5) and 270.50(d) apply to land disposal facilities and are not applicable to any of the SNL Permitted Units. DOE/Sandia note the CAMU is a containment cell; it is a grandfathered unit (see 40 CFR § 264.551) that was approved before April 22, 2002 and meets the exemption of 264.550(b). The Department may modify/review/reissue or terminate this Permit as necessary pursuant to Section 74-4-4.2 of the HWA and 40 C.F.R. §§ 270.41 or 270.43, as applicable. Such modification(s) shall not extend the effective term of this Permit as specified in Permit Condition 1.8.2. Nothing in this Section (1.8.9) of Permit Part 1 shall preclude the Department from reviewing and, in accordance with applicable requirements, modifying the Permit at any time during its term.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-11	1.15	10	Information and records requested by the Department pursuant to this condition shall be provided in paper form or in an electronic format acceptable to the Department, or both as the Department may specify. 40 C.F.R. § 264.74(a), and 40 C.F.R. § 270.30(h) (incorporated herein by reference).	DOE/Sandia note that 40 C.F.R. § 264.74(a) and 40 C.F.R. § 270.30(h) require that records be furnished upon request and at reasonable times but do not require that records be maintained in electronic form. DOE/Sandia may maintain records in paper and/or electronic formats as described in the Application. Please revise to read: Information and records requested by the Department pursuant to this condition shall be provided in paper form or in an electronic format.
PP1-12	1.17.2	11	The Permittees shall maintain records from all groundwater monitoring wells and associated groundwater surface elevations, for the active life of the Facility, and for the CAMU for the post-closure care period. [40 C.F.R. § 270.30(j)(2) which is incorporated herein by reference].	Please delete this requirement as groundwater monitoring associated with individual SWMUs and AOCs is best addressed in the requirements for the specific units.
PP1-13	1.17.3	11 - 12	Records of monitoring information shall include: *1 (not included in comment)* 2. The names and qualifications of the individuals who performed the sampling or measurements; 3. The name and address of the laboratory that performed the analyses; *4 (not included in comment)* 5. The names and qualifications of the individuals who performed the analyses; *6–7 (not included in comment)* [40 C.F.R. § 270.30(j)(3)].	DOE/Sandia note that 40 C.F.R. § 270.30(j)(3) does not require the qualifications of individuals who perform sampling, the name and address of the laboratory that performed the analyses, or the qualifications of the individuals who performed the analyses. Please see General Comment G-C for additional discussion regarding consistency between the regulations and the requirements in the draft Permit, and revise as follows: Records of monitoring information shall include: *1 (not included in comment)* 2. The names of the individuals who performed the sampling or measurements; *3 (formerly 4, not included in comment)* 4. The names or initials of the individuals who performed the analyses; *5–6 (formerly 6 and 7, not included in comment)* [40 C.F.R. § 270.30(j)(3)].

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-14	1.19	12	If any Permitted Unit is modified, the Permittees shall not treat or store hazardous or mixed wastes in the modified portion of the Permitted Unit, unless the following conditions have been satisfied. *1 (not included in comment)* 2. The Department has: *a (not included in comment)* b. Waived the inspection or, within fifteen (15) calendar days from the date of submittal of the letter required by paragraph 1 of Section 1.9.11, has not notified the Permittees of its intent to inspect.	DOE/Sandia note that modifications requested by the Permittees must meet the criteria in 40 CFR 270.42. In addition, there is no Section 1.9.11; the correct reference is to Section 1.19.1. Please revise as follows: If any Permitted Unit is modified as defined in 40 CFR 270.42, the Permittees shall not treat or store hazardous or mixed wastes in the modified portion of the Permitted Unit, unless the following conditions have been satisfied. 2. The Department has: b. Waived the inspection or, within fifteen (15) calendar days from the date of submittal of the letter required by paragraph 1 of Section 1.19.1, has not notified the Permittees of its intent to inspect.
PP1-15	1.20.1	12 - 13	The oral report shall include the following. *1 (not included in comment)* 2. Any information about a release or discharge of hazardous or mixed waste or hazardous constituent or of a fire or explosion at a Permitted Unit which could threaten the environment or human health outside the facility; 3. A description of the noncompliance and its cause; 4. Name, address, and telephone number of the responsible official representing the owner or operator; *5 (not included in comment)* 6. The period of the occurrence including exact date and time, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; *7 (not included in comment)* 8. An assessment of actual or potential hazards to the environment and human health, where this is applicable; and *9 (not included in comment)*	DOE/Sandia note item 2 includes the phrase "or hazardous constituent" and is thus inconsistent with 40 CFR 270.30(l)(6)(i) and (ii). In addition, items 3, 4, 6, and 8 are also not consistent with the regulations. DOE/Sandia further note the list of items in this section does not fully address the requirements of 40 CFR 270.30(l)(6)(i) and (ii). Please see General Comment G-C for additional discussion regarding consistency between the regulations and the requirements in the draft Permit, and revise as follows: The oral report shall include the following. 2. Any information about a release or discharge of hazardous or mixed waste or of a fire or explosion at a Permitted Unit which could threaten the environment or human health outside the Facility; 3. A description of the occurrence and its cause; 4. Name, address, and telephone number of the owner or operator; 6. The occurrence date, time, and type of incident; 8. An assessment of actual or potential hazards to the environment and human health outside the Facility, where this is applicable; 10. The name and quantity of material(s) involved.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-16	1.20.2	13	The written report shall contain the following. *1 (not included in comment)* 2. Name, address, and telephone number of the responsible official representing the owner or operator; *3–9 (not included in comment)*	DOE/Sandia note item 2 is not consistent with the requirements of 40 CFR § 270.30 (l)(6)(iii) or 40 CFR 264.56(j). DOE/Sandia further note the list of items in this section does not fully address the requirements of 40 CFR 270.30(l)(6)(i) and (ii). Please see General Comment G-C for additional discussion of consistency between regulations and requirements in the draft Permit and revise as follows: The written report shall contain the following. 2. Name, address, and telephone number of the owner or operator; 10. Date, time, and type of incident.
PP1-17	1.27	14	The Permittees shall submit Monitoring Reports at the frequencies specified in Permit Part 1 Condition 1.17. [40 C.F.R. § 270.30(l)(4)].	Permit Condition 1.17 addresses monitoring records but does not specify reporting frequency. Please revise as follows to make this Condition consistent with the submittal summary in Table 1-1: The Permittees shall submit Monitoring Reports at the frequencies specified in approved work plans. [40 C.F.R. § 270.30(l)(4)].
PP1-18	1.29	14 - 15	If a significant discrepancy in a manifest is discovered, the Permittees shall attempt to reconcile the discrepancy. If not resolved within 15 calendar days, the Permittees shall submit a letter report, including a copy of the manifest to the Department, as required in 40 C.F.R. § 264.72, which is incorporated herein by reference.	DOE/Sandia note the draft Permit Condition is vague because it does not include criteria or a definition for a "significant discrepancy." Please revise to include the appropriate regulatory citation as follows: If a significant discrepancy, as defined in 40 CFR § 264.72(b), is discovered in a manifest, the Permittees shall attempt to reconcile the discrepancy. If not resolved within 15 calendar days, the Permittees shall submit a letter report, including a copy of the manifest to the Department, as required in 40 C.F.R. § 264.72(b), which is incorporated herein by reference.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-19	1.32.1	15	The Permittees shall submit by certified mail or hand delivery all reports, notifications, or other submissions that are required by this Permit to be sent or given to the Department.	Courier/delivery services such as Federal Express are capable of meeting the requirements (timeliness and documentation of delivery/receipt), yet these services are currently excluded from the list of delivery options available to the Permittees. The choices should be updated to explicitly include any courier/delivery service that provides documentation of delivery equivalent to certified mail. In addition, the NMED locations for hand delivery should include: New Mexico Environment Department Hazardous Waste Bureau 5500 San Antonio NE Albuquerque NM 87109

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-20	Table 1-1	16	**DRAFT PERMIT TEXT** Note: only the rows shown below are included in this comment	

TABLE 1-1
Document Submittal Summary

Facility Submission Requirements	Due Date
Non-compliance Oral Report (Permit Part 1, Condition 1.9.12.1)	Within 24 hours of Permittees discovering the non-compliance
Non-compliance Written Report (Permit Part 1, Condition 1.9.12.2)	Within 5 calendar days of discovering the non-compliance
Monitoring Reports (Permit Part 1 Condition 1.12)	Intervals specified in approved work plans
Manifest Discrepancy report (Permit Part 1, Condition 1.14)	For unresolved discrepancies in manifest – within 15 calendar days of discovering discrepancy
Unmanifested waste Report (Permit Part 1, Condition 1.15)	Within 15 days of discovering unmanifested waste
Biennial Report covering Facility activities (Permit Part 1, Condition 1.16 and Part 2, § 2.7)	By March 1st of even numbered calendar years
Closure SAP for TTU (Permit Part 2, Condition 2.20)	6 days prior to final hazardous waste receipt
Waste Minimization Plan (Permit Part 2 Condition 2.7)	Biennially, by December 1st of odd-numbered years
Non-compliance Report (Permit Part 5, Condition 5.2.1)	Within 15 days of a hazardous waste ≥ 500 parts per million (ppmv) VOCs being put into Unit
Non-compliance Annual Report (Part 5, § 5.2.1)	Annually
Annual Report – summary of outdoor testing activities (Permit Part 6, Condition 6.1.6)	1st report within 90 days of effective date of this Permit, by March 31 annually thereafter
Implementation and Maintenance of Controls Annual Report (Permit Part 6, Condition 6.5)	1st report within 90 days of effective date of this Permit, by March 31 annually thereafter
Quarterly Progress reports on all activities (Permit Part 6, Conditions 6.1.5 and 6.10.9)	By January 31, April 30, July 31 and October 31 of each calendar year
Verbal notification of newly-discovered releases (Permit Part 6, Condition 6.6)	24 hours after discovery of release
MWL Corrective Measures Implementation (CMI) Progress Reports (Permit Part 6, Condition 6.10.9)	Approved schedule in CMI Plan

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-20 (cont)				

DOE/SANDIA COMMENT

The table includes several references to incorrect draft Permit conditions and regulatory requirements. It also contains requirements that are inconsistent with other parts of the Permit (e.g., the submittal deadline for the waste minimization certification). Correct references that could be discerned have been included below.

Please see Comment PP1-18 regarding reports of significant discrepancies in manifests that cannot be resolved.. Please see General Comment G-I regarding application of air emissions standards in 40 CFR 264 Subpart CC to individual containers rather than to Permitted Units.

Please revise as follows and clarify the requirement for monitoring reports:

TABLE 1-1
Document Submittal Summary

Facility Submission Requirements	Due Date
Non-compliance Oral Report (Permit Part 1, Condition 1.20.1)	Within 24 hours of Permittees discovering the non-compliance
Non-compliance Written Report (Permit Part 1, Condition I.20.2)	Within 5 calendar days of discovering the non-compliance
Monitoring Reports (Permit Part 1 Condition 1.17)	Intervals specified in approved work plans
Manifest Discrepancy report (Permit Part 1, Condition 1.29)	15 days after discovering a significant discrepancy in a manifest that cannot be resolved within 15 calendar days
Unmanifested waste Report (Permit Part 1, Condition 1.30)	Within 15 days of discovering unmanifested waste
Biennial Report covering Facility activities (Permit Part 1, Condition 1.31)	By March 1st of even numbered calendar years
Updated SAPs for Unit closure if needed (Permit Part 2, Condition 2.20)	60 days prior to final hazardous waste receipt
Waste Minimization Certification (Permit Part 2 Condition 2.7)	Annually by January 31 for the previous year
Organic Air Emissions Non-compliance Report for Individual Occurrences (Permit Part 5, Condition 5.2.1)	Within 15 days of a hazardous waste ≥ 500 parts per million (ppmv) VOCs being put into a container that is subject to but not in compliance with the requirements of 40 CFR 264 Subpart CC.
Organic Air Emissions Non-compliance Annual Report (Part 5, § 5.2.1)	Annually
Annual Report – summary of outdoor testing activities (Permit Part 6, Condition 6.1.6)	Annually by March 31
Implementation and Maintenance of Controls Annual Report for Corrective Action Activities (Permit Part 6, Condition 6.5)	Annually by March 31
Quarterly Progress reports on all Corrective Action Activities (Permit Part 6, Condition 6.1.5)	By January 31, April 30, July 31 and October 31 of each calendar year
Verbal notification of Newly-Discovered Releases Beyond Facility Boundary (Permit Part 6, Condition 6.1.4)	24 hours after discovery of release
MWL Corrective Measures Implementation (CMI) Progress Reports (Permit Part 6, Condition 6.7)	Approved schedule in CMI Plan

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-21	1.34	18	The Permittees shall maintain at the Facility until completion of closure as specified in Permit Attachment 15 or until the completion of post-closure care in the case of the CAMU, the following documents and all amendments, revisions and modifications to these documents. 1. This Permit, including all Attachments. 2. Waste Analysis Plan at each Permitted Unit set forth in Attachment 9, as required by 40 C.F.R. § 264.13(b), which is incorporated herein by reference, and this Permit. 3. Inspection Plan at each Permitted Unit as set forth in Attachment 11, as required by 40 C.F.R. § 264.15(b)(2), which is incorporated herein by reference, and this Permit. 4. Personnel Training Plan and related documents and records at each Permitted Unit as set forth in Attachment 14, as required by 40 C.F.R. § 264.16(d), which is incorporated herein by reference, and this Permit. 5. Contingency Plan at each Permitted Unit as set forth in Attachment 12, as required under 40 C.F.R. § 264.53, Subpart D, which is incorporated herein by reference, and this Permit, and including summary reports and details of all incidents that require implementation of the Contingency Plan, as required by 40 C.F.R. § 264.56(j). 6. Operating Record and other records as required under 40 C.F.R. § 264, Subpart E and this Permit, at each Permitted Unit as set forth in Attachment 13. 7. Closure Plan at each Permitted Unit set forth in Attachment 15, as required under 40 C.F.R. § 264.112, which is incorporated herein by reference, and this Permit. 8. The names, addresses, and telephone numbers of the Emergency Coordinator(s) (EC) and all such information for persons designated as alternate ECs, as required by Permit Part 2 Condition 2.10.4 and as set forth in Permit Attachment 12, Contingency Plan. 9. A list of all equipment, as set forth in Permit Attachment 12, Table 12-2, List of Emergency Equipment, as required by 40 C.F.R. Part 264, Subpart C. 10. The Post-Closure Care Plan for the CAMU at the CAMU, as set forth in Permit Attachment 16, and as required under 40 C.F.R. §	DOE/Sandia note the records retention requirements in this section are not consistent with the recordkeeping requirements in Permit Attachment 13 or in 40 CFR 264.73, especially with respect to inspection records. Only the records associated with post-closure care of the CAMU need to be retained until the completion of CAMU post-closure care. Section 1.34 discusses records to be maintained at the Facility (SNL/NM) and at each Permitted Unit, and the distinction is not clear in all cases. In particular, it is not necessary or appropriate to keep a copy of the Operating Record or a copy of "summary reports and details of all incidents that require implementation of the Contingency Plan" at each Permitted Unit, as these are not pertinent to operations and are readily accessible at the Facility. Also, DOE/Sandia note the MSB have very limited facilities for records, and the operations do not require that any documents except the contingency plan and inspection schedule/records be maintained at each Unit. Thus, most of the records for the MSB are maintained at the RMWMU, as described in the Application. Several of the specific citations are not accurate. 40 C.F.R. § 264.15(b) requires an inspection schedule, rather than a plan. 40 CFR 264.16(d) requires personnel training documents and records rather than a plan. 40 CFR 264.51 (rather than 53) requires a contingency plan. Items 8 and 9 in the list are included in the Contingency Plans specified in item 5; thus, they should be deleted. Please review the entire list and the need to maintain these documents in multiple locations. Please revise to read: The Permittees shall maintain the following records at the Facility as described in Permit Attachment 13 or Permit Attachment 16 (for the CAMU only), the following documents. 1. This Permit, including all Attachments, amendments, revisions, and modifications, at the Facility. 2. The current Waste Analysis Plan at each Permitted Unit except the MSB as set forth in Attachment 9, as required by 40 C.F.R. § 264.13(b), which is incorporated herein by reference, and this Permit. 3. The current inspection schedule at each Permitted Unit as set forth in Attachment 11, as required by 40 C.F.R. § 264.15(b)(2), which is incorporated herein by reference, and this Permit. The schedule

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-21 (cont)			264.118, which is incorporated herein by reference, and this Permit.	need only incorporate the Unit-specific information for that Unit. 4. Current personnel training documents and records at each Permitted Unit except the MSB as set forth in Attachment 14, as required by 40 C.F.R. § 264.16(d), which is incorporated herein by reference, and this Permit. 5. The current Contingency Plan at each Permitted Unit as set forth in Attachment 12, as required under 40 C.F.R. § 264.51, which is incorporated herein by reference, and this Permit. The Plan need only incorporate the Unit-specific information for that Unit. 6. Operating Record and other records as required under 40 C.F.R. § 264, Subpart E and this Permit, at the Permitted Units and/or the Facility as set forth in Attachment 13. 7. The current Closure Plan at each Permitted Unit except the MSB as set forth in Attachment 15, as required under 40 C.F.R. § 264.112(a), which is incorporated herein by reference, and this Permit. The Plan need only incorporate the Unit-specific information for that Unit. 8. The current Post-Closure Care Plan for the CAMU, as set forth in Permit Attachment 16, and as required under 40 C.F.R. § 264.118, which is incorporated herein by reference, and this Permit. None of the documents in items 2, 3, or 7 need be maintained at the CAMU.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-22	1.35	19	Within 90 days of the effective date of this Permit, the Permittees shall create and maintain an information repository (40 C.F.R. 270.30(m)). The Permittees shall allow public access to the information repository during normal business hours and shall provide access in the information repository, at a minimum, to the administrative record for this Permit issuance and the administrative record for the Compliance Order on Consent in compliance with 40 C.F.R. §§ 124.33 and 270.30(m). The Permittees shall also maintain the information that is to be included in the repository on an internet webpage that can be accessed by the public. The Permittees' Information Repository shall contain the following: 1. Complete, legible hard copies of all documents relating to the Permittees' previous activities which resulted or may have resulted in the generation, management, or actual or potential release of solid waste, hazardous waste, or hazardous constituents, including among other things, correspondence, reports, data, photographs, aerial photographs, maps, figures, drawings, tables, attachments, enclosures, and appendices; 2. Complete, legible hard copies of all documents relating to the Permittees' Part A and Part B Permit Applications, this Permit, and interim status closure plans and post-closure plans including, but not limited to, any correspondence, photographs, aerial photographs, maps, figures, drawings, tables, attachments, enclosures, and appendices; 3. Complete, legible hard copies of all documents relating to any sampling, monitoring, investigation, clean up, and corrective action of solid waste, hazardous waste, or hazardous constituents, conducted at the Facility including, but not limited to, work plans, evaluations, historical reports, data aerial photographs, engineering drawings, glossy photographic imprints, maps, figures, drawings, tables, attachments, enclosures, and appendices; and 4. A searchable database that contains an index of all documents stored in the repository.	DOE/Sandia note that 40 CFR 124.33(d) states that the "information repository shall be located and maintained at a site chosen by the facility." There is no requirement to maintain the information at a site chosen by NMED (such as an internet webpage). Moreover, DOE/Sandia request deletion of this requirement for an information repository, as it is unnecessary in light of the fact that the documents relevant to the Permit and COOC are already publicly available. Documents are available in the administrative record and/or at the following address: University of New Mexico, Zimmerman Library Government Information Department DOE FOIA Document Collection Albuquerque NM 87131-1466 The administrative record is available from NMED at: NMED – Hazardous Waste Bureau 205 Rodeo Park Drive East, Building 1 Santa Fe NM 87505

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-23	1.37	20	**1.37 COMMUNITY RELATIONS PLAN** The Permittees shall maintain a plan for dissemination of information to the public regarding investigation and remediation activities and results. The plan shall: 1. Require the creation and maintenance of an active mailing list of interested parties (to be updated annually), including those on the official mailing list as required by 40 C.F.R. § 124.10. 2. Require informal meetings, including briefings and workshops as appropriate, with the public and local officials before and during the corrective action process. The meetings shall be held at least once every 6 months as long as corrective action is required for any SWMU/AOC listed on Table 6-2 or as long as any corrective action is required for any operating or closed hazardous waste management unit, or any SWMU/AOC discovered after termination of the Consent Order. 3. Require that news releases, fact sheets, work plan submittals, report submittals, and publicly available quarterly progress reports that explain the progress and conclusions of investigations and clean ups be timely provided to interested citizen groups and the public as requested. 4. Require the creation and maintenance of a public information repository and reading room. 5. Require that public tours and briefings be conducted to inform and to listen to public concerns and answer questions related to environmental monitoring, characterization, and remediation. 6. Require immediate written, and if possible, oral notification to affected parties of any discovered off-site release that could affect them. 7. Require that interested community groups be notified of and be given opportunities to observe field data gathering activities conducted during the corrective action process. Notices shall specify the need for any required safety training. Within 45 days of the effective date of this Permit, the Permittees shall solicit public input on the methods of communicating information to the public. The Permittees shall use the Facility mailing list to contact members of the community to inform them of a meeting to be hosted by the Permittees for the purpose of presenting a draft of the community relations plan to community members. The Permittees shall accept	Please delete this section or revise it to mirror the existing COOC language as corrective action is near completion at SNL, and any remaining corrective measures are already subject to public involvement requirements under Section VII.D.4 of the COOC.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1 23 (cont)			public comment on the plan for a period no less than 45 days. The Permittees shall respond in writing to public comment, revise the plan taking into consideration the public comments, and shall submit a copy of the comments, the Permittees' responses, and the revised community relations plan to the Department within 45 days of the end of the public comment period. The revised community relations plan shall be subject to approval by the Department.	

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-101*	1.2	1	This permit authorizes the Permittees to accept and treat hazardous and mixed waste generated off-site and on-site at the Facility at nine treatment and storage units and requires the Permittees to conduct post-closure care at one unit.	The language should be more explicit to clarify that units may be used for storage and/or treatment, as in Permit Condition 1.18.1. Please revise as follows: This Permit authorizes the Permittees to accept, store, and/or treat hazardous and mixed waste generated off-site and on-site at the Facility at nine treatment and storage units. In addition, this Permit requires the Permittees to conduct post-closure care at one unit.
PP1-102*	1.6	3	**"Federal Facility Compliance Order"** (FFCO) means the Order issued by the Department to the United States Department of Energy, and Sandia Corporation on April 28, 2004, pursuant to section 3012(b) of RCRA, 42 U.S.C. § 6939(c), as amended by the Federal Facility Compliance Act (the Act) of 1992, Public Law 102 386, 106 Stat. 1505 (1992).	Please revise as follows to correct to the appropriate date of issuance: **"Federal Facility Compliance Order"** (FFCO) means the Order issued by the Department to the United States Department of Energy, and Sandia Corporation on October 4, 1995, pursuant to section 3012(b) of RCRA, 42 U.S.C. § 6939(c), as amended by the Federal Facility Compliance Act (the Act) of 1992, Public Law 102 386, 106 Stat. 1505 (1992).
PP1-103*	1.9	9	Any Permit noncompliance, except under the terms of an emergency permit, constitutes a violation of HWA and/or RCRA and may subject the Permittees, its successors and assigns, officers, directors, employees, parents, or subsidiaries, to enforcement action as provided in Permit condition 1.9.2.	There is no Permit condition 1.9.2; the correct reference is to Permit Condition 1.10. Please revise accordingly.
PP1-104*	1.15	10	This Permit Condition (1.9.7) shall not be construed to limit, in any manner, the Department's authority under Section 74-4-4.3 of the HWA, RCRA § 3007(a); or any other applicable law or regulation.	There is no Permit Condition 1.9.7. Please delete the reference:
PP1-105*	1.16	11	This Permit Condition (1.9.8) shall not be construed to limit, in any manner, the Department's authority under Section 74-4-4.3 of the HWA, Section 3007(a) of RCRA, 40 C.F.R. § 270.30(i), or any other applicable law or regulation.	There is no Permit Condition 1.9.8. Please delete the reference.
PP1-106*	1.23	14	The reports shall contain the information listed in Permit Condition 1.9.12.2. [40 C.F.R. § 270.30(l)(10)].	There is no Permit Condition 1.9.12.2. Please revise to the relevant Permit Condition.

*Comment is more administrative in nature

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP1-107*	1.25	14	The Permittees shall sign and certify all applications, reports, or information submitted to or requested by the Department or required by this Permit, in accordance with the certification requirements in 40 C.F.R. §§ 270.11(a)(1) and (3).	DOE/Sandia note that 40 CFR §§ 270.11(a)(1) and (3) apply only to applications; 40 CFR § 270.11(b) applies to reports and information. Please revise to read: The Permittees shall sign and certify all applications, reports, or information submitted to or requested by the Department or required by this Permit, in accordance with the certification requirements in 40 C.F.R. §§ 270.11(a)(1) and (3) and 40 CFR § 270.11(b).
PP1-108*	1.31	15	A biennial report must be submitted covering Facility activities during each even numbered calendar year in accordance with the requirements of 40 C.F.R. § 264.75.	This requirement is not consistent with the submittal summary in Table 1-1, and it does not clearly communicate the biennial report requirements or schedule. Please revise to read: A biennial report must be submitted by March 1 of each even numbered calendar year. The report must cover facility activities during the previous calendar year in accordance with the requirements of 40 C.F.R. § 264.75.

*Comment is more administrative in nature

Enclosure C

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT PART 2

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-1	2.0	22	The Permittees shall store or otherwise manage only hazardous and solid wastes at the Hazardous Waste Management Unit (HWMU) and shall treat only hazardous waste at the Thermal Treatment Unit (TTU). Mixed waste shall not be stored, treated, or otherwise managed at the HWMU and the TTU. The Permittees shall store or otherwise manage mixed wastes only at the Radioactive and Mixed Waste Management Unit (RMWMU), the Auxiliary Hot Cell Unit (AHCU), and the five Manzano Storage Bunkers (MSB). Hazardous waste shall not be stored, treated, or otherwise managed at the RMWMU, AHCU, and the MSB.	Please see General Comment G-A. DOE and Sandia note that source, special nuclear, and byproduct materials are regulated by DOE under the Atomic Energy Act, not through the Permit and the NMHWA. Therefore, DOE/Sandia believe the draft Permit need only specify materials regulated under the draft Permit, and thus radionuclides do not require discussion within the documentation. With the exception of the TTU, the draft Permit is to reflect management of hazardous waste and mixed waste at each Permitted Unit, rather than limiting any Unit to only hazardous or mixed waste management. Accordingly, please revise to read: The Permittees shall treat only hazardous waste at the Thermal Treatment Unit (TTU). Mixed waste shall not be treated at the TTU.
PP2-2	2.1	22	The Permittees shall design, construct, maintain, and operate the Permitted Units to minimize the possibility of a fire, explosion, or any unplanned, sudden or nonsudden release of hazardous or mixed waste or hazardous constituents to air, soil, sediment, groundwater, or surface water which could threaten human health or the environment, as required by 40 C.F.R. § 264.31.	DOE/Sandia note that this Permit Section is not consistent with the requirements of 40 CFR 264.31, which specifies release of hazardous waste constituents rather than release of hazardous constituents. As discussed in General Comment G-C, the language presented in the draft Permit requirements must be identical to the cited regulations. Please revise accordingly.
PP2-3	2.2.1	22	The Permittees shall treat and store for subsequent transfer to a treatment, storage, or disposal facility only the hazardous and mixed wastes specified in Part 3 (Storage of Hazardous and Mixed Waste) and Attachment 8 (Authorized Wastes) of this Permit.	As discussed in General Comment G-B, the scope of activities conducted under this Permit includes treatment, and management of wastes at facilities other than the Permitted Units is not relevant to this Permit. Please revise to read: The Permittees shall store and/or treat only the hazardous and mixed wastes specified in Part 3 (Storage of Hazardous and Mixed Waste), Part 4 (Treatment of Hazardous and Mixed Wastes), and Attachment 8 (Authorized Wastes) of this Permit.
PP2-4	2.2.3	22	No wastes shall be managed at the CAMU except waste generated by post-closure care activities conducted at the CAMU.	The draft post-closure care Permit for the Chemical Waste Landfill (CWL) currently requires DOE/Sandia to manage CWL wastes in the less-than-90-day accumulation area at the CAMU. Please delete this requirement.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-5	2.2.4	23	The Permittees are prohibited, pursuant to 40 C.F.R. § 268.50 (incorporated herein by reference), from storing hazardous or mixed waste restricted from land disposal pursuant to 40 C.F.R. Part 268, Subpart C for more than one year from the date such waste was first placed into storage.	DOE/Sandia note that wastes that are subject to the requirements of the FFCO may be stored for more than one year from the date such waste was first placed into storage. Please revise to read: The Permittees are prohibited, pursuant to 40 C.F.R. § 268.50 (incorporated herein by reference), from storing hazardous or mixed waste restricted from land disposal pursuant to 40 C.F.R. Part 268, Subpart C for more than one year from the date such waste was first placed into storage, unless such storage is in accordance with the requirements of the Federal Facilities Compliance Order (FFCO).
PP2-6	2.2.4	23	The Permittees shall not place in any land disposal unit the wastes specified in 40 C.F.R. Part 268 after the effective date of the prohibition unless the Department has established disposal or treatment standards for the hazardous or mixed waste and the Permittees meet such standards and other applicable conditions of this Permit. Notwithstanding the foregoing, the Permittees may land dispose hazardous or mixed waste restricted by 40 C.F.R. Part 268 which does not meet treatment standards if: 1. A variance from the treatment standards has been granted pursuant to 40 C.F.R. § 268.44; 2. A petition has been granted on a case-by-case extension to the effective date, pursuant to 40 C.F.R. § 268.5; or 3. "No-migration" petitions have been granted pursuant to 40 C.F.R. § 268.6.	The Permittees do not perform land disposal of hazardous or mixed wastes at any of the Permitted Units, and off-site management of wastes is outside the scope of this Permit, as discussed in General Comment G-B. DOE/Sandia note that certain requirements of 40 CFR 268 are applicable to the wastes treated at the RMWMU, TTU, and AHCU; these are addressed in Permit Parts and Attachments as appropriate. Please see preceding comment regarding storage of hazardous or mixed wastes restricted from land disposal pursuant to 40 CFR 268. Please delete this text.
PP2-7	2.3	23	The Permittees shall accept, store, treat, or otherwise manage at the Permitted Units at the Facility only those hazardous wastes and mixed wastes that have been fully characterized in accordance with 40 C.F.R. § 264.13, the requirements of this Permit, and the Waste Analysis Plan (WAP) required by 40 C.F.R. § 264.13(b) and contained in Permit Attachment 9.	As noted in the Waste Analysis Plan (WAP), (Permit Attachment 9, Section 9.0, page 243), waste characterization at SNL "is a collaborative effort between individuals involved with the generation of hazardous and mixed wastes and personnel that work at the Permitted Units." It is not necessary that the waste be completely characterized before it is managed at a Unit in a safe and compliant manner. Please revise to read: The Permittees shall accept, store, treat, or otherwise manage at the Permitted Units at the Facility only those hazardous wastes and mixed wastes that have been characterized sufficiently to identify the requirements for management at the Unit in accordance with the requirements of 40 CFR § 264.13 and this Permit. Characterization in accordance with the requirements of the Waste Analysis Plan (WAP) in Permit Attachment 9 may be completed while the waste is managed at a Permitted Unit.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-8	2.3	23	At a minimum, the Permittees must obtain and document all of the necessary information that must be known to treat, store, or otherwise manage a hazardous or mixed waste in accordance with 40 C.F.R. Parts 264 and 268, including but not limited to: *1–4 (not included in comment)* 5. Whether the waste has a radiological component.	Please see General Comment G-A regarding regulation of the radiological component of wastes under this Permit. Please see General Comment G-B regarding the scope of this Permit and regulation of activities other than treatment and storage requiring a Permit at the Permitted Units; no reference to other management is needed. Please delete item 5 and revise as follows: At a minimum, the Permittees must obtain and document all of the necessary information that must be known to treat or store a hazardous or mixed waste at one of the Permitted Units in accordance with 40 C.F.R. Parts 264 and 268, including but not limited to: *1–4 (not included in comment)*
PP2-9	2.3	24	The Permittees shall document the following for each hazardous waste and mixed waste managed under this Permit. *1 (not included in comment)* 2. The unique waste identifier, *3 (not included in comment)* 4. A detailed description of the waste generation process that includes all material inputs or other information that identifies the chemical content and physical form of the waste.	As discussed in preceding comments, DOE/Sandia note that it is not necessary to fully identify all the chemical constituents of a waste in order to manage it in accordance with the regulatory requirements and Permit conditions. It is also not necessary to use a unique waste identifier in the Operating Record. Please delete item 2 and revise as follows: The Permittees shall document the following for each hazardous waste and mixed waste managed under this Permit. *1 (not included in comment)* *2 (formerly 3, not included in comment)* 3. A description of the waste generation process that includes material inputs or other information as needed to determine hazardous waste codes and physical form of the waste.
PP2-10	2.3.1	25	Copies of all such contracts with independent contract laboratories shall be kept in the Facility Operating Record.	The Operating Record requirements of 40 CFR § 264.73 do not include this requirement. Please see General Comment G-C for additional discussion of regulatory requirements and consistency with the draft Permit. Please delete this condition.

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PP2-11	2.3.2	25	When using laboratory analysis as part of a hazardous waste characterization, the Permittees shall require the laboratory to report concentrations of all hazardous constituents listed at 40 C.F.R. § 268.48, *Table of Universal Treatment Standards*, that the analytical test method used is capable of measuring.	DOE/Sandia note hazardous wastes are characterized according to the criteria in 40 CFR 261, not according to 40 CFR 268. The status of the waste with respect to the treatment standards in 40 CFR 268 is not required for the waste storage activities governed by this Permit. As described in the WAP (Permit Attachment 9), DOE/Sandia have developed a strategy for characterizing wastes generated at SNL. As part of the strategy, analyses are targeted towards constituents known or suspected to be present in the wastes, as summarized in Permit Table 9-1. Wastes that are to be treated in one of the Permitted Units are tested as needed to determine whether they meet the applicable treatment standards in cases where meeting the standards is one of the treatment objectives. The testing includes analysis for underlying hazardous constituents (UHCs) in 40 CFR 268.48 as applicable. Further, DOE/Sandia note that the definition of UHCs in 40 CFR 268.2(i) limits them to constituents "which can reasonably be expected to be present at the point of generation of the hazardous waste at a concentration above the constituent-specific UTS treatment standards." Accordingly, please delete this requirement.
PP2-12	2.3.2	25	When performing or obtaining laboratory analysis to demonstrate that a waste meets its applicable Land Disposal Restrictions (LDR) treatment standard concentrations specified in 40 C.F.R. § 268.40, *Treatment Standards for Hazardous Wastes*, in compliance with 40 C.F.R. §§ 268.7(a) and (b), the Permittees shall ensure that analytical method detection limits are not higher than the applicable treatment standard.	DOE/Sandia generate a wide variety of wastes from Facility operations, and it is not feasible to ensure that future wastes will not have characteristics that interfere with analyses. In the case of wastes with such characteristics, DOE/Sandia will use other information as needed to characterize the waste. Please delete this requirement.
PP2-13	2.3.3	25	AK documentation must be maintained in writing in the Facility Operating Record. The Permittees shall assign a traceable identification number to this documentation to facilitate access to this information by the Permittees and the Department for as long as required under Condition 2.17.2 of Permit Part 2.	DOE/Sandia note that 40 C.F.R. § 264.74(a) and 40 C.F.R. § 270.30(h) require that records be furnished upon request and at reasonable times but do not require that records be maintained in written form. DOE/Sandia may maintain records in paper and/or electronic formats as described in the Application. There is no Permit Condition 2.17.2. Permit Condition 1.34 requires the Permittees to maintain operating record information until the completion of closure. Further, DOE/Sandia may choose to use another method to facilitate access as needed. Please revise to read: AK documentation associated with waste analysis and waste determinations under 40 CFR 264.73(b)(3) must be maintained in the Facility Operating Record. The Permittees shall assign a traceable identification number to this documentation or use another method to facilitate access to this information by the Permittees and the Department until the completion of closure for the Permitted Unit.

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PP2-14	2.3.4	26	The Permittees shall: 1. Annually re-characterize all hazardous and mixed wastes managed under this Permit, at a minimum, to verify the accuracy of initial characterization results. 2 *(not included in comment)* 3. Re-characterize a hazardous or mixed waste whenever the Permittees are notified by an off-site facility that has received a hazardous waste from the Facility that the characterization of the waste received at the off-site facility does not match a pre-approved waste analysis certification or accompanying waste manifest or shipping paper. The Permittees shall notify the Department in writing within 24 hours of their receipt of such a discrepancy notice from a receiving facility.	Regarding annual re-characterization, DOE/Sandia note that it is only appropriate to re-characterize those hazardous and mixed wastes that are generated periodically and will continue to be generated in the future. Further, it is not necessary to re-characterize all such wastes annually because some of them will be addressed as specified in items 2 and 3 (known or suspected changes in the process or waste, notification from TSDFs that waste does not match the characterization). The 24-hour notification is not consistent with the 15-day period established for resolution of significant manifest discrepancies in 40 CFR §§ 264.72, 262, and 263. Please revise this requirement as follows: The Permittees shall: 1. Annually re-evaluate waste streams for ten percent by volume or mass of the total routinely generated hazardous and mixed wastes streams at the Facility that have been received at a Permitted Unit but not evaluated for any reason within the past twelve months. 3. Re-characterize a hazardous or mixed waste whenever the Permittees are notified by an off-site facility that has received a hazardous waste from the Facility that the characterization of the waste received at the off-site facility does not match a pre-approved waste analysis certification or accompanying waste manifest or shipping paper.
PP2-15	2.3.5	26	The Permittees shall maintain the waste characterization information specified in Table 2-1 of this Permit Part (Required Waste Characterization Information) in the Facility Operating Record. For records that contain waste characterization information but are required to be archived elsewhere at the Facility, such as laboratory record books, the Permittees shall assign a traceable identification number to this documentation to facilitate access to this information by the Permittees and the Department for as long as required under Condition 2.17 of this Permit Part.	Table 2-1, "Documentation Table," does not specify waste characterization information. Waste characterization requirements are specified in Permit Attachment 9. DOE/Sandia note that the documentation requirements applicable to the Permitted Units are specified in Permit Attachment 13. Please delete Table 2-1, as discussed in Comment PP2-23. DOE/Sandia may choose to use an alternative to a traceable identification number, as discussed in Comment PP2-13. Section 2.17 addresses the manifest system. Section 1.34 in Permit Part 1 addresses document maintenance and Permit Attachment 13 addresses recordkeeping requirements. Please revise to read: For records that contain waste characterization information but are required to be archived elsewhere at the Facility, such as laboratory record books, the Permittees shall assign a traceable identification number to this documentation or use another method to facilitate access to this information by the Permittees and the Department, for as long as required under Permit Part 1, Section 1.34, and the applicable sections of Permit Attachment 13, Recordkeeping.

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PP2-16	2.3.5	26	The Permittees shall include in AK documentation all information assembled and used in the characterization process and a report summarizing the supporting documentation and waste characterization conclusions.	DOE/Sandia note that "a report summarizing the supporting documentation and waste characterization conclusions" is not required under the regulations, nor is it needed, as the conclusions are evident in the waste determination. All required documentation is maintained in the Operating Record, as described in Permit Attachment 13. Please revise to read: The Permittees shall include in AK documentation all information assembled and used in the characterization process.
PP2-17	2.3.6	26	The Permittees are authorized to accept wastes from off-site waste generators only from the sources listed in Permit Attachment 9 (Waste Analysis Plan).	The WAP (Permit Attachment 9) describes the process for characterizing wastes received from off-site sources. It does not include a list of such sources. Please delete this sentence.
PP2-18	2.3.6	27	If discrepancies between the waste received and the information on the manifest are found, the Permittees shall notify the Department of the discrepancy within five days, and shall return the waste to the off-site generator within 90 days, unless the generator provides acceptable resolution to the discrepancy within 90 days after receipt of the waste at the Facility.	This language is not consistent with the regulatory manifest discrepancy provisions set forth at 40 CFR 264.72 or with the requirements of the WAP (Permit Attachment 9, Section 9.8.2). Please revise to read: If any significant discrepancies between the shipment and associated documentation are found that cannot be resolved within 15 days after receiving the waste, the Permittees shall send a notification to the Department in accordance with 40 C.F.R. § 264.72.

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PP2-19	2.3.7	27	The Permittees shall characterize treatment-derived wastes by determining whether the waste is a hazardous or mixed waste in compliance with the requirements of Permit Condition 2.3.4 of this Part (2) and in compliance with the notification and record-keeping requirements specified in 40 C.F.R. § 268.7(b)(3)(ii), Treatment Facility Paperwork Requirements Table, Requirement 1. Specifically, the Permittees shall characterize treatment-derived wastes, including wastes that are formerly characteristic and thus are no longer hazardous or mixed waste, to determine whether the waste meets the applicable LDR treatment standards specified at 40 C.F.R. §§ 268.40, 268.45, 268.48, and 268.49, in compliance with 40 C.F.R. § 268.7(b). Pursuant to 40 C.F.R. § 268.7(b)(3)(ii), the Permittees shall characterize treatment-derived waste to determine the presence of any of the constituents of concern for hazardous waste codes F001 through F005 and F039, and the presence of underlying hazardous constituents in characteristic wastes as defined at 40 C.F.R. § 268.2(i).	DOE/Sandia note Permit Condition 2.3.4 addresses waste characterization review, rather than waste characterization. Additionally, compliance with treatment standards is not always a goal (e.g., preliminary treatment steps taken to render a waste suitable for further treatment at an off-site TSDF). DOE/Sandia evaluate the treated waste to determine whether the treatment was effective; thus, characterization would be limited to information needed for that determination. Please see Comments PA9-26 and PA9-46 for additional discussion of characterization of treated wastes. Accordingly, please revise to read: For hazardous or mixed wastes that are treated to meet one or more applicable treatment standards at a Permitted Unit, the Permittees shall characterize the treatment-derived wastes in compliance with the notification and record-keeping requirements specified in 40 C.F.R. § 268.7(b)(3)(ii), Treatment Facility Paperwork Requirements Table, Requirement 1. Specifically, when compliance with treatment standards is a treatment goal, the Permittees shall characterize treatment-derived wastes, including wastes that are formerly characteristic and thus are no longer hazardous or mixed waste, to determine whether the waste meets the applicable LDR treatment standards specified at 40 C.F.R. §§ 268.40, 268.45, 268.48, and 268.49, in compliance with 40 C.F.R. § 268.7(b). Pursuant to 40 C.F.R. § 268.7(b)(3)(ii), the Permittees shall characterize treatment-derived waste to determine the presence of any of the constituents of concern for hazardous waste codes F001 through F005 and F039, and the presence of underlying hazardous constituents in characteristic wastes as defined at 40 C.F.R. § 268.2(i).
PP2-20	2.4	27	The Permittees shall not be required to determine the average VOC concentration of wastes if the container or tank manages mixed waste as exempted at 40 C.F.R. § 264.1080(b)(6), or the Permittees control air emissions from containers in accordance with the container construction specifications and operation requirements at 40 C.F.R. § 264.1086(b).	The application of 40 CFR 264 Subpart CC requirements to containers of mixed wastes is discussed in General Comment G-1. Each container is evaluated individually with respect to the container construction specifications and operation requirements in 40 CFR 264.1086(b). Please revise to read: The Permittees shall not be required to determine the average VOC concentration of wastes if the container or tank manages mixed waste as exempted at 40 C.F.R. § 264.1080(b)(6), or the Permittees control air emissions from the container in accordance with the container construction specifications and operation requirements at 40 C.F.R. § 264.1086(b).

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-21	2.5.1	28	The Permittees shall not store hazardous or mixed wastes beyond one year from the date that the wastes were first placed into storage at a Permitted Unit unless the Permittees are able to demonstrate to the Department that one of the following conditions exist. *1–2 (not included in comment)* 3 That a mixed waste is included in the Site Treatment Plan (STP) under the Federal Facility Compliance Order (FFCO) and such storage is otherwise in compliance with all requirements of the STP and FFCO (40 C.F.R. §§ 268.50(b) and (e)).	DOE/Sandia note that quantities of covered mixed wastes (wastes that are subject to the FFCO) that are less than 1 cubic meter or 10% of the volume of a treatability group are immediately included in the STP, as specified in Sections VIII and X.B.4 of the FFCO. Larger quantities of covered wastes are not included in the STP until it is revised as specified in Sections VIII and X. Since the revision process takes at least 60 days, it is not appropriate to specify that all covered wastes be included in the STP. As discussed in general Comment G-G, DOE/Sandia also note that NMED review and approval of detailed treatment plans for each waste to be treated at the RMWMU and AHCU (see Permit Part 4, Section 4.3) will lead to significant delays in treating the wastes; thus wastes may not be treated within one year, affecting the Permittees' ability to comply with the requirements of 40 CFR 268.50. Please revise to read: 3 That a mixed waste is subject to the Federal Facility Compliance Order (FFCO) and such storage is otherwise in compliance with all requirements of the STP and FFCO.
PP2-22	2.5.3	29	Pursuant to 40 C.F.R. § 268.7(a)(7), the Permittees shall document in the Facility Operating Record any land disposal prohibited wastes that the Permittees determine to be excluded from the definition of hazardous or solid waste, or determine to be exempted from Subtitle C regulation under 40 C.F.R. §§ 261.2 through 261.6 subsequent to the point of generation. This includes deactivated formerly characteristic hazardous waste managed in wastewater treatment systems subject to the Clean Water Act (CWA) as specified at 40 C.F.R. 261.4(a)(2) or that are CWA-equivalent (40 C.F.R. § 268.7(a)(7)). The Permittees shall include in this documentation a description of the waste's generation process, a description of why it is exempted or excluded, and a description of the waste's disposition.	40 CFR § 268.7(a)(7) requires a one-time notice. The Permit Condition should clearly state that requirement. Further, the requirement does not generally apply to the DOE/Sandia operations that are covered in this Permit; it only applies to wastes that are treated at the RMWMU, the AHCU, or the TTU. Information regarding exclusions and exemptions are documented in the Operating Record in accordance with 40 CFR 268.7(a)(7). Please revise to read: For hazardous or mixed wastes treated at one of the Permitted Units, pursuant to 40 C.F.R. § 268.7(a)(7), the Permittees shall document in the Facility Operating Record (with a one-time notice) any land disposal prohibited wastes that the Permittees determine to be excluded from the definition of hazardous or solid waste, or determine to be exempted from Subtitle C regulation under 40 C.F.R. §§ 261.2 through 261.6 subsequent to the point of generation. This includes deactivated formerly characteristic hazardous waste managed in wastewater treatment systems subject to the Clean Water Act (CWA) as specified at 40 C.F.R. 261.4(a)(2) or that are CWA-equivalent (40 C.F.R. § 268.7(a)(7)).

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-23	2.6 and Table 2-1	29		

DRAFT PERMIT TEXT

2.6 WASTE CHARACTERIZATION DOCUMENTATION INFORMATION

This Documentation Table (Table 2-1) summarizes the waste characterization documentation referenced in this Permit Part and in the Waste Analysis Plan (Permit Attachment 9). This table is not intended to set forth all applicable waste characterization documentation requirements, but is intended only to summarize such requirements. This Table is not exhaustive and the absence of a document requirement shall not be interpreted to waive an otherwise applicable requirement.

Table 2-1
Documentation Table

Name	Location
Waste Analysis Plan (WAP)	Permit Attachment 9
Sampling and Analysis Plan (SAP)	Permit Attachment 15, Section 15.18
Quality Assurance/Quality Control record	Permit Condition 2.3.1 (Part 2) and Permit Attachment 9 (WAP), Section 9.4
Record of waste re-evaluation	Permit Condition 2.3.5 (Part 2)
Record of evaluation of air emission control applicability	Permit Condition 2.4 (Part 2)
LDR notification and certification statements	Permit Condition 2.7.a (Part 2) and Permit Attachment 9, WAP, Sections 9.5 and 9.6
Disposal Request Form	Permit Attachment 9 (WAP), Section 9.4.3
Material Safety Data Sheet (MSDS)	Permit Attachment 9 (WAP), Section 9.2.1
Laboratory Analysis	Permit Attachment 9 (WAP), Section 9.3.1
Pre- and Post-Container Inspection Checklist	Permit Attachment 14, Table 14-7
Training documentation	Permit Condition 2.11 (Part 2), and Permit Attachment 14
Manifest	Permit Attachment 9 (WAP), Section 9.8

DOE/SANDIA COMMENT

As discussed in Comment PP2-15, documentation to be kept in the Facility Operating Record (including the documentation for waste characterization described in Permit Attachment 9) is clearly and completely specified in Permit Attachment 13. Numerous documentation references are also included in other sections of Permit Part 2. This Permit Condition is not consistent with the rest of this draft Permit, and it is not consistent with the requirements in 40 CFR 264.73. Furthermore, Table 2-1 contains numerous inaccurate references, and is unnecessary.

Please delete this section.

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PP2-24	2.8	30	Pursuant to 40 C.F.R. § 266.23(b), the Permittees shall not use waste or used oil or any other material, which is contaminated with dioxin, PCBs, or any other hazardous or mixed waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment.	DOE/Sandia note that PCBs are not included in 40 CFR 266.23(b). Please revise to read: Pursuant to 40 C.F.R. § 266.23(b), the Permittees shall not use waste or used oil or any other material, which is contaminated with dioxin, or any other hazardous or mixed waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment. In addition, the Permittees shall not use waste or used oil or any other material contaminated with PCBs in this manner..
PP2-25	2.9	30	Pursuant to 40 C.F.R. § 264.14, to prevent the unknowing entry and to minimize the possibility of unauthorized entry of persons or livestock onto the waste management units, the Permittees shall comply with the Security Plan set forth in Permit Attachment 10, as required by 40 C.F.R. § 264.14.	The regulatory citations are not specific to the issue. Please revise to read: Pursuant to 40 C.F.R. § 264.14(c), to prevent the unknowing entry and to minimize the possibility of unauthorized entry of persons or livestock onto the waste management units, the Permittees shall comply with the Security Plan set forth in Permit Attachment 10.
PP2-26	2.10	30	The Permittees shall implement the Inspection Plan contained in Permit Attachment 11, and shall remedy any container and equipment malfunctions and deteriorations, operator errors, and discharges as required by 40 C.F.R. § 264.15(c).	40 C.F.R. § 264.15(c) addresses malfunctions and deterioration of only equipment and structures; 40 C.F.R. § 264.15(a) addresses "malfunctions and deterioration, operator errors, and discharges." Please revise to read: The Permittees shall implement the Inspection Plan contained in Permit Attachment 11, and shall remedy any container and equipment malfunctions and deteriorations, operator errors, and discharges as required by 40 C.F.R. § 264.15(a).
PP2-27	2.15.1	31	At a minimum, the Permittees shall maintain at the Permitted Units the equipment set forth in Permit Attachment 12 (Contingency Plan), Table 12-3, and as required by 40 C.F.R. § 264.32.	The wording of this Permit Condition is confusing, as Table 12-3 lists facility-wide equipment that is not maintained at individual Units, and other tables in the Permit Attachment list equipment to be maintained at individual Units. Please revise to read: At a minimum, the Permittees shall have available for use the equipment set forth in Table 2-3 of Permit Attachment 12 (Contingency Plan), and as required by 40 C.F.R. § 264.32. The Permittees shall also have available at each Permitted Unit the Unit-specific equipment detailed in Tables 12-5, 12-7, 12-9, 12-11, and 12-13.

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PP2-28	2.15.2	31	This equipment shall undergo, at a minimum, weekly inspection to ensure proper functionality in accordance with the Inspection Plan (Permit Attachment 11).	The inspection frequencies identified in Permit Attachment 11 vary (e.g., daily, weekly, and monthly). DOE/Sandia note that weekly inspections are not necessary for much of the equipment; such items are inspected monthly at most of the Units in accordance with the requirements of 40 CFR 264.15, as described in the Application. DOE/Sandia have performed such inspections on a monthly basis for many years, and have found this frequency to be appropriate considering the slow rate of deterioration of the equipment and the low probability of an environmental or human health incident if the deterioration or malfunction goes undetected between inspections, as specified in 40 CFR 264.15(b)(4). Please revise to read: This equipment shall undergo regularly scheduled inspections to ensure proper functionality in accordance with the frequencies specified in the Inspection Plan (Permit Attachment 11).
PP2-29	2.15.5	31	The Permittees shall maintain Coordination Agreements with the 377th Air Base Wing, Kirtland Air Force Base, the New Mexico Department of Public Safety, the City of Albuquerque and Bernalillo County Fire Departments, the Albuquerque Regional Medical Center, Lovelace Medical Center, the University of New Mexico Medical Center, Presbyterian Health Care Services, and the U.S. Forest Service.	The City of Albuquerque and Bernalillo County Fire Departments do not provide emergency response services to SNL/NM. Fire protection is provided by the 377th Air Base Wing and the US Forest Service, as described in the Application, and in Section 12.5.4 of Permit Attachment 12. DOE/Sandia note that the name and number of hospitals are subject to change. Please revise to read: The Permittees shall maintain Coordination Agreements as needed with the 377th Air Base Wing, Kirtland Air Force Base, the New Mexico Department of Public Safety, the U.S. Forest Service, and one or more Albuquerque hospitals such as the Albuquerque Regional Medical Center, Lovelace Medical Center, the University of New Mexico Medical Center, and Presbyterian Health Care Services.
PP2-30	2.15.5	32	Copies of the Coordination Agreements shall be maintained in the Facility Operating Record.	DOE/Sandia note that 40 CFR § 264.73 (Operating Record) does not require that copies of coordination agreements be included in the Facility operating record. Please delete this sentence.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-31	2.16.1	32	The Permittees shall revise the EC lists in Attachment 12 of this Permit (Tables 12-6, 12-8, 12-10, 12-12, and 12-14) and Table 6-2 of Appendix 6 of Permit Attachment 16 by including the home addresses and physical office addresses or locations of the ECs within 30 days of the effective date of this Permit.	DOE/Sandia note this is not necessary for two reasons: • The information already provided in the Contingency Plan fully satisfies the requirements in 20.4.1.500 NMAC incorporating 40 CFR 264.52(d). • The requested information does not support the objectives of rapidly contacting the ECs and providing timely emergency response. Telephones and pagers are the primary means of contacting ECs, and addresses are solely listed for the purpose of correspondence, in which case a post office box is adequate. According to 40 CFR 264.52(d), "The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator..., and this list must be kept up to date." The plan submitted listed the names of the ECs and alternate ECs, provided an address for correspondence and included work and home telephone numbers as well as a pager number and/or a cell phone number. The sentence construction in this regulation clearly establishes that the "(office and home)" phrase applies to phone numbers only, not to providing home addresses. Also, in the May 19, 1980 Federal Register (45 FR 33186), EPA made the following statement when commenting on the availability of an emergency coordinator, "However, the Agency believes an emergency coordinator should at least be available (on call) to respond immediately to emergencies at the facility, initially by giving phone instructions to local authorities and facility personnel, but also by being able to be on-the-scene within a short time." Therefore, DOE and Sandia have complied with the regulations by providing an address which allows for correspondence (i.e., post office box for the relevant office address) and a complete listing of all telephone numbers to achieve the level of being available (on call). Please delete this requirement.
PP2-32	2.16.1	32	The Permittees shall immediately implement the Contingency Plan contained in Permit Attachment 12, whenever there is a fire, explosion, or release of hazardous or mixed waste or hazardous waste constituents that could threaten human health or the environment.	Please revise as follows to clarify that the requirement for implementing the contingency plan applies only to emergencies affecting Permitted Units: The Permittees shall immediately implement the Contingency Plan contained in Permit Attachment 12, whenever there is a fire, explosion, or release of hazardous or mixed waste or hazardous waste constituents at a Permitted Unit that could threaten human health or the environment.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-33	2.16.2	32	The Permittees shall maintain copies of the Contingency Plan and all amendments to the Plan at each Permitted Unit. [40 C.F.R. § 264.53(a)]. The Permittees shall provide a current copy of the Contingency Plan and all amendments of the Plan to the Department and all entities with whom the Permittees have Coordination Agreements, as provided for in Permit Condition 2.15.5 and Permit Attachment 12. [40 C.F.R. § 264.53(b)].	It is not necessary to keep all amendments at each Permitted Unit; only the most current Plan is necessary. It is also not necessary to provide the full plan to entities that do not directly provide emergency services; these entities are adequately informed according to the Coordination Agreements. The distribution list for the plan and amendments consists of NMED, the SNL emergency response organization, and the Kirtland Air Force Base Fire Department, as shown in Section 12.4 of Permit Attachment 12. Please revise to read: The Permittees shall maintain copies of the current Contingency Plan at each Permitted Unit and shall maintain a copy of the Contingency Plan and all amendments to the Plan in the Facility Operating Record. [40 C.F.R. § 264.53(a)]. The Permittees shall provide a current copy of the Contingency Plan to the Department and all entities that provide emergency services at SNL/NM, as provided for in Permit Condition 2.15.5 and Permit Attachment 12. [40 C.F.R. § 264.53(b)].
PP2-34	2.18	32	Personnel and Telephone Number Changes -- The Permittees shall inform the Department in writing of changes in its key management personnel and their telephone numbers within 15 days of the changes.	Please delete this requirement. For purposes of implementing the Permit, use of position/title is more efficient than individual names. Use of position/title is consistent with the NMED contact information provided in Section 1.32.1 of the draft Permit. In accordance with 40 CFR 270.11, the names of responsible corporate officers and their delegated representatives will be provided to NMED by letter transmittal. The DOE contact person is: Site Office Manager U.S. Department of Energy P.O. Box 5400, M/S 0184 Albuquerque, NM 87185-0184 (505) 845-6036 The Sandia contact person is: Vice President Waste Management Operations Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185-5800

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-35	2.19	33	**2.19 BIENNIAL REPORT ON WASTE MINIMIZATION** The Permittees shall include the following items in biennial reports as required under 40 C.F.R. § 264.75 and of Condition 1.16 of Permit Part 1. *1–8 (not included in comment)* 9. Any written policy or statement that outlines the goals, objectives, or methods for source reduction and recycling of hazardous and mixed waste at the Facility. 10. Any employee training or incentive programs designed to identify and implement source reduction and recycling opportunities for all hazardous and mixed wastes. 11. Any source reduction and/or recycling measures implemented in the last five years or planned for the near future. 12. An itemized list of the dollar amounts of capital expenditures (plant and equipment) and operating costs devoted to source reduction and recycling of hazardous and mixed waste. 13. Factors that have prevented implementation of source reduction and recycling. 14. Sources of information on source reduction and recycling received at the Facility (e.g. local government, trade associations, suppliers). 15. An investigation of additional waste minimization efforts that could be implemented at the Facility. This investigation should analyze the potential for reducing the quantity and toxicity of each waste stream through production process change, production reformulation, recycling, and all other appropriate means. The analysis should include an assessment of the technical feasibility, cost, and potential waste reduction for each option. 16. A flow chart or matrix detailing all hazardous wastes the Facility produces, by quantity and type, including mixed waste, and by building/area. 17. A demonstration of the need to use those processes which produce a particular hazardous or mixed waste due to a lack of alternative processes, available technology, or available alternative processes that would produce less volume of toxic waste. 18. A demonstration of the applicability or inapplicability of the	The Biennial Report includes information on EPA ID numbers of off-site facilities; descriptions and quantities of hazardous waste received during the reporting year; and methods of treatment, storage, or disposal for each hazardous waste. Items 9-18 are not included in the requirements in 40 CFR 264.75 for biennial reports, and should not be included in the Permit as they are not consistent with the regulations, as discussed in General Comment G-C. DOE/Sandia are required by Condition 2.7 of Permit Part 2 and by 40 CFR 264.73(b)(9) to certify annually that a waste minimization program is in place. Please delete items 9-18 and revise as follows: **2.19 BIENNIAL REPORT** The Permittees shall include the following items in biennial reports as required under 40 C.F.R. § 264.75 and of Condition 1.31 of Permit Part 1. *1–8 (not included in comment)*

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-35 (cont)			following waste minimization techniques. a. A program that inventories the amount of contaminated lead that exists at the Facility; b. A program that substitutes steel for lead whenever possible; c. A program for coating lead with a strippable coating to prevent its entire contamination, if it is impossible to substitute steel for lead; d. A program or bench scale method to decontaminate the contaminated lead; e. A program for use of non-hazardous liquid scintillation cocktail solutions; and f. A program designed to prevent commingling of radioactive waste with hazardous or solid wastes.	

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-36	2.20.2	35 - 36	The Closure Plan in Permit Attachment 15 as written is inadequate and must be revised. The Permittees shall submit a detailed closure plan for each Permitted Unit, incorporating all the requirements identified in this Permit Part, within 90 days after the effective date of this Permit; the submittal shall be in the form of a Class 3 Permit modification request. (40 C.F.R. § 270.32(b)) which identifies all steps necessary to perform closure. The Permittees shall prepare the closure plans in accordance with 40 C.F.R. § 264.112, incorporated herein by reference, incorporating all the requirements identified in this Permit Part. The closure plans shall, at a minimum, describe how each Permitted Unit will be closed to meet the closure performance standards and shall include the following. 1. The Permittees shall include in each closure plan a sampling and analysis plan (SAP) for each Permitted Unit based on Section 2.20.4 of this Permit Part. The Permittees may propose additional or alternate sampling activities in the SAP that address Unit-specific conditions. The Department must approve all SAPs before sampling activities begin. 2. The Permittees shall establish a comprehensive list of contaminants of potential concern for each Permitted Unit undergoing closure by identifying: a. All hazardous and mixed wastes managed within the Permitted Unit; and b. All hazardous constituents contained within those wastes. This list shall be utilized to select the analytical methods and detection limits capable of detecting the contaminants of potential concern associated with the Unit. 3. The Permittees shall include in each Permitted Unit's closure plan a schedule for completing the requirements in this Permit Part in accordance with 40 C.F.R. § 264.112(b)(6) which is incorporated herein by reference. This schedule shall account for all permit modifications.	As discussed in General Comment G-J, DOE/Sandia note that the Closure Plan included in the Application and Permit Attachment 15 is adequate, as it fully identifies the steps necessary at each Unit to perform closure and meet the closure performance standards. In addition, the plan fully addresses all the requirements of 40 CFR 264 Subpart G, the additional requirements for container storage units in 40 CFR 264.178, the requirements for miscellaneous units in 40 CFR 264 Subpart X, and the requirements for closure of thermal treatment units in 40 CFR 265.381. Finally, the closure plan included in the Application and Permit Attachment 15 includes a SAP that addresses the requirements for SAPs in draft Permit Condition 2.20.3. Please delete the first item. Regarding the contaminants of potential concern (COPCs) in item 2, DOE/Sandia note that it is not reasonable to ignore Unit history and operations when developing a closure plan. DOE/Sandia selected constituents of concern based on Unit history, waste management operations, and constituent properties. The constituents are included in the Closure Plan in the Application and in Permit Attachment 15. The constituents chosen are those that are: • present in wastes that were/are stored in the Units, • indicative of releases of hazardous wastes or constituents • likely to be present at closure if they were released. DOE/Sandia included a schedule in the Closure Plan in the Application. DOE/Sandia also note that any schedule that accounts for future permit modifications is only an estimate. Please include the schedule from the Application in the Permit and delete item 3. Please revise to read: Prior to closure of each Permitted Unit, the Permittees shall establish in the Closure Plan for that Unit a comprehensive list of contaminants of potential concern by identifying: 1. All hazardous and mixed wastes managed within the Permitted Unit; and 2. constituents present in wastes that would be indicative of releases of hazardous wastes 3. constituents likely to be present at closure if they were released. This list shall be utilized to select the analytical methods and detection limits capable of detecting the contaminants of potential concern associated with the Unit.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-37	2.20.3	36	Sixty days prior to final receipt of hazardous waste at any of the Permitted Units, Permittees shall submit for Department approval, an updated sampling and analysis plan describing decontamination procedures and sampling methods to verify decontamination of equipment and removal of solid and hazardous waste.	It is not necessary to submit an "updated sampling and analysis plan" unless there are changes that necessitate an update. DOE/Sandia note that changes in procedures for decontamination of facility equipment or structures are considered Class 1 permit modifications requiring prior Department approval in 40 CFR 270.42 Appendix I (Item D.d). The review time specified in 20.4.2.207 NMAC for this type of modification is 120 days, not 60 days. DOE/Sandia further note that it is not possible to predict the date of "final receipt of hazardous waste at any of the Permitted Units" due to the variations in quantity and types of hazardous wastes generated by the research and development operations at SNL/NM. Please delete this item.
PP2-38	2.20.3.1	36	Each SAP shall provide for: 1. Verification sampling to ensure that equipment, structures, and buildings are decontaminated and to determine whether there has been a release of hazardous wastes or hazardous constituents to environmental media; 2. Investigative sampling if a release of hazardous wastes or hazardous constituents to environmental media is identified in step 1 above in order to determine the nature and extent of the release; and *3 (not included in comment)*	DOE/Sandia note that sampling environmental media is not an adequate or appropriate tool for determining whether there has been a release of hazardous wastes or hazardous waste constituents to environmental media. Sampling is appropriate to investigate the extent of a release <u>only</u> when there is prior information (such as visual evidence or operating history) indicating that a release occurred or may have occurred. DOE/Sandia also note the SAPs included in the Closure Plan do provide for adequate verification sampling. Please revise as follows: Each SAP shall provide for: 1. Verification sampling to ensure that equipment, structures, and buildings are decontaminated; 2. Investigative sampling if a release of hazardous wastes or hazardous constituents to environmental media is identified in Unit operating history or records, or is suspected based on visual evidence in order to determine the nature and extent of the release; and

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-39	2.20.3.1	37	Each SAP shall, at a minimum, include the following. *1–5 (not included in comment)* *6 Cleaning Solutions.* The Permittees shall make certain that all cleaning solutions to be used during closure are identified in the Unit-specific sampling and analysis plan.	DOE/Sandia note that the most appropriate cleaning solution will be selected during closure based on the specific conditions. The closure plan in the Application includes a general specification for cleaners, and will be revised before closure to include recommendations for specific cleaners that are commercially available. Any cleaner chosen will meet the specifications. The closure report will include a discussion of the cleaning activities and the analytical results; the cleaning solution will be considered as appropriate during evaluation of the results. Please revise as follows: Each SAP shall, at a minimum, include the following. *1–5 (not included in comment)* *6 Cleaning Solutions.* The Permittees shall make certain that all cleaning solutions to be used during closure meet the specifications in the Closure Plan.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-40	2.20.4.1	37	After decontamination and removal as discussed in Section 2.20.7, the Permittees shall conduct the following verification sampling activities and frequencies, and include them in each SAP, to ensure equipment and structures are properly decontaminated and determine whether there has been a release of hazardous or mixed waste or hazardous constituents to environmental media. 1. The Permittees shall collect at least one sample every 250 square feet in loading and unloading zones and at least one sample every 500 square feet on walls, ceilings, and floors of the Permitted Unit. The type of sample collected (e.g., wash-water, swipe, chip, core, soil) shall depend on the material being sampled and the constituents being analyzed. The Permittees shall provide the rationale for proposing the types of samples they will be collecting. *2 (not included in comment)* 3. If samples collected from any equipment or surfaces indicate the presence of contamination above Department-approved levels, the contaminated area must be washed and re-sampled. The Permittees shall continue this process until decontamination is achieved. 4. If verification samples on floors detect hazardous or mixed waste or hazardous constituents, the Permittees shall follow the procedures identified in Section 2.20.4.1. 5. The Permittees shall collect one swipe sample for every 10 feet of exposed piping. 6. At the Permitted Units, the Permittees shall decontaminate fully each room (e.g., walls, floors, doors, sumps, seconday containment structures, drainage structures and ceilings) and include these areas in the sampling area grid locations. Outdoor storage areas, including concrete, asphalt, and asphaltic concrete shall also be decontaminated. *7 (not included in comment)* 8. The Permittees' verification samples in areas constructed of asphalt or asphaltic concrete shall consist of collecting soil samples from the subgrade and soils underneath the asphalt or asphaltic concrete at intervals approved by the Department. If verification soil samples detect contamination, the Permittees shall remove all of the asphalt or asphaltic concrete and follow the	DOE/Sandia note the sampling frequency specified in this section is not consistent with the Closure Plan in the Application or in Permit Attachment 15. Neither is it consistent with the operating history of the Permitted Units. For example, DOE/Sandia note wastes are transferred through tubing at the Thermal Treatment Unit; this tubing will be managed with the other equipment during closure, as described in the Closure Plan in the Application and Permit Attachment 15. The piping present in the other waste management units is part of the structures, and should be sampled in the same manner as the surrounding area; thus, item 5 should be deleted. Item 6 does not address verification sampling and should be deleted. Item 8 is not consistent with the Closure Plan and does not address contamination attributable to Unit operations. Permit Condition 2.20.7 describes Time Allowed for Closure, not decontamination and removal. Accordingly, please revise as follows: After decontamination and removal as discussed in Permit Attachment 15, Sections 15.3.2, 15.4, and 15.5, the Permittees shall conduct the following verification sampling activities and frequencies, and include them in each SAP, to ensure equipment and structures are properly decontaminated and determine whether there has been a release of hazardous or mixed waste or hazardous constituents to environmental media. 1. The Permittees shall collect samples as described in Permit Attachment 15. The samples shall address surfaces in the Permitted Units that were affected by hazardous and mixed waste management activities. The type of sample collected (e.g., wash-water, swipe, chip, core, soil) shall depend on the material being sampled and the constituents being analyzed. The Permittees shall provide the rationale for proposing the types of samples they will be collecting. *2 (not included in comment)* 3. If samples collected from any equipment or surfaces indicate the presence of contamination above threshold levels in the Closure Plan, the contaminated area must be washed and re-sampled. The Permittees shall continue this process until decontamination is achieved. 4. If verification samples on floors detect hazardous or mixed waste or hazardous waste constituents, the Permittees shall follow the procedures identified in Permit Attachment 15, Section 15.3.2.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-40 (cont)			procedures identified in Section 2.20.4.1.	*5 (formerly 7, not included in comment)* 6. The Permittees' verification samples in areas constructed of asphalt or asphaltic concrete shall consist of collecting soil samples from the subgrade and soils underneath the asphalt or asphaltic concrete at intervals approved by the Department. If verification soil samples detect contamination attributable to release of hazardous wastes or hazardous waste constituents, the Permittees shall remove the affected asphalt or asphaltic concrete and follow the procedures identified in Permit Attachment 15.
PP2-41	2.20.4.2	38	The Permittees must determine the nature, extent, and rate of migration of any releases detected during closure activities if contamination is discovered.	DOE/Sandia note that 40 CFR 264 Subpart G requires that the closure activities control, minimize, or eliminate contamination to the extent necessary to protect human health and the environment. This effort is achieved by defining the nature and extent of the contamination and then decontaminating to accepted cleanup levels. Please revise to read: The Permittees must determine the nature and extent of any releases detected during closure activities if contamination is discovered.
PP2-42	2.20.5	38	At the completion of closure of any Permitted Unit, the Permittees shall submit a closure report, for Department approval, that summarizes all activities conducted during closure including, but not limited to: 1. The results of all investigation, *2 (not included in comment)* 3. Decontamination, *~~4~~ 5 (not included in comment)* Such closure reports shall be submitted to the Department no later than 90 days after completion of Unit closure; nothing shall preclude the Department from requesting interim reports concerning the progress of closure.	The text of numbered items 1 and 3 as written is unclear. DOE/Sandia also note 40 CFR 264 does not include a requirement for interim reports on the progress of closure; this should be deleted. Please revise as follows: At the completion of closure of any Permitted Unit, the Permittees shall submit a closure report to the Department no later than 90 days after completion of Unit closure, for Department approval. The closure report shall summarize all activities conducted during closure including, but not limited to: 1. Equipment and structure removal, 3. Decontamination of the Units including remaining structures,

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-43	2.20.7	38 - 39	Within 90 days after receiving the final volume of hazardous or mixed waste at a Permitted Unit, the Permittees shall remove all hazardous and mixed waste from the Permitted Unit to a permitted treatment, storage or disposal facility, and shall complete closure activities, as required by 40 C.F.R. § 264.113, following the Closure Schedule in Permit Attachment 15, Table 15-3.	DOE/Sandia note that closure will not be completed in 90 days, as the closure schedule in Table 15-3 specifies 180 days. In addition, any closure activities will be delayed until NMED approves any revisions needed for the SAP. Please revise to read: The Permittees shall remove all hazardous and mixed waste from the Permitted Unit to a permitted treatment, storage or disposal facility, and shall complete closure activities, as required by 40 C.F.R. § 264.113, following the Closure Schedule in Permit Attachment 15, Table 15-3.
PP2-44	2.20.9	39	Within 60 days from the date of completion of closure of a Permitted Unit, the Permittees shall submit by registered mail to the Department a final closure report and written closure certification and signed by an independent professional engineer registered in the State of New Mexico, stating that the waste management unit was closed as required by the Closure Plan in Permit Attachment 15. [40 C.F.R. § 264.115].	This section is not consistent with the requirements of 40 CFR § 264.115. Please revise to read: Within 60 days from the date of completion of closure of a Permitted Unit, the Permittees shall submit by registered mail to the Department a final closure report and written closure certification signed by the owner or operator and an independent professional engineer registered in the State of New Mexico, stating that the waste management unit was closed as required by the Closure Plan in Permit Attachment 15. [40 C.F.R. § 264.115]
PP2-45	2.22 and 2.23	39 - 40	**2.22 LIABILITY REQUIREMENTS** **2.23 INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS**	Sandia Corporation is not subject to these requirements, as discussed in General Comment G-D. Please delete these sections.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP2-101*	2.3.1	25	The Permittees shall maintain a record of these quality assurance procedures and results in the Facility Operating Record required under 40 C.F.R. § 264.73 and Permit Condition 2.17 (Part 2).	Permit Condition 2.17 addresses the Manifest System; the Facility Operating Record is required in Permit Condition 1.34 (Numbered item 6). Please revise accordingly.
PP2-102*	2.3.6.	26	In addition, the Permittees shall ensure that all applicable waste characterization requirements specified in Condition 2.3.4 of this Permit Part are met and documented.	Permit Section 2.3.4 addresses waste characterization review requirements; Section 2.3 lists general waste characterization requirements. Please revise accordingly.
PP2-103*	2.3.7	27	The Permittees shall characterize treatment-derived wastes by determining whether the waste is a hazardous or mixed waste in compliance with the requirements of Permit Condition 2.3.4 of this Part (2) and in compliance with the notification and record-keeping requirements specified in 40 C.F.R. § 268.7(b)(3)(ii), Treatment Facility Paperwork Requirements Table, Requirement 1.	As noted in the preceding comment, Permit Part 2, Section 2.3.4 addresses waste characterization review requirements; Permit Part 2, Section 2.3 lists general waste characterization requirements. In addition, Permit Attachment 9, Section 9.4.5.3 addresses the characterization of treated wastes and treatment residues. Please revise to read: The Permittees shall characterize treatment-derived wastes by determining whether the waste is a hazardous or mixed waste in compliance with the requirements of Permit Part 2, Section 2.3, and Permit Attachment 9, Section 9.4.5.3, of this Part (2) and in compliance with the notification and record-keeping requirements specified in 40 C.F.R. § 268.7(b)(3)(ii), Treatment Facility Paperwork Requirements Table, Requirement 1.
PP2-104*	2.15.3	31	The Permittees shall maintain access to the communications or alarm system required by 40 C.F.R. § 264.34.	This Permit Condition can reference the systems that are described in the Permit Attachments. Please revise to read: The Permittees shall maintain access to the communications or alarm systems listed and described in Permit Attachments 11 and 12 as required by 40 C.F.R. § 264.34.
PP2-105*	2.15.4	31	The Permittees shall maintain enough aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of operation of the Permitted Units, including the CAMU, in an emergency as required by 40 C.F.R. § 264.35, and as set forth in Permit Attachment 12 (Contingency Plan).	Permit Attachment 12 does not include any reference to aisle space. Please revise to read: The Permittees shall maintain enough aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of operation of the Permitted Units, including the CAMU, in an emergency as required by 40 C.F.R. § 264.35, and as set forth in Permit Attachment 2, Section 2.2.2.2 (Aisle Space and Storage Configuration).

*Comment is more administrative in nature

Enclosure D

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT PART 3

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP3-1	3.0	41	This Permit Part (3) contains the regulatory requirements that the Permittees shall follow when managing and storing hazardous wastes at the Hazardous Waste Management Unit (HWMU), and when managing and storing mixed waste at the Radioactive and Mixed Waste Management Unit (RMWMU), the Auxiliary Hot Cell Unit (AHCU), and the Manzano Storage Bunkers (MSB).	Management of radionuclides is not regulated under this Permit, as discussed in General Comment G-A. Therefore, DOE/Sandia do not believe this Permit needs to specify whether radionuclides are present or absent in the wastes that are managed at the HWMU, RMWMU, AHCU, or MSB subject to this Permit. Accordingly, please revise to read: This Permit Part (3) contains the regulatory requirements that the Permittees shall follow when managing and storing hazardous and mixed wastes at the Hazardous Waste Management Unit (HWMU), the Radioactive and Mixed Waste Management Unit (RMWMU), the Auxiliary Hot Cell Unit (AHCU), and the Manzano Storage Bunkers (MSB).
PP3-2	3.1	41	The Permittees shall manage and store hazardous and mixed waste as specified in Permit Attachments 3, 4, 5, and 7, subject to the following conditions. *1 (not included in comment)* 2. Storage Time Limit -- The Permittees shall not store any hazardous or mixed waste in the storage units for more than 1 year, as required by 40 C.F.R. § 268.50(b). *3 (not included in comment)*	Waste management requirements and conditions are specified in all the Permit Attachments. DOE/Sandia note the time limit in this section is not fully consistent with Section 2.5.1 in Permit Part 2 which allows storage beyond one year under certain conditions listed therein. Permit Attachment 9, Section 9.9.3 also lists conditions under which wastes may be stored for more than one year. Please revise as follows: The Permittees shall manage and store hazardous and mixed waste as specified in Permit Attachments 1 through 14, subject to the following conditions. 2. Storage Time Limit -- The Permittees shall not store any hazardous or mixed waste in the storage Units for more than one year, unless the storage meets the conditions in Section 2.5.1 of Permit Part 2 or in Section 9.9.3 of Permit Attachment 9.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP3-3	3.4	42	The Permittees shall use containers that comply with the requirements of the U.S. Department of Transportation shipping container regulations (49 C.F.R. Part 173 – *Shipper's -General Requirements for Shipment and Packaging*, and 49 C.F.R. Part 178 - *Specifications for Packaging*) for management and storage of hazardous and mixed waste.	Acceptable containers are compatible with the waste, in good condition, and kept closed. Containers at the Permitted Units meet these criteria and are managed in compliance with 40 CFR 264 Subparts I and CC as applicable. DOE/Sandia note that this Condition is not consistent with the requirements of 40 CFR 263.10 (b), which specifies "These regulations do not apply to on-site transportation of hazardous waste by generators or by owners or operators of permitted hazardous waste management facilities" in reference to the DOT hazardous materials transportation regulations in 49 CFR 171 through 179 that are incorporated by reference into 40 CFR 263. Please see General Comment G-C for additional discussion regarding consistency between the regulations and requirements in the draft Permit. Furthermore, in many cases, containers that comply with DOT requirements for shipping are not appropriate for storage or treatment at the SNL Permitted Units. Accordingly, please delete this requirement.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP3-4	Table 3-1	43		

DRAFT PERMIT TEXT

TABLE 3-1
Maximum Storage Capacities at SNL's Storage Units

Permitted Storage Unit	Maximum Amount of Waste (gallons)	Type of Container Stacking
Hazardous Waste Management Unit (HWMU)		
Building 958	14,988	Waste containers shall be placed on metal grating over the secondary containment area, or, if they do not contain liquids, on pallets on the reinforced concrete floor.
Building 958B (Modular Storage Building)	1,250	Containers shall not be stacked in the modular buildings.
Building 958C (Modular Storage Building)	1,250	Containers shall not be stacked in the modular buildings
Building 959	1,898	Containers shall not be stacked higher than two containers.
Radioactive and Mixed Waste Management Unit (RMWMU)		
Building 6920	3,355	Containers of liquid wastes shall be stored on portable spill pallets or pans.
Building 6921	1,953	Stacking not available.
Building 6925	20,790	Containers of solids stacked three high without pallets.
Building 6926	20,790	Stacking not available.
Modular Storage Building TP150	275	Containers shall not be stacked.
Modular Storage Building TP153	275	Containers shall not be stacked.
Asphalt Area North, East, and West of Building 6920	4,950	Containers of mixed wastes shall be stored inside enclosed steel transportainers
Auxiliary Hot Cell Unit (AHCU)		
Building 6597	225	Containers of liquids shall not be stacked.
Building 6597 Storage Silos	364	
Manzano Storage Bunkers (MSB)		
Bunker 37034	6,270	Containers of waste shall not be stacked.
Bunker 37045	4,620	
Bunker 37055	4,620	
Bunker 37057	4,620	
Bunker 37118	8,800	

DOE/SANDIA COMMENT

Please see General Comment G-F for discussion of quantities in existing permits and in the draft Permit. DOE/Sandia note the maximum volume is given in gallons; this is a unit of volume and does not imply that the wastes are all liquids, as indicated in the footnote to revised Table 3-1 in this comment.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP3-4 (cont)			As noted in General Comment G-G, the Application includes numerous descriptions of typical operations that illustrate ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. Container configuration, stacking, and the use of transportainers are three examples; in each case, the draft Permit includes prescriptive requirements that are not appropriate in all cases. Also, it is not clear whether "containers shall not be stacked" has the same meaning as "stacking not available." Please revise Table 3-1 as follows:	

TABLE 3-1
Maximum Storage Capacities at SNL's Storage Units

Permitted Storage Unit	Maximum Volume of Waste (gallons)	Type of Container Stacking
Hazardous Waste Management Unit (HWMU)		
Building 958	59,950	Stacks shall be stable. Containers and stacks shall not exceed grating or floor capacity.
Building 958B (Modular Storage Building)	5,000	Stacks shall be stable. Containers and stacks shall not exceed grating capacity.
Building 958C (Modular Storage Building)	5,000	
Building 959	7,590	Stacks shall be stable. Containers and stacks shall not exceed grating or floor capacity.
Radioactive and Mixed Waste Management Unit (RMWMU)		
Building 6920	13,420	Stacks shall be stable. Containers and stacks shall not exceed grating or floor capacity.
Building 6921	7,810	
Building 6925	83,160	
Building 6926	83,160	
Modular Storage Building TP150	1,100	Stacks shall be stable. Containers and stacks shall not exceed grating capacity.
Modular Storage Building TP153	1,100	
Asphalt Area North, East, and West of Building 6920	19,800	Stacks shall be stable. Containers and stacks shall not exceed grating or floor capacity.
Auxiliary Hot Cell Unit (AHCU)		
Building 6597 Container Storage Area	3,520	Stacks shall be stable. Containers and stacks shall not exceed grating or floor capacity.
Building 6597 Storage Silos	1,456	
Building 6597 Hot Cell	900	
Building 6597 Fume Hood	110 (included in Work Area)	
Building 6597 Work Area	2,200	
Manzano Storage Bunkers (MSB)		
Bunker 37034	25,080	Stacks shall be stable. Containers and stacks shall not exceed grating or floor capacity.
Bunker 37045	18,480	
Bunker 37055	18,480	
Bunker 37057	18,480	
Bunker 37118	35,200	

Note: The maximum volume is given in gallons; this does not imply that the wastes are liquids.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP3-5	3.8	44	The Permittees shall inspect at least weekly the storage units for the condition of containers and secondary containment systems, safety equipment, and aisle space to detect leaking containers, deterioration of containers and the containment system caused by corrosion and other factors and to ensure safety equipment and aisle space are adequate in the event of an emergency, in accordance with the Inspection Plan contained in Permit Attachment 11, and as required by 40 C.F.R. § 264.174.	The inspection frequencies identified in Permit Attachment 11 vary (e.g., daily, weekly, and monthly). DOE/Sandia note that weekly inspections are not necessary for much of the equipment; such items are inspected monthly at most of the Units in accordance with the requirements of 40 CFR 264.15, as described in the Application. DOE/Sandia have performed such inspections on a monthly basis for many years, and have found this frequency to be appropriate considering the slow rate of deterioration of the equipment and the low probability of an environmental or human health incident if the deterioration or malfunction goes undetected between inspections, as specified in 40 CFR 264.15(b)(4). In addition, the condition is inexact in relation to the cited regulatory requirement. Please revise to read: The Permittees shall perform regularly-scheduled inspections at areas where containers are stored in the storage Units in accordance with the frequencies specified in the Inspection Plan (Permit Attachment 11), as required by 40 C.F.R. § 264.174.
PP3-6	3.10.1	44	The Permittees shall not locate containers holding ignitable or reactive hazardous or mixed waste within 50 feet (15 meters) of fences surrounding the technical areas, as required by 40 C.F.R. § 264.176.	DOE/Sandia note the HWMU and MSB are not located within a SNL TA. Accordingly, please revise to: Containers holding ignitable or reactive wastes shall be located at least 50 feet from the TA boundary with the following exceptions: at the MSB where they shall be stored at least 50 feet from the fence restricting access by non-Facility personnel at all times, and at the HWMF where they shall be stored at least 50 feet from the Facility property line. Containers holding ignitable or reactive wastes shall be protected from sources of ignition or reaction. [40 C.F.R. § 264.176].
PP3-7	3.10.3	44	Containers of ignitable and reactive wastes shall not be stacked more than two high, in order to comply with the National Fire Protection Association's Flammable and Combustible Liquids Code, incorporated by reference at 40 C.F.R. § 260.11(a)(10).	40 CFR 260.11(a) states "When used in parts 260 through 270 of this chapter, the following publications are incorporated by reference:" DOE/Sandia note the "Flammable and Combustible Liquids Code" is not used in the regulations addressing general requirements for ignitable, reactive, or incompatible wastes in 40 CFR 264.17 or in the requirements for management of containers under 40 CFR 264 Subpart I. As discussed in General Comment G-C, the language of the Permit must be identical to the language of the regulations. Accordingly, please delete this sentence.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP3-101*	3.0	41	A description of the storage units and their locations is provided in Permit Attachments 1, 3, 4, 5, and 6.	The storage Units are described in Permit Attachments 3, 5, 6, and 7. Please revise accordingly.
PP3-102*	3.7	44	Pursuant to 40 C.F.R. § 264.175(d), the Permittees shall comply with the requirements of 40 C.F.R. § 264.175(d) for wastes having hazardous waste numbers F020, F021, F022, F023, F026, and F027.	As written, this condition is inexact in relation to the cited regulatory requirement. Please revise to read: Pursuant to 40 C.F.R. § 264.175(d), the Permittees shall have a containment system defined by 40 C.F.R. 264.175(b) for containers holding wastes having hazardous waste numbers F020, F021, F022, F023, F026, and F027 that do not contain free liquids.
PP3-103*	3.10.2	44	The Permittees shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste and shall follow the procedures described in Permit Part 2 and Attachments 3, 4, 5, 6 and 7, and in accordance with the requirements 40 C.F.R. § 264.17.	Container management requirements are included in Permit Attachment 2 rather than Permit Part 2. Please revise accordingly.
PP3-104*	3.11.1	45	The Permittees shall not place incompatible wastes in the same containers, as set forth in Permit Attachments 3, 4, 5, 6, and 7, and as required by 40 C.F.R. § 264.177(a).	Permit Attachment 2 describes the management of incompatible wastes. Permit Attachment 4 discusses treatment at the TTU; storage is not conducted at that Unit. Please revise to reference the correct Attachments.
PP3-105*	3.11.2	45	The Permittees shall not place hazardous or mixed waste in an unwashed container that previously held an incompatible waste or material, as required by 40 C.F.R. § 264.177(b).	Please see preceding comments. This section references requirements in Permit Attachments 2, 3, 5, 6, and 7. Please revise to incorporate the appropriate Attachments.

*Comment is more administrative in nature

Enclosure E

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT PART 4

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP4-1	4.1.1	46	The Permittees shall only treat waste at the RMWMU and the AHCU in containers for subsequent transfer to a storage or disposal facility, and shall treat only mixed wastes listed in Permit Attachment 8 (Authorized Wastes).	As described in the Application, not all waste treatment at the RMWMU and AHCU occurs in containers. Physical treatment and chemical deactivation may or may not take place in containers, depending on the nature of the waste and treatment requirements. Further, DOE and Sandia note that the source, special nuclear, and byproduct materials that make up the radioactive component of mixed wastes are regulated by DOE under the Atomic Energy Act, as discussed in General Comment G-A. Please revise to read: The Permittees shall treat waste at the RMWMU and the AHCU for subsequent transfer to a storage or disposal facility, and shall treat only wastes listed in Permit Attachment 8 (Authorized Wastes).

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP4-2	Table 4-1	47		

DRAFT PERMIT TEXT

TABLE 4-1
MAXIMUM VOLUMES OF WASTES TO BE TREATED AT THE PERMITTED UNITS

UNIT	WASTE TYPES	MAXIMUM AMOUNT PER TREATMENT EVENT	ANNUAL TREAMENT CAPACITY
THERMAL TREATMENT UNIT (TTU)			
The Unit consists of a square steel pan 2.5 feet per side and 0.5 foot deep set on a 14 feet by 14 feet concrete pad.	Explosives and explosives contaminated wastes	20.8 gallons per burn event	1,200 gallons
RADIOACTIVE AND MIXED WASTE MANAGEMENT UNIT (RMWMU) -- Buildings 6920 and 6921			
Chemical deactivation	Ignitable, Reactive and Corrosive Wastes	65 Gallons/day	3,000 Gallons/Year
Macroencapsulation	Hazardous Debris: Wastes with Toxic Metals (excluding Mercury	165 Gallons/ day	6,000 Gallons/Year
Stabilization	Solid and liquid Toxicity Characteristic Metals	550 Gallons/day	6,000 Gallons/Year
Thermal deactivation	Ignitable, Reactive and Corrosive Wastes	550 Gallons/day	150 Gallons/Year
Amalgamation	Elemental Mercury	10 Pounds/hour	100 Pounds/Year
Physical Treatment/Mechanical Processing	Example: Puncturing Aerosol Cans	20 Pounds/hour	4,000 Pounds/Year
AUXILIARY HOT CELL UNIT (AHCU) -- Building 6597			
Chemical deactivation	Ignitable, Reactive and Corrosive Wastes	55 gallons/day	2,000 Gallons/Year
Macroencapsulation	Hazardous Debris: Wastes with Toxic Metals (excluding Mercury	55 gallons/day	6,000 Gallons/Year
Stabilization	Solid and liquid Toxicity Characteristic Metals	55 gallons/day	2,000 Gallons/Year
Physical Treatment/Mechanical Processing	Example: Aerosol Cans	20 pounds /hour	4,000 Pounds/Year

DOE/SANDIA COMMENT

Please revise all quantities in the table to be consistent with current permitted capacities as specified in Permit NM5890110518-2 (for the TTU) and Part A of the Application (for the RMWMU and AHCU). All capacities have been calculated according to the process and physical requirements, as discussed in General Comment G-F. Reducing capacities will render the treatment operations unworkable and will not provide additional protection of human health or the environment.

The table also includes several incorrect references (e.g., "Hazardous Debris Wastes with Toxic Metals (excluding mercury)" should be "Hazardous Debris" in the list of types of waste to be treated at the RMWMU and AHCU. This change will make Table 4-1 in the Permit consistent with the regulatory requirements for macroencapsulation in 40 CFR 268.45 Table 1, and with the waste treatment described in the Waste Analysis Plan (Permit Attachment 9.3.2 item 2) DOE/Sandia note that there are no contaminant restrictions for macroencapsulation in 40 CFR 268.45 Table 1; the restrictions listed in this table are applicable to stabilization rather than macroencapsulation.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP4-2 (cont)				

DOE/Sandia note stabilization is performed at the RMWMU and AHCU to immobilize toxicity characteristic metals but many stabilization agents also eliminate free liquids. Both stabilization and solidification may be goals of the treatment process; thus both should be included. Also, corrosive wastes are not treated by thermal deactivation at the RMWMU.

As discussed in Comment PP3-4, volumes are all given in gallons for consistency; this is a unit of volume and does not imply that all wastes are liquids, as indicated in the footnote to revised Table 4-1 in this comment.

Please revise Table 4-1 to read:

TABLE 4-1
MAXIMUM QUANTITIES OF WASTES TO BE TREATED AT THE PERMITTED UNITS

UNIT	WASTE TYPES	MAXIMUM AMOUNT PER TREATMENT EVENT	ANNUAL TREAMENT CAPACITY
THERMAL TREATMENT UNIT (TTU)			
The Unit consists of a square steel pan 2.5 feet per side and 0.5 foot deep set on a 14 feet by 14 feet concrete pad.	Explosives and explosives contaminated wastes	190 pounds or 20.8 gallons present at any one time	5,000 kilograms or 1,200 gallons
RADIOACTIVE AND MIXED WASTE MANAGEMENT UNIT (RMWMU) -- Buildings 6920 and 6921			
Chemical deactivation	Ignitable, Reactive and Corrosive Wastes	65 Gallons/day	3,000 Gallons/Year
Macroencapsulation (also in Building 6925)	Hazardous Debris	840 Gallons/ day	6,000 Gallons/Year
Stabilization/Solidification	Solid and Liquid Wastes (excluding elemental and high mercury subcategories)	550 Gallons/day	6,000 Gallons/Year
Thermal deactivation	Ignitable and Reactive Wastes	10 Pounds/hour	150 Pounds/Year
Amalgamation	Mercury	2 Pounds/hour	100 Pounds/Year
Physical Treatment	Example: Puncturing Aerosol Cans	20 Pounds/hour	4,000 Pounds/Year
AUXILIARY HOT CELL UNIT (AHCU) -- Building 6597			
Chemical deactivation	Ignitable, Reactive and Corrosive Wastes	55 gallons/day	2,000 Gallons/Year
Macroencapsulation	Hazardous Debris	55 gallons/day	6,000 Gallons/Year
Stabilization/Solidification	Solid and Liquid Wastes (excluding elemental and high mercury subcategories)	55 gallons/day	2,000 Gallons/Year
Physical Treatment/	Example: Aerosol Cans	20 pounds /hour	4,000 Pounds/Year

Note: The annual quantity may be given in gallons; this is a volume and does not imply that the treated wastes are liquids.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP4-3	4.2.2	47	The Permittees are prohibited from treating shipping and storage containers. The Permittees shall not treat more than 20.8 gallons of reactive hazardous wastes per burn event, except in case of an emergency, and then only following authorization by the Department.	DOE/Sandia note that a burn event may last for several hours, and includes all the waste requiring treatment; this volume typically exceeds 20.8 gallons. However, only 20.8 gallons (or an equivalent volume of solids) of waste are present in the Unit at any one time. Further, the discussion of treatment of shipping and storage containers is not consistent with the existing permit or with the information provided in the Application. Please revise to read: The Permittees shall not place more than 20.8 gallons or 190 pounds of reactive hazardous wastes (solid and liquid combined) in the burn pan at any one time. The maximum net explosive weight of explosives treated during any burn event shall not exceed 2.4 pounds (1.092 kg).
PP4-4	4.2.3	48	After an OB treatment event, TTU personnel shall notify any security guards when their security patrols can resume.	TTU personnel notify Sandia emergency response personnel before and after TTU treatment operations; the emergency response personnel notify security personnel. Please revise to read: After TTU treatment operations are completed for the day, TTU personnel shall notify Sandia emergency response personnel that the burn event is complete. Security personnel can then resume normal patrols around the TTU.
PP4-5	4.2.3	48	The Permittees shall sample and analyze any accumulated precipitation from the catch tank that is located adjacent to the burn pan. All standing water in any portion of the burn pan shall be removed within 24 hours after a precipitation event. The Permittees shall make a hazardous waste determination of the water in accordance with 40 C.F.R. § 262.11 upon removal of any such water and manage the water appropriately.	DOE/Sandia note the burn <u>pan</u> is equipped with a lid that is kept closed except during treatment to minimize contamination. The <u>pad</u> that surrounds the burn cage (containing the burn pan) is open and drains to the catch tank; water does not accumulate on the pad. The catch tank is sized to accommodate a single precipitation event, but multiple events may occur before waste determination is completed. Therefore, the water in the tank is pumped into containers and accumulated; this prevents overflow of the tank. Please revise to read: To prevent precipitation accumulation in the burn pan and to minimize contamination of precipitation, the burn pan lid shall be closed except during treatment events, during loading or unloading of the burn pan. Precipitation incident on the steel liner pad shall be collected in the adjacent catch tank. The Permittees shall make a determination of the water in accordance with 40 C.F.R. § 262.11, and shall manage the water appropriately.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP4-6	4.2.3.5	48	The Permittees shall follow the special procedures for handling ignitable, reactive, and incompatible wastes set forth in Permit Attachments 2, 3, 4, 5 6, and 7, and as required by 40 C.F.R. § 264.17(a).	Permit Part 4.2 specifies requirements for the operation of the TTU. References to Permit Parts specifying requirements for the permitted storage Units are therefore unnecessary. Please revise accordingly.
PP4-7	4.2.3.6	47	The Permittees shall conduct OB activities only between the hours of 7 AM and 7 PM, except in case of an emergency.	DOE/Sandia note that it is sometimes necessary to adjust the operations in response to the weather, as recognized in existing Permit NM5890110518-2. Such adjustments allow TTU personnel to complete treatment in a timely manner, and provide protection for human health and the environment. Please revise to read: The Permittees shall conduct OB activities only between the hours of 7 AM and 7 PM. Operations may continue beyond 7 PM only in case of an emergency or if necessary to complete treatment that is underway.
PP4-8	4.2.3.7	48	The Permittees shall ensure that not less then two persons are present at the TTU during any TTU operations.	For personnel safety, TTU operation is monitored from within building 6715 as described in the Application. Please revise to read: During TTU treatment operations, the Permittees shall ensure two persons are present at the TTU or monitoring TTU operations from within Building 6715.
PP4-9	4.2.3.10	49	The Permittees shall not carry out TTU operations when there are unauthorized personnel at or around the TTU.	The TTU boundary and Building 6715 complex boundary define the safety exclusion area for the TTU operations. An additional exclusion area beyond these is unnecessary. Please revise to read: The Permittees shall not carry out TTU operations when there are unauthorized personnel within the TTU boundary or between the TTU and Building 6715.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP4-10	4.2.3.11	49	The Permittees shall not conduct TTU operations at any given time when wind speed at the TTU exceeds 15 miles per hour (25 km/hour).	The upper limit in allowable wind speed is not consistent with Permit NM5890110518-2, and it is not clear that this restriction applies only to treatment operations at the TTU. During the past four years, DOE/Sandia have demonstrated that the TTU can be operated at wind speeds up to 20 miles per hour in compliance with the current permit conditions, and in a manner that is protective of human health and the environment. The windscreens on the south and north sides of the TTU and the burner housing on the east side of the cage, coupled with the depth and relatively small capacity of the burn pan and the close proximity of the burners, provide adequate combustion at ambient wind speeds up to twenty mph. The windscreens and burner housing extend more than 20 inches above the top of the burn pan and burners. The windscreens are attached at the top and have openings at the bottom to provide protection from direct winds while allowing airflow for combustion. The positive pressure and flow rate of the burners provide a sturdy flame, and the burners are located near the burn pan to maximize treatment effectiveness. Following treatment, the burn pan lid is lowered to provide containment and the ash is removed from the pan in accordance with the permit. Please revise to read: The Permittees shall not operate the TTU (burn) when wind speed at the TTU exceeds 20 miles per hour (32 km/hour).
PP4-11	4.2.3.11	49	The Permittees shall not conduct TTUoperations on any day when a thunderstorm is imminent or is within 10 miles (16 km) of the TTU. The Permittees shall not conduct TTU operations during a snowstorm.	These conditions are not consistent with Permit NM5890110518-2, and the operations have not changed to warrant these conditions. Also, it is not clear that the restrictions would apply only to treatment operations at the TTU. The draft Permit does not include any explanation of why these restrictions on Unit operations are necessary. DOE/Sandia note the restrictions are unclear and may prevent timely waste treatment, reducing both the safety of Unit personnel and protection of the environment (e.g., the restriction on operations during any day when a thunderstorm is imminent appears to be applicable to most days during the summer). Please revise to read: The Permittees shall not operate the TTU (burn) at any time when threatening weather is within 10 miles (16 km) of the TTU. Threatening weather is defined as: winds in excess of 35 miles per hour (56 km/hour); tornadoes; electrical storms with or without precipitation of any type; snowstorms with a visibility of less than 2000 feet; rain with accumulations greater than 0.3 inches per hour; or any hail, sleet, and/or ice storms.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP4-12	4.2.3.11	49	The Permittees shall not conduct TTU operations when there is a range fire in the vicinity of the TTU.	Please see preceding comments regarding applicability of operating restrictions to treatment operations at the TTU. DOE/Sandia note that small short-lived brush fires are sometimes caused during tests at the SNL/NM outdoor test facilities in TA-3 (facilities that are in the vicinity of the TTU). These fires are rapidly controlled and do not present a hazard to TTU operations or operating personnel. Please revise to read: The Permittees shall not operate the TTU (burn) when there is an uncontrolled range fire within one mile of the TTU.
PP4-13	4.2.3.11	49	The Permittees shall not conduct TTU operations during a dust storm or sandstorm.	Dust or sandstorms caused by blowing wind are addressed by the general restrictions on wind speed, making this sandstorm restriction redundant. DOE/Sandia note sandstorms that are "dust devils" are sporadic and unpredictable. Due to their rapid formation and cessation, the Unit operator cannot effectively cease treatment operations for dust devils. Please delete this requirement.
PP4-14	4.2.3.13	49	Following an OB event, the TTU Team Leader shall be responsible for determining whether or not it is safe to enter the Unit. The Unit shall be closed for a minimum of 24 hours after the fire has died out before anyone is permitted into the area.	As described in the Application, treatment operations occur periodically at the TTU and typically involve intermittent burns during one to three days. Because of the multi-day nature of the waste generating activities and associated waste treatment, it is not feasible or necessary to wait 24 hours before entering the Unit to place waste in the burn pan or perform other operations. Based on operating experience, DOE/Sandia have determined four hours is the minimum safe approach time. Please revise as follows: Following treatment operations, the TTU Team Leader or alternate shall be responsible for determining whether or not it is safe to enter the Unit. Except in an emergency, the Unit shall be closed for a minimum of 4 hours after the fire has died out before anyone is permitted into the area.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP4-15	4.2.4	49	After a burn has been completed the Permittees shall secure the TTU for 24 hours to ensure the safety of personnel entering the area to conduct maintenance. After 24 hours has expired, the TTU Team Leader may enter the TTU. After the TTU has been deemed safe, the Team Leader shall ensure that samples of treatment residues are taken. After samples have been collected, TTU personnel shall remove and containerize all treatment residues, inspect the TTU for serviceability, and document any damage which should be repaired in order to keep the Unit operational. The Permittees shall inspect the TTU as soon as practicable after 24 hours have elapsed from the last time a burn was completed. This includes checking for kick-out of water or waste residue, containerizing all treatment residues, collecting treatment residue samples, and physically inspecting the TTU.	As noted in the previous comment, DOE/Sandia have determined four hours is the minimum safe approach time. Personnel may enter the TTU after four hours to conduct a variety of activities (e.g., operations, maintenance or inspections). Determining whether it is safe to enter the Unit is addressed in Section 4.2.3.1, and is redundant here. DOE/Sandia note Permit Attachment 4, Section 4.7.2 requires that treatment residues shall be sampled at least annually. Due to the small annual quantity of treatment residues generated and consistency in the wastes treated at the Unit, annual sampling is adequate to characterize the residues. The residue is known to be a characteristic waste due to the presence of silver. Much of the second paragraph is redundant with the first paragraph. Please revise to read: After a burn has been completed, the Permittees shall secure the TTU for 4 hours to ensure the safety of personnel entering the area. After the TTU has been deemed safe, and as soon as practicable after the completion of the last burn in a set of treatment operations, TTU personnel shall remove and containerize all treatment residues, inspect the TTU for serviceability, document any damage which should be repaired in order to keep the Unit operational, and check for kick-out of waste residue.
PP4-16	4.2.4	50	The Permittees shall remove all combustible materials, including but not limited to grass and wood, within 200 feet of the burn pan.	The current layout of the TTU and the surrounding perimeter road results in 70 feet of cleared vegetation from the TTU. This area and the earthen berms surrounding the TTU effectively shield and protect surrounding areas from TTU activities and provide an adequate fire protection buffer. Expanding the cleared area to 200 feet would increase blowing sand and dust. To protect the environment, the need of fire protection must be balanced with fugitive dust control. For consistency with the requirements in Permit Attachment 4 (Section 4.5.6.1), please revise to read: The Permittees shall keep the grounds and berms within 70 feet of the TTU clear of dry or dead weeds, brush, and other combustible substances to prevent fires.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP4-17	4.2.6	50	**4.2.6 Sampling and Analysis Plan** The Permittees shall sample treatment residues and potentially contaminated soil that are generated during TTU operations and shall send those samples to a laboratory to be analyzed for the constituents listed in Permit Attachment 9 (Waste Analysis Plan).	This condition is not consistent with Permit NM5890110518-2, with the requirements in Permit Attachments 4 and 9, or with the Unit operations described in the Application. DOE/Sandia note that soil in the earthen berms is not contaminated through routine TTU operations, and treatment residues from the TTU can be characterized without sampling and analysis. Please revise to read: **4.2.6 Treatment Residues** The Permittees shall characterize treatment residues generated during TTU operations in accordance with Permit Attachment 9 (Waste Analysis Plan). If soil in the earthen berms is contaminated during TTU operations, the Permittees shall treat the soil as needed in accordance with Permit Attachment 4 (The Thermal Treatment Unit), and shall characterize the residue in accordance with Permit Attachment 9.
PP4-18	4.3	50	Prior to any treatment at the RMWMU and the AHCU, the Permittees must obtain approval from the Department. The Permittees must submit a detailed treatment plan Approval by the Department for each waste that is to be treated. The treatment plan shall describe, at a minimum, the wastes to be treated, the volume of the wastes, detailed descriptions of the methods of treatment, and how treatment efficacy will be verified.	DOE/Sandia note that treatment processes at the RMWMU and AHCU are described in the Application and in Attachments 5 and 6 of the draft Permit. Treatment operations at the RMWMU have historically required 15 to 30 separate treatment plans each year due to the variety of wastes generated at SNL/NM. Immediate modifications are sometimes required in response to conditions encountered during treatment operations. DOE/Sandia note NMED has historically required 60 to 120 days to acknowledge receipt of documents submitted in accordance with the FFCO; this time has been considerably longer for documents that require review and approval. The mutual goal of NMED and the Permittees should be timely treatment of the waste and protection of human health and the environment. Please see General Comment G-G for additional discussion regarding this requirement. Please revise as follows: All treatment at the RMWMU and AHCU shall be performed in accordance with this Permit. Prior to any treatment at the RMWMU and the AHCU, the Permittees must prepare a detailed treatment plan. The treatment plan shall describe, at a minimum, the wastes to be treated, the volume of the wastes, the methods of treatment, and how treatment efficacy will be verified. These plans will be retained in the Operating Record in accordance with Permit Attachment 13.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP4-19	4.3.1	50	The Permittees shall chemically deactivate waste that exhibits the characteristics of ignitability, corrosivity, and/or reactivity at the RMWMU and the AHCU, as described in Permit Attachments 5 and 6.	This condition is not consistent with the conditions in the draft Permit for other types of treatment; the other types of treatment are optional but not required. In some cases, it is more effective to send the waste to an off-site facility for deactivation or neutralization. Please revise to read: The Permittees may chemically deactivate or neutralize waste that exhibits the characteristics of ignitability, corrosivity, and/or reactivity at the RMWMU and the AHCU, as described in Permit Attachments 5 and 6.
PP4-20	4.3.2	50	The Permittees may, at the RMWMU and the AHCU, macroencapsulate debris containing mixed waste or hazardous constituents (excluding elemental and high mercury subcategories) defined in 40 C.F.R. § 268.45(b)(2), Table 1, Section C, in order to reduce or eliminate the leaching potential of that waste by immobilizing the larger debris-type wastes, as described in Permit Attachments 5 and 6.	Elemental and high mercury subcategories are not excluded for hazardous debris treated in accordance with the alternative treatment standards for hazardous debris in §268.45. As noted in Comment PP4-2, these exclusions apply to stabilization, rather than to macroencapsuation. In addition, §268.45(b)(2) is an incorrect reference to Table 1 in §268.45. Please revise to read: The Permittees may, at the RMWMU and the AHCU, macroencapsulate debris containing mixed waste or hazardous waste in accordance with 40 C.F.R. § 268.45 Table 1, Section C, in order to reduce or eliminate the leaching potential of that waste by immobilizing the larger debris-type wastes, as described in Permit Attachments 5 and 6.
PP4-21	4.3.3	50	**4.3.3 Stabilization** The Permittees may stabilize liquid wastes, waste soils, and particulate-type wastes in containers containing toxicity characteristic metals (excluding elemental and high mercury subcategories) in order to reduce or eliminate the leaching potential by immobilizing the metals, and eliminating the liquids, as described in Permit Attachments 5 and 6. Stabilization shall only be done at the RMWMU and the AHCU.	Both stabilization and solidification may be goals of the treatment process, thus it is appropriate to mention both. Please revise to read: **4.3.3 Stabilization and Solidification** The Permittees may stabilize and/or solidify liquid wastes in containers, and may stabilize waste soils and particulate-type wastes in containers containing toxicity characteristic metals (excluding elemental and high mercury subcategories) in order to reduce or eliminate the leaching potential by immobilizing the metals, and eliminating the liquids, as described in Permit Attachments 5 and 6. Stabilization and solidification shall only be done at the RMWMU and the AHCU.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP4-22	4.3.4	50	The Permittees may thermally deactivate static-sensitive explosives and explosive component wastes and liquid wastes exhibiting the characteristics of ignitability, corrosivity, and/or reactivity, in order to remove hazardous characteristics. Thermal deactivation shall only be done at the RMWMU.	This condition is not fully consistent with Unit operations described in the Application. Please revise to read: The Permittees may thermally deactivate explosives and explosive component wastes to remove the hazardous characteristic of reactivity. Thermal deactivation shall only be done at the RMWMU. The thermally deactivated waste may require subsequent treatment to address additional characteristic waste constituents that may also be present in explosive components.
PP4-23	4.3.6	51	**4.3.6 Mechanical Processing** The Permittees may conduct physical treatment of mixed wastes at the RMWMU to achieve volume reduction of the wastes by shredding, segregation, crushing and dissolution of the wastes, as described in Permit Attachment 5.	DOE/Sandia do not conduct X02 mechanical processing operations at the RMWMU or AHCU. Segregation and shredding are not included in the description of physical treatment in the Application. Please revise as follows: **4.3.6 Physical Treatment** The Permittees may conduct physical treatment of hazardous or mixed wastes at the RMWMU and AHCU to achieve volume reduction of the wastes by reducing piece sizes, crushing, and dissolution of the wastes, as described in Permit Attachment 5.
PP4-24	4.3.7	51	The Permittees shall comply with the air emissions requirements of 40 C.F.R. Part 264, Subpart CC, when conducting waste treatment at the Units described in Table 4-1 of this Permit Part.	DOE/Sandia note the requirements of 40 CFR 264 Subpart BB are applicable to hazardous waste treatment operations at the TTU. The requirements of 40 CFR 264 Subpart CC are generally applicable to hazardous or mixed waste treatment operations at the RMWMU and AHCU. Please revise to read: The Permittees shall comply with the applicable air emissions requirements of 40 C.F.R. Part 264, Subparts BB and CC when conducting hazardous or mixed waste treatment at the Units described in Table 4-1 of this Permit Part. Air emission requirements are addressed in Permit Part 5.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP4-101*	4.0	46	Also presented is information on the description and dimensions of each container treatment area, the maximum amount and type(s) of wastes that may be treated by the Permittees, a description of the types of containers used, the capacities of primary and secondary containment systems, and the specific features associated with each waste treatment activity.	This Permit Part only includes information on maximum amount and type(s) of wastes; there is no information about "a description of the types of containers used, the capacities of primary and secondary containment systems, or the specific features associated with each waste treatment activity". Descriptions of the treatment processes are included in Permit Attachments 4, 5, 6, and 9. Please revise accordingly.
PP4-102*	4.1.1	46	The Permittees shall only treat at the TTU reactive hazardous wastes generated in Building 6715 and as authorized in Permit Attachment 8 and Section 4.4.2 of this Permit Part.	There is no Section 4.4.2 of Permit Part 4; the correct reference is Section 4.2. Please revise accordingly.

*Comment is more administrative in nature

Enclosure F

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT PART 5

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP5-1	5.1	52	The Permittees shall characterize hazardous and mixed wastes to ensure adherence to applicable air emission requirements in compliance with 40 C.F.R. Part 264, Subparts AA, BB, and CC. The Permittees store and treat hazardous wastes in containers subject to Subpart CC (i.e., waste contains an average volatile organic concentration of 500 parts per million by weight (ppmw)). In accordance 40 C.F.R. § 264.1080(b)(6) mixed waste stored in permitted container storage units are not subject to Subpart CC air emission control and waste characterization requirements. If the Permittees claim exemption from air emission controls due to a container managing mixed waste, the Permittees shall clearly label the container as containing a radioactive component.	DOE/Sandia note the Subpart CC requirements apply to individual containers, as discussed in General Comment G-I. Thus the exemption for containers managing mixed wastes in 40 CFR 264.1080(b)(6) applies to individual containers; this is not clear in the draft Permit language. Additionally, DOE/Sandia note that characterization is required only to the extent necessary for determining whether wastes are subject to the emission requirements in 40 CFR 264 Subparts AA, BB, and CC. Please revise to read: The Permittees shall characterize hazardous and mixed wastes as needed to ensure adherence to applicable air emission requirements in compliance with 40 C.F.R. Part 264, Subparts AA, BB, and CC. The Permittees store and treat hazardous wastes in containers subject to Subpart CC (i.e., waste contains an average volatile organic concentration of 500 parts per million by weight (ppmw)). In accordance 40 C.F.R. § 264.1080(b)(6) mixed waste stored in containers used solely for management of mixed wastes are not subject to Subpart CC air emission control and waste characterization requirements. If the Permittees claim exemption from air emission controls due to a container managing mixed waste, the Permittees shall clearly label the container as containing a radioactive component.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP5-2	5.2.1	53	In accordance with 40 C.F.R. § 264.1090(a), for each Permitted Unit that is exempted under 40 C.F.R. § 264.1082(c) from using air emission controls, a written report shall be submitted to the Department within 15 days from any occurrence when hazardous waste is placed in a Permitted Unit in noncompliance with the requirements specified in 40 C.F.R. § 264.1082(c)(1) or (c)(2), as applicable (for example, placing in such a Permitted Unit a hazardous waste having an average volatile organic concentration equal to or greater than 500 ppmw at the point of waste origination). The written report shall contain the EPA identification number, name and telephone number of the responsible official, Facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The Permittees shall also submit an annual report of such occurrences to the Department. This report shall also be kept on an electronic filing system.	As discussed in General Comment G-I, the 40 CFR 264 Subpart CC requirements apply to individual containers rather than to entire Permitted Units. Therefore, DOE/Sandia can store containers that are subject to the Subpart CC requirements in the same Permitted Unit as containers that are exempt from the requirements. DOE/Sandia note that 40 CFR § 264.1090(a) does not require the name and telephone number of the responsible official to be included in the written report but does require that the report be signed and dated by an authorized representative of the owner or operator. Further, DOE/Sandia note that an annual report is not required; thus the last two sentences should be deleted. Please revise to read: In accordance with 40 C.F.R. § 264.1090(a), for each container in a Permitted Unit that is exempted under 40 C.F.R. § 264.1082(c) from using air emission controls, a written report shall be submitted to the Department within 15 days from any occurrence when hazardous waste is placed in the container in noncompliance with the requirements specified in 40 C.F.R. § 264.1082(c)(1) or (c)(2), as applicable (for example, placing in such a container a hazardous waste having an average volatile organic concentration equal to or greater than 500 ppmw at the point of waste origination). The written report, signed and dated by an authorized representative of the owner or operator, shall contain the EPA identification number, Facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance.
PP5-3	5.3	53	Pursuant to 40 C.F.R. § 264.1082(b), the Permittees shall control air emissions for each Permitted Unit in accordance with the standards specified in 40 C.F.R. §§ 264.1084 through 264.1087 as applicable to the Permitted Unit. Containers or tanks are exempt from these emission control requirements if all wastes entering the Unit have an average volatile organic concentration at the point of waste origination of less than 500 ppmw.	Please see discussion in preceding comment regarding individual containers. Please revise to read: Pursuant to 40 C.F.R. § 264.1082(b) and (c), the Permittees shall control air emissions for each container or tank subject to the standards as specified in 40 C.F.R. §§ 264.1084 through 264.1087 as applicable to the Permitted Unit. Containers that meet the criteria in 40 CFR 264.1080(b) or 1082(c) are exempt from these emission control requirements.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP5-4	5.4.1	54	The Permittees shall visually inspect all Type A containers for defects at the time the Permittees first manage and/or store hazardous waste or the first time that hazardous waste is accepted for treatment or storage at any of the Permitted Units.	Please see discussion in General Comment G-I regarding individual containers. The inspection requirement in this section should be consistent with the requirements in Sections 5.4.2 and 5.4.3. Please revise to read: The Permittees shall visually inspect all Type A containers for defects at the time the Permittees first manage and/or store hazardous waste in it or the first time that the container with hazardous waste is accepted for storage at any of the Permitted Units.
PP5-5	5.4.2	54	The Permittees shall visually inspect all Type B containers and cover devices for defects at the time each container is first used for managing and storing hazardous waste or the first time hazardous waste is accepted at any of the Permitted Units. If a container remains at any of the storage units for one (1) calendar year or more, it shall be visually inspected for defects at least once every 12 months, pursuant to 40 C.F.R. § 264.1086(c)(4)(ii).	Please see the preceding comment. The inspection requirement in this section should be consistent with the requirements in Sections 5.4.1 and 5.4.3. Please revise to read: The Permittees shall visually inspect all Type B containers and cover devices for defects at the time each container is first used for managing and/or storing hazardous waste or the first time the container with hazardous waste is accepted at any of the Permitted Units. If a container remains at any of the permitted storage Units for one (1) calendar year or more, it shall be visually inspected for defects at least once every 12 months, pursuant to 40 C.F.R. § 264.1086(c)(4)(ii) and the Inspection Plan in Permit Attachment 11.
PP5-6	5.4.3	54	The Permittees shall visually inspect all Type C containers and cover devices for defects at the time each container is first used for treating, managing or storing hazardous or mixed waste or the first time hazardous or mixed waste is accepted at any of the Permitted Units.	Please see the preceding comments. The inspection requirement in this section should be consistent with the requirements in Sections 5.4.1 and 5.4.2. Please revise to read: The Permittees shall visually inspect all Type C containers and cover devices for defects at the time each container is first used for managing and/or storing hazardous waste or the first time the container with hazardous waste is accepted at any of the Permitted Units.
PP5-7	5.6	54	Prior to installing a container storage unit or a miscellaneous unit subject to 40 C.F.R. Part 264, Subpart CC, or modifying an existing process, waste handling, or container such that the Unit or container will become subject to 40 C.F.R. Part 264, Subpart CC, the Permittees shall apply for a Permit modification under 40 C.F.R. § 270.42, and provide specific Part B application information required under 40 C.F.R. §§ 270.14-15 and § 270.27, as applicable, with the modification request.	Please see General Comment G-I regarding applicability of 40 CFR 264 Subpart CC requirements to individual containers rather than to entire Permitted Units. A permit modification is not required for management of wastes or individual containers that are included in the existing permit, whether those containers are subject to Subpart CC or not. Modifications to the Permitted Units are addressed in Permit Part 1. Please delete this section.

Enclosure G

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT PART 6

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-1	6.0	56	Corrective action for releases of hazardous waste or hazardous constituents at the Facility, required by sections 3004(u) and (v) of RCRA, 42 U.S.C. §§ 6924(u) and (v), and sections 74-4-4(A)(5)(h) and (i) and 74-4-4.2(B) of the HWA, shall be conducted solely under the Consent Order except for the following five circumstances: 1) New releases of hazardous waste or hazardous waste constituents from Permitted Units at the Facility; *2–3 (not included in comment)* 4) Releases of hazardous wastes or hazardous constituents that occur after the date on which the Consent Order terminates; and *5 (not included in comment)*	DOE/Sandia note circumstances 1 and 4 identify potential new releases that would be subject to corrective action under the Permit; Section III.W.1 of the Compliance Order on Consent (COOC or Consent Order) also identifies these releases as subject to the Permit. However, the rest of Part 6 is not clear regarding the division of authority between the COOC and the draft Permit, as discussed in General Comment G-E. For example, the references to Table 6-2 at times indicate that all of the SWMUs/AOCs listed are regulated under the COOC, and at other times indicate that the list would include new SWMUs/AOCs identified under the Permit, as discussed in Comment PP6-3. DOE and Sandia request that Part 6 be revised to more clearly distinguish applicability by creating an additional table to list new releases that meet circumstances 1 or 4. Please take the following steps to achieve this: 1. Renumber the current Table 6-1 in the draft Permit as Table 6-5 since the initial reference to this table appears toward the end (p. 95) in Part 6. None of the other tables in Part 6 would be affected by this change. 2. Add another table to Part 6 to list those units subject to corrective action under the draft Permit (and not under the COOC). This new table would become Table 6-1 and should be titled "Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Requiring Corrective Action under the Permit." 3. Change the title of Table 6-2 to indicate it includes only units that are subject to corrective action under the COOC (but not under the Permit): "Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Requiring Corrective Action under the Consent Order." DOE/Sandia note the new Table 6-1 would have no entries, but this could change in the future if new releases meeting Circumstances 1 and 4 occur or are discovered. DOE/Sandia further note a number of changes to Tables 6-3 and 6-4 are needed to correct errors, reflect the most current information, and ensure consistency with the COOC and the administrative record; these are addressed in Comments PP6-78 and PP6-79.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-2	6.0 and 6.7	56	Corrective action for releases of hazardous waste or hazardous constituents at the Facility, required by sections 3004(u) and (v) of RCRA, 42 U.S.C. §§ 6924(u) and (v), and sections 74-4-4(A)(5)(h) and (i) and 74-4-4.2(B) of the HWA, shall be conducted solely under the Consent Order except for the following five circumstances: *1–4 (not included in comment)* 5) For the purpose of complying with the requirements of this Permit for the Mixed Waste Landfill (MWL).	The MWL corrective action process is regulated under the COOC. Section III.W.4 of the COOC states: "The requirements of this Consent Order shall not terminate upon renewal of the Permit issued to the Respondents. The renewed Permit, and any future modifications, renewals, or reissuance of the Permit, will not include any corrective action requirements, nor any other requirement that is duplicative of this Consent Order. The Permit or any renewed Permit can include the four excepted items and the list of SWMUs requiring corrective action described in Section III.W.1." DOE/Sandia note that the COOC prohibits duplicative requirements in the Permit and specifically allows only the following four items listed in Section III.W.1: "(1) new releases of hazardous waste or hazardous constituents from operating units at the Facility; (2) the closure and post-closure requirements of 20.4.1.500 NMAC (incorporating 40 C.F.R. Part 264 Subpart G) as they apply to operating units at the Facility; (3) implementation of the controls, including long-term monitoring, for any SWMU on the Permit's Corrective Action Complete With Controls list, which is described in Section III.W.3.b; and (4) any releases of hazardous waste or hazardous constituents that occur after the date on which this Consent Order terminates pursuant to Section III.E.2." Accordingly, as the MWL corrective action requirements are not included in this list, please delete item 5.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-3	6.0	56	The Permittees shall meet the specified compliance schedules for all actions and deliverables required by this Permit. Corrective action is required for all SWMUs and AOCs identified in Table 6-2 of this Permit Part.	DOE/Sandia note Part 6 of the draft Permit is not clear regarding the division of authority between the COOC and the draft Permit, as discussed in General Comment G-E and the preceding comments. This issue may be addressed by adding a new Table 6-1 as discussed in Comment PP6-1. After the new table is added, please revise to read: The Permittees shall meet the specified compliance schedules for all actions and deliverables required by this Permit. Table 6-1 identifies the SWMUs and AOCs for which corrective action is required pursuant to this Permit. Table 6-2 identifies the SWMUs and AOCs for which corrective action is required pursuant to the Consent Order. The corrective action provisions of this Part apply only to the SWMUs and AOCs identified in Table 6-1, except as explicitly noted by reference to Table 6-2.
PP6-4	6.1.5	57	The Permittees shall submit to the Department by January 31, April 30, July 31, and October 31 of each calendar year a quarterly report summarizing all corrective action activities conducted pursuant to this Permit and the Consent Order. Each report shall summarize the corrective action activities for the quarter (3 month time period) preceding the month of the due date of the report (e.g., the April 30 report shall cover the quarter ending March 31) as detailed in Section 6.14.1 of this Permit Part.	Please revise as follows to be consistent with the current quarterly reporting period and submittal dates: The Permittees shall submit to the Department by March 30, June 30, September 30, and December 30 of each calendar year a quarterly report summarizing all corrective action activities conducted pursuant to this Permit and the Consent Order. Each report shall summarize the corrective action activities for the quarter (3 month time period). Each report shall be submitted within two months following the end of the quarter (e.g., the March 30 report shall cover the quarter ending January 31) as detailed in Section 6.14.1 of this Permit Part.
PP6-5	6.1.6.1	57	**6.1.6.1 Existing SWMUs and AOCs** Table 6-2 identifies the SWMUs and AOCs for which corrective action is required pursuant to the Consent Order.	Please see Comment PP6-1 for suggested revisions to delineate division of authority between the COOC and the draft Permit. Please change the title of the section to better reflect the content, and revise to read: **6.1.6.1 Tracking SWMUs and AOCs** Table 6-1 identifies the SWMUs and AOCs for which corrective action is required pursuant to this Permit. Table 6-2 identifies the SWMUs and AOCs for which corrective action is required pursuant to the Consent Order.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-6	6.1.6.2	58	**6.1.6.2 Reporting of Potential Future SWMUs/AOCs** Permittees shall submit to the Department an annual report containing a summary of outdoor testing activities that could lead to the creation of new SWMUs/AOCs. The report shall list the name, location, and a general description of the type or types of testing (e.g. firing site, explosives testing, drop testing, burn testing) conducted at each outdoor test facility. The first annual report shall be submitted to the Department within 90 days of the effective date of this Permit; subsequent reports shall be submitted annually by March 31 of the following year.	DOE/Sandia note the first annual report of outdoor test activities was submitted December 14, 2005; thus there is no need for a first annual report. Also, the title of this section does not reflect the content of the report. Please revise to read: **6.1.6.2 Reporting of Outdoor Test Activities** Permittees shall submit to the Department an annual report containing a summary of outdoor testing activities that could lead to the creation of new SWMUs/AOCs. The report shall list the name, location, and a general description of the type or types of testing (e.g. firing site, explosives testing, drop testing, burn testing) conducted at each outdoor test facility. The reports shall be submitted annually by March 31 of the following year.
PP6-7	6.1.7	58	If, under this Permit, the Department determines that further investigation of a newly discovered SWMU, AOC, or release is required, the Permittees shall submit a Class 1 Permit modification request, in accordance with 40 C.F.R. § 270.42(a), to add the newly discovered SWMU or AOC to Table 6-2 within thirty calendar (30) days of the Department's determination.	Please see Comment PP6-1 for suggested revisions to delineate division of authority between the COOC and the draft Permit. Please revise to read: If the Department determines that further investigation of a newly discovered SWMU, AOC, or release is required, the Permittees shall submit a Class 1 Permit modification request, in accordance with 40 C.F.R. § 270.42(a), to add the newly discovered SWMU or AOC to Table 6-1 or Table 6-2, as appropriate, within thirty calendar (30) days of the Department's determination.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-8	6.1.8	58	If the Department determines that no further corrective action is required for a SWMU or AOC listed in Table 6-2 (Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Requiring Corrective Action), the Permittees shall submit a request to the Department for a Class 3 Permit modification in accordance with 40 C.F.R. § 270.42(c) to remove the unit from Table 6-2 and list the unit on either Table 6-3 (Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs), and Areas of Concern (AOCs) for which Corrective Action is Complete Without Controls) or Table 6-4 (Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Corrective Action Complete With Controls). A determination that Corrective Action is Complete and approval of a Permit modification to remove a unit from Table 6-2 shall not preclude the Department from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicate a release or likelihood of a release from a SWMU or AOC at the Facility that is likely to pose a threat to human health or the environment.	Please see Comment PP6-1 for suggested revisions to delineate division of authority between the Consent Order and the draft Permit. In order to implement these revisions, please add references to new Table 6-1. DOE/Sandia note a number of changes to Tables 6-3 and 6-4 are needed to correct errors to the lists of SWMUs, to ensure consistency with the administrative record, and to reflect the most current risk information. These corrections are discussed in Comments PP6-78 and PP6-79, and are provided as markups to both tables (in separate files included with these comments). Additionally, AOCs are not addressed in either Table 6-3 or Table 6-4, since the COOC defines the process by which SWMUs are placed on either Table 6-3 or 6-4 of the Permit, and does not include AOCs in that process. COOC Section VII.D.6 *Certificate of Completion for SWMUs and AOCs* states: "If the Department determines that the requirements of this Consent Order have been satisfied for the SWMU or AOC, it will issue to the Respondents a written Certificate of Completion, which shall state that Corrective Action is Complete With Controls or Corrective Action is Complete Without Controls. If an AOC is designated as Corrective Action Complete With Controls, it shall be considered a SWMU and added to the Permit. *See* Section III.W." The COOC does not explicitly address the disposition of an AOC that is designated as Corrective Action Complete Without Controls, but implies that it will not be considered a SWMU and will not be added to the Permit (i.e. it should not be included on Table 6-3 of Permit Part 6). This interpretation is supported by the referenced Section III.W. Specifically, the relevant Subsection III.W.3.b *Class 3 Permit Modification For Corrective Action Complete* identifies only <u>SWMUs</u> that will be addressed in Class 3 permit modification requests for Corrective Action Complete and then added to Table 6-3 or 6-4 of the Permit. In addressing additions to the tables, Section III.W.3.b does not address AOCs at all. Thus, if an AOC is Corrective Action Complete with Controls, it will be re-categorized as a SWMU and added to Table 6-4. If an AOC is Corrective Action Complete Without Controls, it would not be included on either table and would not be subject to the Permit. Accordingly, the term "Area of Concern" should be removed from the titles of Tables 6-3 and 6-4.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-8 (cont)				Please revise to read: If the Department determines that no further corrective action is required for a SWMU or AOC listed in Table 6-1 or Table 6-2 (Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Requiring Corrective Action), the Permittees shall submit a request to the Department for a Class 3 Permit modification in accordance with 40 C.F.R. § 270.42(c) to remove the unit from Table 6-2 and list the unit on either Table 6-3 (Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls) or Table 6-4 (Solid Waste Management Units (SWMUs) Corrective Action Complete With Controls). A determination that Corrective Action is Complete and approval of a Permit modification to remove a unit from Table 6-1 or Table 6-2 shall not preclude the Department from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicate a release or likelihood of a release from a SWMU or AOC at the Facility that is likely to pose a threat to human health or the environment.
PP6-9	6.2.1.2	59	If the Department determines that the corrective measures implemented by the Permittees with regard to the Property are not protective of human health and the environment in light of the Transferee's intended use of the Property, the Department will explain, in writing, why such measures are not protective and will identify the specific additional corrective action requirements that Permittees must complete with regard to the Property.	DOE/Sandia note the land transfer process specified in this Section is not consistent with Section III.Y.1.b of the Consent Order. In order to ensure a timely process for land transfer that is consistent with the Consent Order, please revise to read: If the Department determines that the corrective measures implemented by the Permittees with regard to the Property are not protective of human health and the environment in light of the Transferee's intended use of the Property, the Department will explain, in writing within 60 days after the meeting described in Section 6.2.1.1, why such measures are not protective and will identify the specific additional corrective action requirements that Permittees must complete with regard to the Property.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-10	6.2.1.2	59	**6.2.1.2 The Department's Determination**	Please see preceding comment, and add the following paragraph to the end of this Section: The Department must notify Respondents no later than 60 days following the meeting required by Section 6.2.1.1 as to whether additional corrective action measures are necessary with regard to the property given the transferee's intended use of the property. If the Department does not notify Respondents within this time frame, the Department will be deemed to have concluded that no additional corrective measures are necessary given the transferee's intended use of the property.
PP6-11	6.2.2.2	61	**6.2.2.2 Department's Determination**	Please see preceding comment, and add the following paragraph to the end of this Section: The Department must notify Respondents no later than 60 days following the notice of transfer required by Section 6.2.2.1 as to whether additional corrective action measures are necessary with regard to the property given the transferee's intended use of the property. If the Department does not notify Respondents within this time frame, the Department will be deemed to have concluded that no additional corrective measures are necessary given the transferee's intended use of the property.
PP6-12	6.3	61	**6.3 HEALTH AND SAFETY PLAN** The Permittees shall maintain a Facility Health and Safety Plan, which shall include: *1–12 (not included in comment)* The Facility Health and Safety Plan shall be consistent with: *1–5 (not included in comment)* 6 OSHA regulations, particularly 29 C.F.R. 1910 and 1926; *7–8 (not included in comment)*	Due to the advanced stage and site-specific nature of corrective of action at SNL/NM, please delete the requirement to maintain a facility-wide health and safety plan. Please replace all of Section 6.3 in the draft Permit with the following requirement: The Permittees shall prepare Health and Safety Plans for all field activities. The Health and Safety Plans shall be prepared in accordance with all applicable provisions of this Permit and all local, State and federal regulations and be developed as stand-alone documents.

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PP6-13	6.5	62	The Permittees shall implement and maintain the controls as identified for each SWMU or AOC listed in Table 6-4 and Section 6.6 of this Permit Part for as long as the Department determines that said controls are needed to protect human health and the environment.	Following this sentence, please insert: The Permittees may at any time initiate a permit modification to revise or delete a control.
PP6-14	6.5	62	The controls shall be fully implemented within 90 days of the effective date of this Permit. SWMUs/AOCs for which controls are required shall be inspected by the Permittees at least annually and may be inspected by the Department at any time.	DOE/Sandia note this Section is not consistent with the inspection requirements in 40 CFR 270.30(i). Please see General Comment G-C for further discussion of consistency between regulatory requirements and Permit Conditions, and revise to read: The controls shall be fully implemented within 90 days of the effective date of this Permit. SWMUs for which controls are required shall be inspected by the Permittees at least annually and may be inspected at reasonable times by the Department.
PP6-15	6.6	63 - 64	The Permittees shall implement and maintain the following controls for each of the specified SWMUs/AOCs for as long as the Department determines that said controls are needed to protect human health and the environment. 1 *SWMU 54, Pickax Site (Thunder Range)* – The unexpected discovery of buried explosives at the adjacent TNT site demonstrates that controls are needed for both SWMU 54 and the TNT Site because of the potential for additional unknown occurrences of buried explosives in these areas. The Permittees shall place on the deed prior to any transfer of the land a description of the land's prior use as an explosives test area. The Permittees shall post warning signs at road entrances into the area and at other locations in sufficient numbers to be seen from any approach to the area. The warning signs shall have a legend that states "Danger Unauthorized Personnel Keep Out". The signs shall be posted in English and Spanish and the legend shall be legible from a distance of at least 25 ft. The Permittees shall also implement a system of administrative controls that will ensure that permits are acquired before any use of the land is allowed. The warning signs and permits shall specify that the land was used in the past as an explosives test site. 2 *(not included in comment)* 3 *SWMU 94, Lurance Canyon Burn Site (including all subunits 94-A through 94-H)* – The unexpected discovery of buried depleted uranium (DU) demonstrates that controls are needed for SWMU 94 and co-located SWMU 65 because of the potential for additional	DOE/Sandia note the controls proposed for SWMUs 54, 94, 65, 28-1, and 28-4 in Section 6.6 of this Permit Part are related to potential physical and/or radiological hazards, and are not related to remaining residual RCRA contamination. As discussed in General Comment G-C, New Mexico statutes, Section 7-4-4 NMSA, prohibit more stringent requirements than the federal RCRA regulations as amended. Additionally, source, special nuclear, and byproduct material are not subject to this Permit, as discussed in General Comment G-A. Long-term controls at SWMUs must be directly related to protection of human health and the environment from hazardous waste or residual RCRA contamination; this is consistent with both the COOC and EPA guidance. In guidance for Corrective Action Complete determinations (*Federal Register,* Vol. 67, February 27, 2002, pages 9174 and 9175), EPA distinguished between a cleanup that results in unrestricted use of a facility and one that allows contamination to remain on site: "In other cases, the Agency selects a remedy that allows contamination to remain on site, but imposes ongoing obligations concerning, for example, operation and maintenance of physical waste controls (e.g., a cap), and compliance with institutional controls (e.g., an industrial land use restriction). Thus in this situation, the goal of "protection of human health and the environment" often is achieved by imposing a remedy that allows some contamination to remain in

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PP6-15 (cont)			unknown occurrences of buried DU in these areas. The Permittees shall place on the deed prior to any transfer of the land a description of the land's prior use as an explosives and burn test area, and that the land may contain buried DU. The Permittees shall post warning signs at road entrances into the area and at other locations in sufficient numbers to be seen from any approach to the area. The warning signs shall have a legend that states "Danger Unauthorized Personnel Keep Out". The signs shall be posted in English and Spanish and the legend shall be legible from a distance of at least 25 ft. The Permittees shall also implement a system of administrative controls that will ensure that permits are acquired before any use of the land is allowed. The warning signs and permits shall specify that the land was used in the past as an explosives and burn test area, and that the site may contain buried DU. 4 *SWMU 65, Lurance Canyon Explosive Test Site (including subunits 65-A through 65-E)* -- The unexpected discovery of buried depleted uranium (DU) demonstrates that controls are needed for SWMU 65 and co-located SWMU 94 because of the potential for additional unknown occurrences of buried DU in these areas. The Permittees shall place on the deed prior to any transfer of the land a description of the land's prior use as an explosives and burn test area, and that the land may contain buried DU. The Permittees shall erect warning signs around the site perimeter spaced no further than 200 feet apart and shall develop and implement a system of administrative controls that will ensure that land use permits are acquired before any use of the land is allowed by the Permittees. The warning signs and permits shall specify that the land was used in the past as an explosives and burn test area, and that the land may contain buried DU. 5 *SWMU 28-1, Mine Shaft*—The Permittees shall maintain the cable netting over the mine portal. 6 *SWMU 28-4, Mine Shaft*—The Permittees shall maintain the fence enclosure.	place, but requires controls (engineering and/or institutional) at the facility to limit exposure and subsequent release of contamination that remains following cleanup." (emphasis added) EPA's definition of institutional controls in the guidance (*Federal Register,* Vol. 67, February 27, 2002, pages 9174 and 9175) contains the same qualifying concept: "non-engineered instruments such as administrative and/or legal controls that minimize the potential for human exposure to contamination by limiting land or resource use." (emphasis added) DOE/Sandia note the COOC does not contain a definition for controls or institutional controls, but is consistent with the EPA guidance that controls are measures that are taken to limit exposure to residual contamination. Subsection III.W.3.b of the COOC states: "These two lists [the draft Tables 6-3 and 6-4] are for informational purposes only and are not enforceable; provided, however, that where controls are identified for a SWMU, only those controls (e.g., institutional controls, engineered barriers, long-term monitoring and operation and maintenance) are enforceable under the Permit." Regarding radionuclides, DOE/Sandia note Section I of the COOC is consistent with the exclusive legal authority of DOE and states: "The requirements of this Order do not apply to radionuclides, including, but not limited to, source, special nuclear, or byproduct material as defined in the Atomic Energy Act of 1954, as amended, or the radioactive portion of mixed waste." Additionally, NMED addressed the issue in a letter dated January 8, 2007 to DOE and Sandia regarding ER Site 28-2, stating that radiological risk will not be considered in Corrective Action Complete determinations. Accordingly, please delete the following SWMUs from this section, and add them to Table 6-3 "Corrective Action Complete without Controls:" • SWMU 54, Pickax Site (Thunder Range) • SWMU 94, Lurance Canyon Burn Site (including all subunits 94-A through 94-H) • SWMU 65, Lurance Canyon Explosive Test Site (including subunits 65-A through 65-E) • SWMU 28-1, Mine Shaft • SWMU 28-4, Mine Shaft

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PP6-16	6.7	64	**6.7 CORRECTIVE MEASURES FOR THE MWL (SWMU 76)**	DOE/Sandia note the Mixed Waste Landfill (MWL) is regulated under the Consent Order as discussed in Comment PP6-2. Please delete this entire Section and all other provisions of the draft Permit related to corrective action at the Mixed Waste Landfill.
PP6-17	6.8	66	**6.8 Special Information Submittals**	DOE/Sandia note Section 6.8 contains requirements for facility-wide reports documenting information related to: the general facility, potential receptors, surface water and sediment contamination, air contamination and subsurface gas. This information has already been developed for individual sites to determine whether corrective action is needed and, if so, an appropriate remedy. Given the almost-complete state of corrective action at SNL/NM, this facility-wide information is not useful. Please delete all of Section 6.8.
PP6-18	6.9.1	68	The Permittees shall conduct a site investigation for each SWMU and AOC listed on Table 6-2 of this Permit.	Please see Comments PP6-1 and PP6-3 for suggested revisions to delineate division of authority between the Consent Order and the draft Permit. In order to revise Part 6 as discussed in these comments, please revise to read: The Permittees shall conduct a site investigation for each SWMU and AOC listed on Table 6-1 of this Permit.
PP6-19	6.10.6	71	The Department will provide an opportunity for a public hearing on the proposed remedy, at which all interested persons will be given a reasonable chance to submit data, views or arguments orally or in writing and to examine witnesses testifying at the hearing.	DOE/Sandia note a public hearing is only required under certain circumstances as stated in the regulations. Please revise to read: As provided in 20.4.1.901A(5)(a)-(c) NMAC, the Department will provide an opportunity for a public hearing on the proposed remedy, at which all interested persons will be given a reasonable chance to submit data, views or arguments orally or in writing and to examine witnesses testifying at the hearing.
PP6-20	6.10.7	71	The CMI Work Plan shall be submitted to the Department for review in accordance with Part 1, Section 1.17, of this Permit.	The cross-reference appears to be incorrect. Please revise to read: The CMI Work Plan shall be submitted to the Department for review in accordance with Part 1, Section 1.32, of this Permit.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-21	6.11.2	72	In accordance with Part 1, Section 1.17.2, if the Department disapproves the ACM Work Plan, the Department will notify the Permittees in writing of the work plan deficiencies and will specify a due date for submittal of a revised ACM Work Plan.	The cross-reference appears to be incorrect. Please revise to read: In accordance with Part 1, Section 1.32.2, if the Department disapproves the ACM Work Plan, the Department will notify the Permittees in writing of the work plan deficiencies and will specify a due date for submittal of a revised ACM Work Plan.
PP6-22	6.13	74	**6.13 CLEANUP LEVELS**	Section 6.13 of the draft Permit contains cleanup levels for specified contaminants and media, all based on the presumption that a residential risk standard is appropriate for all sites. Given that SNL/NM is an industrial facility located on an Air Force base, and given that many SWMUs already require long-term controls, a presumption of cleanup to residential levels is inappropriate. The determination of a site-specific cleanup level should be based on protection of human health and the environment at that site, not a predetermined default to residential levels. Accordingly, DOE/Sandia expressly contest any presumption of cleanup to a residential level and the process established for requesting a variance from a particular cleanup level (based on a residential scenario). Please revise this Section of the draft Permit to remove the presumption that cleanup to a residential level is required.
PP6-23	6.13	74	The Permittees shall adhere to the requirements of this Section (6.13) for implementing and completing cleanup of groundwater, surface water, and soil at all SWMUs and AOCs at the Facility.	DOE/Sandia note this Section of the draft Permit could be interpreted to impose additional investigation requirements on a Facility-wide basis; such investigations would not be consistent with the COOC. To clarify that this Section is explicitly limited to identifying standards for cleanups only at SWMUs and AOCs covered under this Permit, and to maintain consistency with the revisions discussed in Comment PP6-1, please revise to read: The Permittees shall adhere to the requirements of this Section (6.13) for implementing and completing cleanup of groundwater, surface water, and soil at all SWMUs and AOCs listed on Table 6-1.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-24	6.13.1	74	The cleanup levels for groundwater shall be the New Mexico Water Quality Control Commission (WQCC) water quality standards (20.6.2.3103 and 20.6.2.4103 NMAC) and the drinking water maximum contaminant levels (MCLs) adopted by EPA under the federal Safe Drinking Water Act (42 U.S.C. §§ 300f to 300j-26). If both a WQCC standard and an MCL have been established for a hazardous constituent, then the most stringent of the two levels shall be considered the cleanup level for that hazardous constituent.	Please clarify by adding the following at the end: The WQCC standards apply to the dissolved portion of contaminants with the exception of mercury, organic compounds, and non-aqueous phase liquids. Mercury, organic compounds, and non-aqueous phase liquids shall be evaluated based on total, unfiltered concentrations; EPA MCL standards shall apply to the total unfiltered concentrations.
PP6-25	6.13.2	74	**6.13.2 Cleanup Levels for Perchlorate in Groundwater** The Permittees shall determine the nature and extent of any perchlorate contamination at the Facility and, if necessary, down gradient of the Facility. If the WQCC or the EPA adopts a groundwater standard for perchlorate, then the standard will become the cleanup level. Pending WQCC or EPA adoption of a groundwater standard, if perchlorate is detected at concentrations at or greater than 4 µg/L, then the Permittees shall use as a cleanup goal a HQ of one (1.0) and a residential scenario as the basis for proposing a cleanup level.	As discussed in General Comment G-E, perchlorate is regulated under the COOC, and is not a regulated hazardous constituent under RCRA. Accordingly, please delete this Section and renumber the remaining subsections in Section 6.13.
PP6-26	6.14	76	All Work Plans and Reports shall be prepared with technical and regulatory input from the Department.	Please revise to clarify: All Work Plans and Reports shall be prepared considering any technical and regulatory input received from the Department.
PP6-27	6.14.4	78	The Permittees shall prepare a Periodic Monitoring Report using the format set forth below. The reports shall present the results of periodic or routine groundwater and remediation system monitoring at the Facility.	DOE/Sandia note that vadose zone monitoring is not addressed in any of the periodic reports; it is appropriately included with groundwater monitoring. Please revise to read: The Permittees shall prepare a Periodic Monitoring Report using the format set forth below. The reports shall present the results of periodic or routine groundwater, vadose zone, and remediation system monitoring at the Facility.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-28	6.14.6	80	The Permittees shall prepare a CMS Work Plan using the format set forth below. Required sections for a CMS Work Plan are: *1–5 (not included in comment)* 6. Identification of Potential Remedies. 7. Analysis of Potential Remedies. 8. Proposed Remedy. 9. Schedule to complete the CMS. 10. Estimated Cost to Conduct the CMS. 11. Qualifications of Personnel who will conduct the CMS. *12–14 (not included in comment)*	Items 6-11 appear t to be more appropriate for a CMS Report than for a CMS Work Plan. Please delete Items 6-11 and revise as follows: The Permittees shall prepare a CMS Work Plan using the format set forth below. Required sections for a CMS Work Plan are: *1–5 (not included in comment)* 6. Establishment of Corrective Action Objectives 7. Format for Presentation of the CMS 8. Proposed Remedy. 9. Schedule *10–12 (formerly 12-14, not included in comment)*
PP6-29	6.14.9	82	**6.14.9 Corrective Measures Implementation Work Plan Progress Report** The Permittees shall make progress reports on the execution of the CMI Work Plan to the Department, as described in Section 6.10.9 of this Permit Part.	The report described in this Section of the draft Permit is documenting progress on the implementation of the Corrective Measure. Please revise to read: **6.14.9 Corrective Measures Implementation Progress Report** The Permittees shall make progress reports on the execution of the CMI Work Plan to the Department, as described in Section 6.10.9 of this Permit Part.
PP6-30	6.16	84	**6.16 STANDARD OPERATING PROCEDURES** The Permittees may reference relevant Facility Standard Operating Procedures, provided that copies of these procedures are also submitted to the Department for review and approval.	The requirement of an approval by the Department is inappropriate for SNL/NM internal documents; however, submittal to the Department for written concurrence that these internal procedures are in accordance with regulatory requirements is appropriate. Also, DOE/Sandia note that internal procedures are updated as needed; this should be addressed. Please revise to read: **6.16 STANDARD OPERATING PROCEDURES** The Permittees may reference relevant Facility Standard Operating Procedures, provided that copies of these procedures are also submitted to the Department for concurrence that the procedures are in accordance with regulatory requirements. Where no regulatory impact is at issue, the Permittees may implement updated versions of the internal procedures without prior written concurrence from the Department. Revisions to these internal procedures do not constitute a permit modification.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-31	6.17	84	**6.17 REQUIREMENTS FOR FIELD ACTIVITIES**	Please add an introduction sentence to this Section that recognizes that site-specific alternative requirements or procedures may be defined in a Work Plan or Sampling and Analysis Plan approved by the Department: **6.17 REQUIREMENTS FOR FIELD ACTIVITIES** The requirements for field activities as specified in Section 6.17 shall apply unless the Department has approved a Plan that specifies alternative requirements or procedures.
PP6-32	6.17.1	85	The daily record of field activities shall include, at minimum: *1–14 (not included in comment)*	DOE/Sandia note the records of field activities are internal documents, and the contents vary according to the nature of the work recorded therein. The records provide information that is included in reports to NMED, including the reports described in Section 6.14 of the draft Permit. Section 6.14 lists the contents and format of each report; thus it is not necessary to specify the contents of the individual records of field activities. Please revise as follows: The daily record of field activities may include the following items: *1–14 (not included in comment)*

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PP6-33	6.17.2	85	Drilling equipment or other exploration equipment that may come in contact with a borehole shall be decontaminated by steam cleaning, by hot-water pressure washing, or by another method approved by the Department prior to drilling each boring. Sampling or measurement equipment, including but not limited to, stainless steel sampling tools, split-barrel or core samplers, well development or purging equipment, groundwater quality measurement instruments, and water level measurement instruments, shall be decontaminated in accordance with the following procedures or other methods approved by the Department before each sampling event. *1–2 (not included in comment* 3. Wash with non phosphate detergent or other detergent approved by the Department (e.g., Fantastik™ and Liqui-Nox®) followed by a tap water rinse. *4–7 (not included in comment* All decontamination solutions shall be collected and stored temporarily as Investigation Derived Waste (IDW) as described in Section 6.17.5 of this Permit Part.	DOE/Sandia note there are several acceptable methods for decontaminating drilling and exploration equipment, and any decontamination method would be included in a work plan that would be subject to NMED approval. The same is true of decontamination methods for sampling and measurement equipment. Likewise, the detergent would be specified in the work plan, and it is not necessary to include examples in the Permit. The cross-reference for management of IDW is incorrect. Please revise as follows: Drilling equipment or other exploration equipment that may come in contact with a borehole shall be decontaminated by steam cleaning, by hot-water pressure washing, or by another method specified in the approved work plan prior to drilling each boring. Sampling or measurement equipment, including but not limited to, stainless steel sampling tools, split-barrel or core samplers, well development or purging equipment, groundwater quality measurement instruments, and water level measurement instruments, shall be decontaminated in accordance with the following procedures or other methods specified in the approved work plan before each sampling event. 3. Wash with non phosphate detergent or other detergent as specified in the approved work plan, followed by a tap water rinse. All decontamination solutions shall be collected and stored temporarily as Investigation Derived Waste (IDW) as described in Section 6.17.6 of this Permit Part.
PP6-34	6.17.3	85	Field equipment requiring calibration shall be calibrated to known standards, in accordance with the manufacturer's recommended schedules and procedures. At a minimum, calibration checks shall be conducted daily, or at other intervals approved by the Department, and the instruments shall be recalibrated, if necessary.	DOE/Sandia note the requirement for daily calibration (in the second sentence) is not consistent with calibration according to the manufacturer's recommended schedule in the first sentence. Additionally, the calibration should be specified in the work plan. Please revise to read: Field equipment requiring calibration shall be calibrated to known standards, in accordance with the manufacturer's recommended schedules and procedures, as specified in the approved work plan, and the instruments shall be recalibrated, if necessary.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-35	6.17.5	87	The testing methods must be approved, in writing, by the Department prior to implementation. The tests shall be conducted in accordance with Department, EPA, USGS, ASTM or other methods generally accepted by industry that will allow information representative of site conditions to be obtained. Detailed logs of all relevant site conditions and measurements shall be made during the testing events. A summary of the test results, including unexpected or unusual test results and equipment failures or testing limitations shall be reported to the Department.	Acceptable test methods will be those specified in the work plan approved by NMED. Also, the testing described in this Section would be conducted as part of an established investigation or other activity; thus the results would be reported as part of the report for that activity. Please revise to read: Acceptable testing methods must be specified in the approved work plan. The tests shall be conducted in accordance with Department, EPA, USGS, ASTM or other methods generally accepted by industry that will allow information representative of site conditions to be obtained. Detailed logs of all relevant site conditions and measurements shall be made during the testing events. A summary of the test results, including unexpected or unusual test results and equipment failures or testing limitations shall be reported to the Department, generally through an established reporting mechanism such as an RFI Report.
PP6-36	6.17.6	87	All IDW shall be properly characterized and disposed of in accordance with all federal, State, and local rules and regulations for storage, labeling, handling, transport, and disposal of waste. The Permittees shall include a description of the anticipated IDW management process as part of any work plan submitted to the Department for approval.	DOE/Sandia are responsible for characterizing IDW in accordance with the WAP and the requirements of 40 CFR 261. DOE/Sandia are responsible for managing hazardous wastes in accordance with the requirements of 40 CFR 262, and are responsible for arranging further off-site management that is compliant with all applicable requirements of 40 CFR 260-270, as discussed in General Comment G-B. It is not necessary to reiterate those responsibilities here, nor is it necessary to include a description of the anticipated IDW management as a part of any work plan submitted for approval. Please revise to: All IDW shall be characterized in accordance with 40 CFR 261 and shall be managed appropriately.
PP6-37	6.17.8	88	Borings shall be completed at locations specified in this Permit or as approved by the Department in work plans.	Because there are not any borings specified in the Permit, please revise to: Borings shall be completed at locations specified in work plans approved by the Department.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-38	6.17.8	88	The drilling method selected must be approved by the Department prior to the start of field activities. Based on the drilling conditions, the borings shall be completed using one of the following methods. *1–8 (not included in comment)* Hollow-stem auger or DPT drilling methods are preferred if vapor-phase or VOC contamination is known or suspected to be present. Air rotary drilling is preferred for borings intersecting the saturated zone of any aquifer. The type of drilling fluids or additives used, if necessary, must be approved by the Department prior to the start of drilling activities.	Drilling methods, drilling fluids, and drilling fluid additives will be specified in work plans submitted to NMED for approval. Please revise as follows: The drilling method selected must be specified in the work plan approved by the Department prior to the start of field activities. Based on the drilling conditions, the borings shall be completed using one of the following methods. *1–8 (not included in comment)* Hollow-stem auger or DPT drilling methods are preferred if vapor-phase or VOC contamination is known or suspected to be present. Air rotary drilling is preferred for borings intersecting the saturated zone of any aquifer. The type of drilling fluids or additives used, if necessary, must be specified in the approved work plan.
PP6-39	6.17.8	89	Exploratory borings shall be advanced to the depths specified or approved by the Department.	NMED may direct DOE/Sandia to advance borings to a certain depth; it is not necessary to include a general requirement in the draft Permit. Borings that are not directly specified by NMED will be specified in a work plan which requires approval by the Department. Please revise to read: Exploratory borings shall be advanced to the depths specified in the approved work plan.
PP6-40	6.17.8	89	The boring locations shall be located to the nearest foot of their planned location, and locations shall be recorded on a scaled site map upon completion of each boring.	DOE/Sandia note borings may need to be relocated due to buried utilities or other unforeseen obstacles. Please revise to read: When possible, the boring locations shall be located to the nearest foot of their planned location. Locations shall be recorded on a scaled site map upon completion of each boring.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-41	6.17.10	90	Generally, the samples shall be collected at the following intervals and depths. 1. At five (5)-foot intervals, ten (10)-foot intervals, continuously, or as approved by the Department. *2–8 (not included in comment)* Additional samples may be obtained from any depth based on field observations. A split-barrel sampler lined with brass sleeves, a coring device, or other method approved by the Department shall be used to obtain samples during the drilling of each boring.	DOE/Sandia note the sample interval would be included in the work plan approved by NMED. Alternative sample methods would also be included in the work plan. Please revise as follows: 1. At five (5)-foot intervals, ten (10)-foot intervals, continuously, or as specified in the approved work plan. *2–8 (not included in comment)* Additional samples may be obtained from any depth based on field observations. A split-barrel sampler lined with brass sleeves, a coring device, or other method specified in the approved work plan shall be used to obtain samples during the drilling of each boring.
PP6-42	6.17.10	91	The proposed number of samples and analytical parameters shall be included as part of the site-specific work plan submitted to the Department for approval prior to the start of field investigation activities.	Please revise as follows to clarify that sample intervals and depths will be specified in work plans: The proposed number of samples, sample intervals and depths, and analytical parameters shall be included as part of the site-specific work plan submitted to the Department for approval prior to the start of field investigation activities.
PP6-43	6.17.10.1	91	Surface and shallow subsurface soil and sediment samples shall be collected in accordance with the following procedures. 1. Samples that are collected for analyses other than for VOCs shall be obtained using a hand-held stainless steel coring device, Shelby tube, thin-wall sampler, or other device approved by the Department. The samples shall be transferred to pre-cleaned laboratory prepared containers for submittal to the laboratory. 2. Samples obtained for VOC analyses shall be collected using Shelby tubes, thin-wall samplers, or other device approved by the Department. The ends of the samplers shall be lined with Teflon tape or aluminum foil and sealed with plastic caps fastened to the sleeves with tape for shipment to the analytical laboratory.	DOE/Sandia note the sampling devices will be specified in the work plans that require approval by NMED. Please revise as follows: Surface and shallow subsurface soil and sediment samples shall be collected in accordance with the following procedures. 1. Samples that are collected for analyses other than for VOCs shall be obtained using a hand-held stainless steel coring device, Shelby tube, thin-wall sampler, or other device specified in the approved work plan. The samples shall be transferred to pre-cleaned laboratory prepared containers for submittal to the laboratory. 2. Samples obtained for VOC analyses shall be collected using Shelby tubes, thin-wall samplers, or other device specified in the approved work plan. The ends of the samplers shall be lined with Teflon tape or aluminum foil and sealed with plastic caps fastened to the sleeves with tape for shipment to the analytical laboratory.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-44	6.17.10.2	91	**6.17.10.2 Field screening of Soil, Rock, and Sediment Samples**	Please add an introductory sentence to clarify the scope of this section: **6.17.10.2 Field Screening of Soil, Rock, and Sediment Samples** Required field screening methods and frequencies will be specified in a site-specific work plan and may include some or all of the following field screening techniques.
PP6-45	6.17.10.2	91	A photo-ionization detector (PID) equipped with a 10.6 or higher electron volt (eV) lamp, combustible gas indicator, or other instrument approved by the Department shall be used for VOC field screening.	Please clarify that instruments will be specified in the work plan which requires approval by the Department: A photo-ionization detector (PID) equipped with a 10.6 or higher electron volt (eV) lamp, combustible gas indicator, or other instrument specified in the approved work plan shall be used for VOC field screening.
PP6-46	6.17.10.2	92	The methods and procedures for sample preparation and instrument calibration shall be approved by the Department prior to the start of field activities. The Permittees shall record on the field logs all conditions capable of influencing the results of field screening. The Permittees shall submit to the Department a report detailing any conditions potentially influencing field screening results. This report shall be included in any report where the field screening results are presented.	DOE/Sandia note the methods and procedures will be specified in the work plan that requires approval by NMED. Also, the last two sentences are ambiguous with regard to what is necessary for inclusion. Please revise to read: The methods and procedures for sample preparation and instrument calibration shall be specified in the approved work plan prior to the start of field activities. The Permittees shall record on the field logs all conditions capable of influencing the results of field screening. These influential conditions shall be included in any report where the field screening results are presented.
PP6-47	6.17.10.3	92	The Permittees shall prepare and analyze equipment blanks from all sampling apparatus at a frequency of at least ten (10) percent of the total number of samples submitted for analysis. Equipment blanks shall be prepared at a frequency of one (1) per day if disposable sampling equipment is used.	This requirement is not consistent with the field QC specified in Section 6.18.1.5. In addition, disposable sampling equipment precludes decontamination issues; therefore equipment blanks when using disposable equipment are unnecessary. Please revise to read: The Permittees shall prepare and analyze equipment blanks from all sampling apparatus at a frequency of at least five (5) percent of the total number of samples submitted for analysis.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-48	6.17.10.4	93	Samples shall be visually inspected and the soil, sediment, or rock type classified in accordance with ASTM D2487 (Unified Soil Classification System) and ASTM D2488 (Standard Practice for Description and Identification of Soils), or AGI Methods for soil and rock classification or in other ways approved by the Department.	Please clarify that classification methods will be specified in the work plan which requires approval by the Department: Samples shall be visually inspected and the soil, sediment, or rock type classified in accordance with ASTM D2487 (Unified Soil Classification System) and ASTM D2488 (Standard Practice for Description and Identification of Soils), or AGI Methods for soil and rock classification or in other ways specified in the approved work plan.
PP6-49	6.17.11	93	The Permittees shall, at a minimum, collect soil-vapor samples for field measurement of the following. *1 (not included in comment)* 2. Organic vapors (using a photo-ionization detector with a 10.6 eV lamp, a combustible vapor indicator or other method approved by the Department). *3–5 (not included in comment)* The Permittees also shall collect soil-vapor samples for laboratory analysis of the following as required. *1–2 (not included in comment)* 3. Other analytes required by the Department.	DOE/Sandia note the field-measurement parameters will be determined on a site-specific basis, and measurement methods will be specified in the work plan that will be approved by NMED. Also, it is not necessary to include other analytes, because all analytes will be specified in the work plan. Please revise as follows: The Permittees shall, as specified on a site-specific basis in the work plan, collect soil-vapor samples for field measurement of some or all of the following. *1 (not included in comment)* 2. Organic vapors (using a photo-ionization detector with a 10.6 eV lamp, a combustible vapor indicator or other method specified in the approved work plan). *3–5 (not included in comment)* Permittees shall, as specified on a site-specific basis in the work plan, collect soil-vapor samples for laboratory analysis of the following: *1–2 (not included in comment)*

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-50	6.17.11	94	Soil-vapor samples for laboratory analysis shall be collected using SUMMA canisters or other sample collection method approved by the Department. The samples shall be analyzed for VOC concentrations by EPA Method TO-15, as it may be updated or equivalent VOC analytical method approved by the Department. Field soil-vapor measurements, the date and time of each measurement, and the type and serial number of field instrument used shall be recorded on a soil-vapor monitoring data sheet. The instruments used for field measurements shall be calibrated daily in accordance with the manufacturer's specifications and as described in Section 6.17.2 of this Permit Part. The method used to obtain soil-vapor field measurements and samples must be approved by the Department in writing prior to the start of monitoring.	As discussed in preceding comments, methods will be specified in the work plan that requires approval by NMED. Also, DOE/Sandia note that equipment calibration should occur at a frequency recommended by the manufacturer (not necessarily daily), and calibration is discussed in Section 6.17.3. Please revise to read: Soil-vapor samples for laboratory analysis shall be collected using SUMMA canisters or other sample collection method specified in the approved work plan. The samples shall be analyzed for VOC concentrations by EPA Method TO-15, as it may be updated or equivalent VOC analytical method specified in the approved work plan. Field soil-vapor measurements, the date and time of each measurement, and the type and serial number of field instrument used shall be recorded on a soil-vapor monitoring data sheet. The instruments used for field measurements shall be calibrated in accordance with the manufacturer's specifications and as described in Section 6.17.3 of this Permit Part. The method used to obtain soil-vapor field measurements and samples must be specified in the approved work plan.
PP6-51	6.18	94	The Permittees shall implement the groundwater investigation requirements in accordance with the requirements set forth in this Section and in the approved work plans.	Please revise this sentence to recognize that groundwater investigation activities may be defined on a site-specific basis: The Permittees shall implement the groundwater investigation requirements in accordance with the requirements set forth in this Section or in the approved work plans.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-52	6.18.1	94	The Permittees shall implement groundwater investigations to determine the following. *1–5 (not included in comment)* 6. Watershed and regional water balance information for evaluating fate and transport of hazardous constituents including: a. recharge and discharge locations, rates, and volumes b. evapotranspiration data c. stream-flow data *7–13 (not included in comment)* In selecting a site for a new well, the Permittees shall consider paleotopography, fracture density and orientation, source areas, hazardous constituent characteristics, geologic structures, groundwater flow direction, and the known occurrences of groundwater. All existing and newly installed wells and piezometers shall be surveyed in accordance with the requirements described in Section 6.17.6 of this Permit Part.	DOE/Sandia note the Albuquerque Basin is a complicated basin for performing water balances and the information gained from the watershed is sufficient. Also, surveying requirements are described in Section 6.17.7. Please revise as follows: The Permittees shall implement groundwater investigations to determine the following. *1–5 (not included in comment)* 6. Site-wide water balance information for evaluating fate and transport of hazardous constituents including: a. recharge and discharge locations, rates, and volumes b. evapotranspiration data c. stream-flow data *7–13 (not included in comment)* In selecting a site for a new well, the Permittees shall consider paleotopography, fracture density and orientation, source areas, hazardous constituent characteristics, geologic structures, groundwater flow direction, and the known occurrences of groundwater. All existing and newly installed wells and piezometers shall be surveyed in accordance with the requirements described in Section 6.17.7 of this Permit Part.
PP6-53	6.18.1.1	95	Groundwater levels shall be measured in all wells specified in a Department approved work plan within a 24 hour timeframe.	For larger groundwater areas of concern, the well network may too large to measure water levels in 24 hours. Please revise to read: Groundwater levels shall be measured in all wells specified in a Department approved work plan within a 24 hour timeframe. Any deviation from this timeframe will require the groundwater levels to be measured as soon as practicable following the 24 hour timeframe.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-54	6.18.1.2	95	Initial groundwater samples shall be obtained from newly-installed monitoring wells between ten (10) and thirty (30) days after completion of well development. Subsequent groundwater monitoring and sampling shall be conducted at frequencies approved by the Department.	Because newly-installed wells are often installed at a site with existing wells, it is more practical to conduct the initial sampling during the next scheduled sampling event for that site. Additionally, monitoring frequencies will be specified in work plans that require NMED approval. Please revise to read: Initial groundwater samples shall be obtained from newly-installed monitoring wells between ten (10) and thirty (30) days after completion of well development, or during the next scheduled sampling event for that site. Subsequent groundwater monitoring and sampling shall be conducted at frequencies specified in the approved work plan.
PP6-55	6.18.1.2	95	All monitoring wells specified in a Department approved work plan shall be sampled within twenty one (21) calendar days from the start of the groundwater sampling event. The Permittees shall sample all groundwater in all wells as specified in a Department-approved work plan. Any requests for variances from the approved groundwater sampling plan or schedule shall be submitted to the Department in writing, ninety (90) days prior to the start of scheduled monitoring and sampling events.	DOE/Sandia note this schedule does not include contingencies for equipment malfunctions, weather conditions, analytical requirements (holding times), holidays, number of wells for associated project, and well characteristics. Depending upon the project, it is not possible to complete sampling of all wells within a 21-day time frame (e.g., annual sampling of the 21 TAG wells is a task that cannot be completed within 21 calendar days. Please revise to read: If possible, all monitoring wells specified in a Department approved work plan shall be sampled within twenty one (21) calendar days from the start of the groundwater sampling event. The Permittees shall sample all groundwater in all wells as specified in a Department-approved work plan. Any requests for planned variances from the approved groundwater sampling plan or schedule shall be submitted to the Department in writing, ninety (90) days prior to the start of scheduled monitoring and sampling events. For any unplanned variances, due, for example, to unanticipated conditions in the field, sampling will be completed as soon as the specific conditions allow, following the 21 calendar day timeframe, and will be reported when the sampling results are reported.
PP6-56	6.18.1.2	95	Groundwater samples shall be collected from all saturated zones, where possible, including from exploratory borings that are not intended to be completed as monitoring wells prior to abandonment of the borings.	For clarity, please revise to read: For all wells or exploratory borings subject to this Permit, groundwater samples shall be collected from all saturated zones, where possible, including from exploratory borings that are not intended to be completed as monitoring wells prior to abandonment of the borings.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-57	6.18.1.3 and Table 6-1	95 - 96	In addition to other required analyses, water samples shall be analyzed in accordance with approved work plans for one or more of the general chemistry parameters shown in Table 6-1 below, or as required by the Department. **6.18.1.3 Well Purging** All screened zones in each monitoring well shall be purged by removing groundwater prior to sampling in order to ensure that fresh formation water is sampled. Purge volumes shall be determined by monitoring, at a minimum, groundwater pH, specific conductance, dissolved oxygen concentrations, turbidity, redox potential, and temperature during purging and at measurement intervals approved by the Department. The groundwater quality parameters shall be measured with a flow-through cell and measuring instruments approved by the Department. The volume of groundwater purged, the readings obtained at each interval, and the instruments used shall be recorded on the field monitoring log. Water samples shall be obtained from a well only after the measured values of purge water field parameters have stabilized to within 10 percent for three consecutive measurements and after purging 75 per cent of one well-bore volume. A well-bore volume is herein defined as the volume of water in the saturated filter pack plus the volume of all standing water within the well screen and casing. The Permittees may submit to the Department for approval, a written request for a variance from the described method of well purging for individual wells no later than 90 days prior to scheduled sampling activities. **Table 6-1. Groundwater General Chemistry Parameters**	Please see Comment PP6-1 for the order and numbering of tables in Part 6 of the draft Permit. Table 6-1 should be renumbered to Table 6-5. Required analysis and measurement intervals are those specified in the work plan(s) approved by NMED. Additionally, it is not practical to require that NMED approve use of individual measuring instruments, as new products and different vendors are always becoming available for these field instruments. DOE/Sandia note the purging specifications in this Section are not consistent with Field operating Procedures (FOPs) 05-01, 02, 03, and 04; these FOPs were developed per NMED approval of the TAG Work Plan and are consistent with KAFB groundwater program. Please revise to read: In addition to other required analyses, water samples shall be analyzed in accordance with approved work plans for one or more of the general chemistry parameters shown in Table 6-5 below. **6.18.1.3 Well Purging** All screened zones in each monitoring well shall be purged by removing groundwater prior to sampling in order to ensure that fresh formation water is sampled. Purge volumes shall be determined by monitoring, at a minimum, groundwater pH, specific conductance, dissolved oxygen concentrations, turbidity, redox potential, and temperature during purging and at measurement intervals specified in the approved work plan. The groundwater quality parameters shall be measured with a flow-through cell and measuring instruments standard to the environmental industry. The volume of groundwater purged, the readings obtained at each interval, and the instruments used shall be recorded on the field monitoring log. Water samples shall be obtained from a well only after purging a minimum of one saturated screen volume plus achieving stability of water quality parameters as 4 consecutive measurements of pH (w/in 0.1 units), temperature (w/in 1 degree C), SC (w/in 5%), and turbidity (10% or < 5 NTU). A well-bore volume is herein defined as the volume of water in the saturated filter pack plus the volume of all standing water within the well screen and casing. The Permittees may submit to the Department for approval, a written request for a variance from the described method of well purging for individual wells no later than 90 days prior to scheduled sampling activities. **Table 6-5. Groundwater General Chemistry Parameters**

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-58	6.18.1.4	96	Groundwater samples shall be obtained using methods approved by the Department within eight (8) hours of the completion of well purging. Sample collection methods shall be documented in field monitoring logs. The samples shall be transferred to appropriate, clean, laboratory-prepared containers provided by the analytical laboratory. Sample handling and chain-of-custody procedures are described in Section 6.17.3 of this Permit Part. Decontamination procedures shall be established and, implemented, for non-dedicated water sampling equipment as described in Section 6.17.1 of this Permit Part.	DOE/Sandia note the methods will be specified in the work plan which requires approval by NMED. Also, the eight-hour timeframe is not reasonable for some wells and sampling conditions. Wells that purge dry are generally allowed to recover 80% then sampled; recovery times at these wells range from hours to days. In addition, practical considerations, such as time of day when purge/recovery is complete, preclude strict adherence to an 8-hour rule. Also, the references to Sections 6.17.3 and 6.17.1 are not correct. Please revise to read: Groundwater samples shall be obtained using methods specified in the approved work plan, as soon as practicable following completion of well purging. Sample collection methods shall be documented in field monitoring logs. The samples shall be transferred to appropriate, clean, laboratory-prepared containers provided by the analytical laboratory. Sample handling and chain-of-custody procedures are described in Section 6.17.4 of this Permit Part. Decontamination procedures shall be established and, implemented, for non-dedicated water sampling equipment as described in Section 6.17.2 of this Permit Part.
PP6-59	6.18.1.4	97	All purged groundwater and decontamination water shall be temporarily stored in labeled 55-gallon drums, or other containers approved by the Department. The methods for disposal of purge/decontamination water shall be approved by the Department prior to disposal. Disposable equipment and personal protective equipment shall be handled as described in Section 6.17.5 of this Permit Part.	As discussed in General Comment G-B, DOE/Sandia are responsible for proper characterization and management of all wastes generated, and there are many options for off-site management of wastes in compliance with the regulations. Also, Section 6.17.5 discusses in-situ testing. Please revise to read: All purged groundwater and decontamination water shall be collected in labeled 55-gallon drums or other compatible containers. The water, disposable equipment, personal protective equipment, and any IDW shall be managed as described in Section 6.17.6 of this Permit Part

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-60	6.18.1.4	97	Groundwater samples intended for metals analysis shall be submitted to the laboratory for analyses of total metals; the samples shall not be filtered in the field or laboratory, unless the Department requires analyses for dissolved metals concentrations. If dissolved metals concentrations are required by the Department, the Permittees shall obtain groundwater samples for dissolved metals analysis; said samples shall be filtered using disposable in-line filters with a 0.45 micron or other mesh size approved by the Department.	The Permit includes numerous cleanup levels in Section 6.13.1 of Part 6: WQCC standards, EPA MCLs, and Region IV Human Health Medium-Specific Screening Level for tap water. DOE/Sandia note the WQCC standards apply to dissolved metal portions, except for mercury. Also, analysis will be conducted according to NMED-approved work plans. Please revise to read: Groundwater samples intended for metals analysis shall be submitted to the laboratory for analyses of total metals; the samples shall not be filtered in the field or laboratory, unless specified in the approved work plan, e.g., to allow comparison to WQCC standards. Samples to be analyzed for dissolved metals shall be filtered using disposable in-line filters with a 0.45 micron or other mesh size specified in the approved work plan.
PP6-61	6.18.1.5	97	In the case of VOC analyses, field blanks shall be prepared and analyzed at a frequency of no less than one (1) per day per SWMU or AOC.	The proposed frequency is not appropriate for many SWMUs and AOCs. It is inconsistent with current practices and will not provide additional assurance of proper techniques. The intention is to include one field blank per analytical batch of environmental samples. Please revise to read: In the case of VOC analyses, field blanks shall be prepared and analyzed at a frequency of at least 10 percent of the total number of environmental VOC samples, with at least one field blank per analytical batch of environmental samples.
PP6-62	6.18.1.5	97	Equipment blanks shall be prepared and analyzed at a rate of at least five (5) percent of the total number of environmental samples submitted for analysis, but no fewer than one (1) equipment blank per sampling day. Equipment blanks shall be collected and analyzed at a rate of one (1) per sampling day if disposable sampling apparatus is used.	Disposable sampling equipment precludes decontamination issues, therefore equipment blanks are unnecessary. Also, the proposed frequency is not appropriate for many SWMUs and AOCs; as the sampling rate may be as low as one well per day. Please revise to read: Equipment blanks shall be prepared and analyzed at a rate of at least five (5) percent of the total number of environmental samples submitted for analysis, but no fewer than one equipment blank per sampling event.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-63	6.18.1.5	97	Reagent blanks may be required by the Department if chemical analyses requiring the use of chemical reagents are conducted in the field during water sampling activities. Reagent blanks shall be prepared and analyzed at a frequency of at least ten (10) percent of the total number of media samples, but no fewer than one (1) per day per SWMU or AOC.	Please delete these two sentences. Reagent blanks are unnecessary for accomplishing quality control on laboratory analyses, and their use is inconsistent with current practices. Laboratory QC requirements are addressed in contracts and analytical protocols.
PP6-64	6.18.2	98	As required by the Department, the Permittees shall submit to the Department work plans for sampling of springs that meet the following requirements: *1 (not included in comment)* 2. The sampling point for each spring shall be located in accordance with the survey methods described in Section 6.17.6 of this Permit Part or by other survey methods approved by the Department. *3 (not included in comment)* 4. Spring samples shall be submitted to an analytical laboratory for analyses of the general chemistry parameters listed in Section 6.18.1.2 of this Permit Part, and in accordance with approved work plans. 5. The Permittees shall perform the same field QC procedures as are described in Section 6.18.5 of this Permit Part.	The survey methods and general chemistry parameters will be specified in the NMED-approved work plan. Survey methods are described in Section 6.17.7 of this Permit Part, general chemistry parameters are listed in Section 6.18.1.3 of this Part, and field QC procedures are described in Section 6.18.1.5. Please revise as follows: As required by the Department, the Permittees shall submit to the Department work plans for sampling of springs that meet the following requirements: 2. The sampling point for each spring shall be located in accordance with the survey methods described in Section 6.17.7 of this Permit Part or by other survey methods specified in the approved work plan. 4. Spring samples shall be submitted to an analytical laboratory for analyses of the general chemistry parameters listed in Section 6.18.1.3 of this Permit Part, and in accordance with approved work plans. 5. The Permittees shall perform the same field QC procedures as are described in Section 6.18.1.5 of this Permit Part.
PP6-65	6.18.3	98	The methods and instruments used to measure field parameters shall be approved by the Department prior to conducting surface water sampling.	Please revise to clarify that the methods and instruments will be specified in the work plan: The methods and instruments used to measure field parameters shall be specified in the approved work plan.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-66	6.19	99	The Permittees shall submit all samples for laboratory analysis to laboratories within the EPA Contract Laboratory Program.	Please change the text due to the updated EPA change from CLP to the NELAC standard. The Permittees shall submit all samples for laboratory analysis to laboratories holding accreditation to the National Environmental Laboratory Accreditation Conference (NELAC) standard or equivalent standard.
PP6-67	6.19 to 6.20.2.5	99 - 104	**6.19 LABORATORY ANALYSES REQUIREMENTS FOR ALL ENVIRONMENTAL MEDIA** **6.20 REVIEW OF FIELD AND LABORATORY QC DATA FOR ALL MEDIA**	DOE/Sandia reference these requirements (or current industry practices) in analytical contracts and protocol documentation. To clarify that site-specific requirements will be defined in a work plan, please add the following sentence to the end of the first paragraph in Section 6.19: The requirements for laboratory analysis as specified in this Section shall apply unless the Department has approved a Plan that identifies alternative requirements or procedures.
PP6-68	6.20.1	102	The Permittees shall contact the Department within one working day of receipt of the laboratory notification of data quality exceptions to discuss the implications to the sampling data, and to determine whether the data will still be considered acceptable or if sample re-analysis or re-sampling is necessary. The Permittees shall summarize the results of this discussion with Department personnel in a letter. The Permittees shall submit the letter to the Department by fax or electronic mail within three working days of the conclusion of the data quality discussion and shall mail the original signed copy of the letter to the Department within 10 days of the conclusion of the data quality discussion.	A one working day notification to NMED of laboratory data quality exceptions is unnecessary, since these do not represent a threat to human health or the environment. Likewise, a 10 –day limit for submitting written documentation of a data quality discussion is not necessary. Please revise to read: The Permittees shall contact the Department within five working days of receipt of the laboratory notification of data quality exceptions to discuss the implications to the sampling data, and to determine whether the data will still be considered acceptable or if sample re-analysis or re-sampling is necessary. The Permittees shall summarize the results of this discussion with Department personnel in a letter. The Permittees shall submit the letter to the Department by fax or electronic mail within ten working days of the conclusion of the data quality discussion and shall mail the original signed copy of the letter to the Department within 30 days of the conclusion of the data quality discussion.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-69	6.20.3	102 - 112	Numbering of sections **6.20.3 Groundwater Monitoring Well Construction Requirements** **6.20.3.1 Drilling Methods** **6.20.3.2 Monitoring Wells and Piezometers** **6.20.3.3 Alluvial Wells and Piezometers** **6.20.3.4 Perched Aquifer Wells** **6.20.3.5 Regional Aquifer Wells** **6.20.3.6 Well Construction Methods** **6.20.3.7 Design and Construction of Well Screens and Filter Packs** **6.20.3.8 Design and Construction of Annular Seals** **6.20.3.9 Well Development Methods** **6.20.3.10 Surface Completion Methods** **6.20.3.11 Well Completion Report** **6.20.3.12 Well Abandonment** **6.20.3.13 Well Construction Diagrams and Logs and Well Boring Logs** **6.20.3.14 Soil Vapor Wells**	DOE/Sandia note the material in these Sections does not fit within the content of Section 6.20, which addresses field and laboratory QC data for all media. Please reformat Section 6.20.3 into a new section 6.21, and reformat all listed subsections accordingly. In addition, to clarify that site-specific requirements will be defined in a work plan, please add the following sentence to the beginning of this section: **6.21 GROUNDWATER MONITORING WELL CONSTRUCTION REQUIREMENTS** The requirements for monitoring well construction as specified in this Section shall apply unless the Department has approved a Plan that identifies alternative requirements or procedures.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-70	6.20.3.3	105	**6.20.3.3 Alluvial Wells and Piezometers** Alluvial wells and piezometers are wells that are screened partially or wholly in alluvial sediments. The Permittees shall submit to the Department for approval work plans for construction of alluvial wells and piezometers that meet the following requirements. *1 (not included in comment)* 2. Samples of alluvial sediments and underlying bedrock, and soil and soil vapor shall be collected as appropriate for hydraulic and soil property testing and for analysis to determine the presence of hazardous constituents at depths or intervals approved by the Department and in accordance with the methods described in Section 6.18 of this Permit Part. 3. Alluvial wells and piezometers shall be constructed and developed in accordance with Section 6.18.6 of this Permit Part. Wells and piezometers shall be abandoned in accordance with the procedures for abandonment in Section 6.18.6.12 of this Permit Part. 4. Samples shall at a minimum be obtained from each boring between the ground surface and one foot below the ground surface (0.0-1.0 foot interval), at subsequent five-foot intervals, at the alluvium-bedrock contact, and at the maximum depth of each boring in accordance with the methods described in Section 6.17.9 of this Permit Part. 5. Field screening and chemical analyses of collected samples shall be conducted in accordance with Section 6.17.9.2 of this Permit Part and in accordance with approved work plans. *6–7 (not included in comment)* 8. Groundwater samples shall be delivered to an analytical laboratory for the analyses required in the approved work plans and Section 6.18.4 of this Permit Part. *9 (not included in comment)*	Please see Comment PP6-69 regarding renumbering this section. DOE/Sandia note most of the wells completed at SNL/NM are drilled into alluvium. This section of the draft Permit addresses wells drilled at the alluvium-bedrock interface. Also, sampling of alluvial sediments and borings will depend on the requirements of a site-specific work plan approved by NMED. It is not appropriate to specify a minimum number of samples for every case. Regarding section numbers and cross-references, DOE/Sandia note the following: • There is no Section 6.17.9.2; Section 6.17.10.2 addresses field screening procedures. • Section 6.18 addresses groundwater sampling; Section 6.17 addresses requirements for field activities. • There is no Section 6.18.4. • Well construction and installation are addressed in Sections 6.20.3.6 – 6.20.3.9; these should be renumbered as Sections 6.21.6 – 6.21.9 as discussed in Comment PP6-69. Please revise as follows: **6.21.3 Alluvium-Bedrock Interface Wells and Piezometers** Alluvium-bedrock interface wells and piezometers are wells that are screened partially or wholly in alluvial sediments at the interface with underlying bedrock. The Permittees shall submit to the Department for approval work plans for construction of alluvial wells and piezometers that meet the following requirements. 2. If required by a site-specific work plan, samples of alluvial sediments and underlying bedrock, and soil and soil vapor shall be collected for hydraulic and soil property testing and for analysis to determine the presence of hazardous constituents at depths or intervals approved by the Department and in accordance with the methods described in Section 6.17 of this Permit Part. 3. Alluvial wells and piezometers shall be constructed and developed in accordance with Sections 6.21.6 – 6.21.9 of this Permit Part. Wells and piezometers shall be abandoned in accordance with the procedures for abandonment in Section 6.21.12 of this Permit Part.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-70 (cont)				4. Samples shall be obtained as described in the approved work plan. If appropriate, samples shall be obtained from each boring between the ground surface and one foot below the ground surface (0.0-1.0 foot interval), at subsequent five-foot intervals, at the alluvium-bedrock contact, and at the maximum depth of each boring in accordance with the methods described in Section 6.17.10 of this Permit Part. 5. Field screening and chemical analyses of collected samples shall be conducted in accordance with Section 6.17.10.2 of this Permit Part and in accordance with approved work plans. 8. Groundwater samples shall be delivered to an analytical laboratory for the analyses required in the approved work plans.
PP6-71	6.20.3.7	108	The use of pre-fabricated well screens and filter packs shall be approved in advance of well installation by the Department.	Please clarify that use of pre-fabricated well screens and filter packs will be specified in the work plan which requires approval by the Department: The use of pre-fabricated well screens and filter packs shall be specified in the approved work plan.
PP6-72	6.20.3.8	108	A tamping device shall be used to ensure that the seal is emplaced at the proper depth.	It is standard industry practice (especially for deep wells) to use a tagging device (a weighted tape measure) to verify the thickness of the seal rather than using a tamping device. Please revise to read: A tagging device shall be used to ensure that the seal is emplaced at the proper depth.
PP6-73	6.20.3.9	109	Approval shall be obtained from the Department prior to introducing air, water, or other fluids into a well for the purpose of well development.	Please clarify that introduction of air, water or other fluids into a well for the purpose of well development will be specified in the work plan which requires approval by the Department: If the introduction of air, water, or other fluids into a well for the purpose of well development is planned, these plans will be specified in the approved work plan.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-74	6.20.3.11	109	For each monitoring well, the Permittees shall submit to the Department a well completion summary within 30 days of completing installation which shall include a well construction log and diagram, a well boring log, and a well development log. The well construction log and diagram and the well boring log shall contain at a minimum the information required under Section 6.18.6.13 of this Permit Part.	In some cases it may be unreasonable to submit a well completion summary within 30 days of completing an installation. Multiple wells are often installed over several months during a single field effort; it is more appropriate to submit well completion summaries for all the wells together. Also, well boring logs are addressed in Section 6.20.3.13 which should be renumbered as Section 6.21.13 as discussed in Comment PP6-69. Please revise to read: For each monitoring well, the Permittees shall submit to the Department a well completion summary within 90 days of completing the field program which shall include a well construction log and diagram, a well boring log, and a well development log. The well construction log and diagram and the well boring log shall contain at a minimum the information required under Section 6.21.13 of this Permit Part.
PP6-75	6.20.3.12	110	For wells with small diameter casing (i.e., 2-inch or less), abandonment shall be accomplished by over drilling the well with a large diameter hollow-stem auger.	The prescribed well abandonment requirements for small diameter casing wells are not always feasible with deep (~500 ft) well completions. Hollow-stem auger drilling methods may not be feasible at these depths. Alternatives to overdrilling will be specified in the work plan. Please revise to read: If conditions allow, for wells with small diameter casing (i.e., 2-inch or less), abandonment shall be accomplished by over drilling the well with a large diameter hollow-stem auger.
PP6-76	6.20.3.14	112	Information on the design and construction of soil-vapor monitoring wells shall be recorded as for groundwater monitoring wells (Section 6.18.6.13 of this Permit Part) as applicable. Soil-vapor monitoring wells shall be designed and constructed in a manner that will yield high-quality samples. The design and depth of installation must be approved by the Department.	Well boring logs are addressed in Section 6.20.3.13 which should be renumbered as Section 6.21.13 as discussed in Comment PP6-69. The design and depth of installation will be specified in a work plan that is approved by NMED. Please revise to read: Information on the design and construction of soil-vapor monitoring wells shall be recorded as for groundwater monitoring wells (Section 6.21.3.13 of this Permit Part) as applicable. Soil-vapor monitoring wells shall be designed and constructed in a manner that will yield high-quality samples. The design and depth of installation must be specified in the approved work plan.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-77	Table 6-2	113	**TABLE 6-2** **Solid Waste Management Units (SWMUs) and Areas of Concern (AOC) Requiring Corrective Action**	Consistent with Comment PP6-1, please revise as follows: **TABLE 6-2** **Solid Waste Management Units (SWMUs) Requiring Corrective Action under the Consent Order**
PP6-78	Table 6-3	116 - 128	**TABLE 6-3** **Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs), and Areas of Concern (AOCs) for which Corrective Action is Complete Without Controls**	DOE/Sandia note that a number of changes to Table 6-3 are needed to correct errors to the lists of SWMUs, to ensure consistency with the administrative record, and to reflect the most current risk information. Because many of these sites were evaluated some time ago (through the No Further Action process), the basis for the determination (i.e. the land use assumptions) was not always readily apparent and additional review was needed to translate the earlier determination into a Corrective Action Complete with Controls or a Corrective Action Complete without Controls determination. There are two versions of Table 6-3 enclosed as separate files. One is a marked up version containing notes with the rationale for proposed changes. The second file is a final version of revised Table 6-3. Consistent with Comment PP6-8, please revise the title of this table as follows: **TABLE 6-3** **Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls** Please delete Table 6-3 from the draft Permit and replace it with the enclosed final version of Table 6-3.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-79	Table 6-4	129 - 132	**TABLE 6-4** **Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Corrective Action Complete With Controls**	DOE/Sandia note that a number of changes to Table 6-4 are needed to correct errors to the lists of SWMUs, to ensure consistency with the administrative record, and to reflect the most current risk information. As noted in the preceding comment, many of these sites were evaluated some time ago (through the No Further Action process), thus the basis for the determination (i.e. the land use assumptions) was not always readily apparent and additional review was needed to translate the earlier determination into a Corrective Action Complete with Controls or a Corrective Action Complete without Controls determination. There are two versions of Table 6-4 enclosed as separate files. One is a marked up version containing notes that summarize the relevant risk information and the rationale for proposed changes. The second file is a final version of revised Table 6-4. Consistent with Comment PP6-8, please revise the title of this table as follows: **TABLE 6-4** **Solid Waste Management Units (SWMUs) Corrective Action Complete With Controls** Please delete Table 6-4 from the draft Permit and replace it with the enclosed final version of Table 6-4.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-101*	6.17.10	90	The remaining portions of the sample shall be used for field screening and logging, as described in Sections 6.17.9.2 and 6.17.9.4 of this Permit Part, respectively.	There are no Sections 6.17.9.2 or 6.17.9.4. Sections 6.17.10.2 addresses field screening and Section 6.17.10.4 addresses logging. Please revise accordingly.
PP6-102*	6.18.1.5	97	The samples shall be managed as described in Section 6.17.3 of this Permit Part.	Section 6.17.3 discusses calibration of field equipment; Section 6.17.4 addresses sample management. Please revise accordingly.
PP6-103*	6.18.3	98	The Permittees shall perform the same field QC procedures as are detailed in Section 6.18.5 of this Permit Part for groundwater.	There is no Section 6.18.5; the correct reference is to Section 6.18.1.5. Please revise accordingly.
PP6-104*	6.20.2	103	Data validation procedures for all samples shall include review of the following, as appropriate. *1–12 (not included in comment)* 13. Representativeness, comparability, completeness, accuracy, and precision as required in Section 6.18.5.1 above.	There is no Section 6.18.5.1; the correct reference is to Section 6.20.1. Please revise accordingly.
PP6-105*	6.20.2.4	104	Detection limits that exceed cleanup standards, screening levels, or background levels and that are associated with results that are reported as "not detected" shall be considered as data quality exceptions (see Section 6.18.4 of this Permit Part).	There is no Section 6.18.4; the correct reference is to Section 6.19. Please revise accordingly.
PP6-106*	6.20.3.1	105	While the selection of the drilling procedure is usually based on the site-specific geologic conditions, the following issues shall be considered. *1–6 (not included in comment)* 7. Requirements Specified in Section 6.17.7 of this Permit Part	Section 6.17.7 addresses surveying; Section 6.17.8 addresses requirements for exploratory and well installation borings and exploratory excavations. Please revise accordingly.
PP6-107*	6.20.3.2	105	The Permittees shall comply with the requirements of Section 6.17.7 of this Permit Part for the installation of all monitoring wells and piezometers.	Please see preceding comment. Section 6.17.7 addresses surveying; Section 6.17.8 addresses requirements for exploratory and well installation borings and exploratory excavations. Please revise accordingly.

*Comment is more administrative in nature

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-108*	6.20.3.2	105	All well construction and installation shall be conducted in accordance with Section 6.18.6 of this Permit Part and in accordance with approved work plans.	There is no Section 6.18.6. Well construction and installation are addressed in Sections 6.20.3.6 – 6.20.3.9; these should be renumbered as Sections 6.21.6 – 6.21.9 as discussed in Comment PP6-69. Please revise accordingly.
PP6-109*	6.20.3.4	106	The Permittees shall submit to the Department for approval work plans for construction of perched aquifer wells that meet the following requirements. 1. Based on site-specific conditions, geophysical measurements and soil, sediment, rock, soil-vapor, and groundwater samples shall be collected from each boring prior to well construction in accordance with Section 6.18 of this Permit Part, as appropriate. *2–3 (not included in comment)* 4. Field screening and collection of soil, sediment, rock, soil-vapor, and groundwater samples shall be conducted in accordance with Section 6.17.9.2 of this Permit Part. *5 (not included in comment)* 6. Work plans shall be prepared in accordance with Sections Section 6.9.2 of Part 5 of this Permit Part 7. Groundwater samples shall be delivered to an analytical laboratory for the analyses required in the approved work plans and Section 6.18.4 of this Permit Part. *8 (not included in comment)*	Regarding section numbers and cross-references, DOE/Sandia note the following: • There is no Section 6.17.9.2; Section 6.17.10.2 addresses field screening procedures. • Section 6.18 addresses groundwater sampling; Section 6.17 addresses requirements for field activities. • There is no Section 6.18.4. • Permit Part 5 addresses organic air emissions. Please revise as follows: The Permittees shall submit to the Department for approval work plans for construction of perched aquifer wells that meet the following requirements. 1. Based on site-specific conditions, geophysical measurements and soil, sediment, rock, soil-vapor, and groundwater samples shall be collected from each boring prior to well construction in accordance with Section 6.17 of this Permit Part, as appropriate. 4. Field screening and collection of soil, sediment, rock, soil-vapor, and groundwater samples shall be conducted in accordance with Sections 6.17.10.2, 6.17.11, and 6.18.1.4 of this Permit Part. 6. Work plans shall be prepared in accordance with Section 6.9.2 of this Permit Part 7. Groundwater samples shall be delivered to an analytical laboratory for the analyses required in the approved work plans.

*Comment is more administrative in nature

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-110*	6.20.3.5	106	The Permittees shall submit to the Department for approval work plans for construction of regional aquifer wells that meet the following requirements. 1. The proposed locations, depths and details of drilling, sampling, and well construction shall be described in work plans prepared in accordance with Section 4.5 of Part 4 and Section 6.9.2 of this Permit Part or other document approved by the Department prior to well installation. *2–5 (not included in comment)* 6. Field screening and sample collection of soil, sediment, rock, soil-vapor, and groundwater samples shall be conducted in accordance with Section 6.17.9.2 of this Permit Part. *7–8 (not included in comment)* 9. Groundwater samples shall be delivered to an analytical laboratory for the analyses required in the approved work plans and Section 6.18.4 of this Permit Part. *10 (not included in comment)*	Regarding section numbers and cross-references, DOE/Sandia note the following: • There is no Section 6.17.9.2; Section 6.17.10.2 addresses field screening procedures. • There is no Section 6.18.4. • There is no Section 4.5 of Permit Part 4. Permit Part 4 addresses treatment at the TTU, RMWMU, and AHCU. Please revise as follows: The Permittees shall submit to the Department for approval work plans for construction of regional aquifer wells that meet the following requirements. 1. The proposed locations, depths and details of drilling, sampling, and well construction shall be described in work plans prepared in accordance with Section 6.9.2 of this Permit Part or other document approved by the Department prior to well installation. 6. Field screening and sample collection of soil, sediment, rock, soil-vapor, and groundwater samples shall be conducted in accordance with Section 6.17.10.2 of this Permit Part. 9. Groundwater samples shall be delivered to an analytical laboratory for the analyses required in the approved work plans.

*Comment is more administrative in nature

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP6-111*	Part 6	56 - 132	Acronyms	The following acronyms appear in the text of this Permit Part but are not defined in the acronym list at the beginning of the draft Permit. Please include them in the Acronym List: AEC Atomic Energy Commission AUA Annual Unit Audit DEER Directed Energy Experimental Range HE high explosive HERMES High-Energy Radiation Megavolt Electron Source LAARC Light Air-transport Accident Resistant Container LCBS Lurance Canyon Burn Site MO mobile office MW mixed waste NIOSH National Institute of Occupational Safety / Health POTW publicly-owned treatment works RCRIS Resource Conservation and Recovery Information System RD&D Research, Development, and Demonstration RDX Cyclotrimethylene trinitramine TCA trichloroethane TCE trichloroethylene or trichloroethene TNT Trinitrotoluene TO toxic organic TPH Total Petroleum Hydrocarbon UST underground storage tank VCM voluntary corrective measure

*Comment is more administrative in nature

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
OU-1295	***Septic Tanks and Drainfields***		
ER Site 139	Bldg. 9964 Septic System	12/95	
ER Site 141	Bldg. 9967 Septic System	11/01	
ER Site 142	Bldg. 9970 Septic System	9/00	
ER Site 151	Bldg. 9940 Septic System	11/01	
ER Site 160	Bldg. 9832 Septic System	11/01	
OU-1302	***TA-1***		
ER Site 25	Burial Site South of TA-I	12/95	
ER Site 30	PCB Spill (Reclamation Yard)	4/05	
ER Site 32	Steam Plant Oil Spill	12/95	
ER Site 33	Motor Pool Oil Spill	4/05	
ER Site 41	Bldg. 838 Mercury Spill	12/95	
ER Site 42	Acid Spill, Bldg. 879 Water Treatment Facility	9/00	
ER Site 73	Hazardous Waste Repackaging and Storage (Bldg 895)	12/95	
ER Site 96	Storm Drain System	~~5/06~~ 6/06	NMED letter of 6/2/2006 documenting the final decision for the Class 3 permit modification indicates that this site is subject to site controls. As documented in a 5/12/2006 letter to NMED, DOE and Sandia objected to land use restrictions for this site. This site should remain on Table 6-3.
ER Site 104	PCB Spill	12/95	

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
ER Site 187	Septic Tank Piping for POTW	~~5/06~~ 6/06	NMED letter of 6/2/2006 documenting the final decision for the Class 3 permit modification indicates that this site is subject to site controls. As documented in a 5/12/2006 letter to NMED, DOE and Sandia objected to land use restrictions for this site. This site should remain on Table 6-3.
~~ER Site 190~~	~~Steam Plant Tank Farm~~	~~5/06~~ 6/06	NMED letter of 6/2/2006 documenting the final decision for the Class 3 permit modification indicates that this site is subject to site controls. Thus this site should be on Table 6-4.
ER Site 192	TA-I Waste Oil Tank	7/00	
ER Site 226	Old Acid Waste Line	~~5/06~~ 6/06	NMED letter of 6/2/2006 documenting the final decision for the Class 3 permit modification indicates that this site is subject to site controls. As documented in a 5/12/2006 letter to NMED, DOE and Sandia objected to land use restrictions for this site. This site should remain on Table 6-3.
OU-1300			
None			
OU-1303	***TA-II***		
~~ER Site 2~~	~~Classified Waste Landfill~~	~~5/06~~ 6/06	NMED acceptance letter of July 12, 2005, and final approval letter of 6/2/2006 both indicated that this site should have controls. This site should be on Table 6-4.
ER Site 43	Radioactive Material Storage Yard (TA-II~~I~~)	9/00	This site should be listed as being in TA-II not TA-III
ER Site 44	Decontamination Site & Uranium Calibration Pits (UCPs)	7/00	

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
ER Site 48	Bldg. 904 Septic System and HE Drain System (TA-II)	~~5/06~~ 6/06	NMED letter of 6/2/2006 documenting the final decision for the Class 3 permit modification indicates that this site is subject to site controls. As documented in a 5/12/2006 letter to NMED, DOE and Sandia objected to land use restrictions for this site. This site should remain on Table 6-3.
ER Site 113	Area II Firing Sites	11/01	
ER Site 114	Explosive Burn Pit	4/05	
ER Site 135	Bldg. 906 Drain System (TA-II)	~~5/06~~ 6/06	NMED letter of 6/2/2006 documenting the final decision for the Class 3 permit modification indicates that this site is subject to site controls. As documented in a 5/12/2006 letter to NMED, DOE and Sandia objected to land use restrictions for this site. This site should remain on Table 6-3.
ER Site 136	Bldg. 907 Septic System and HE Drain System (TA-II)	~~5/06~~ 6/06	NMED letter of 6/2/2006 documenting the final decision for the Class 3 permit modification indicates that this site is subject to site controls. As documented in a 5/12/2006 letter to NMED, DOE and Sandia objected to land use restrictions for this site. This site should remain on Table 6-3.
ER Site 159	Bldg. 935 Septic System and Drywell (TA-II)	~~5/06~~ 6/06	
ER Site 165	Bldg. 901 Septic System (TA-II)	~~5/06~~ 6/06	
ER Site 166	Bldg. 919 Septic System and Seepage Pit (TA-II)	~~5/06~~ 6/06	
ER Site 167	Bldg. 940 Septic System and Seepage Pits (TA-II)	~~5/06~~ 6/06	
OU-1306	***TAs-III&V***		
ER Site 18	Concrete Pad	4/05	
ER Site 26	Burial Site ~~(West of TA-3)~~ (Western Part of TA-III)	4/05	This site is not west of TA-III but in the Western Part of TA-III.

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
ER Site 31	Electrical Transformer Oil Spill	11/01	
ER Site 34	Centrifuge Oil Spill	11/01	
ER Site 35	Vibration Facility Oil Spill (TA-III)	4/05	
ER Site 37	PROTO Oil Spill	11/01	
ER Site 51	Bldg. 6924 Pad, Tank, and Pit	11/01	
ER Site 100	Bldg. 6620 Drain/Sump	11/01	
ER Site102	Radioactive Disposal Area	11/01	
ER Site 105	Mercury Spill (Bldg. 6536)	12/95	
ER Site 107	Explosives Test Area (SouthEast TA-III)	4/05	
ER Site 111	Building 6715 Sump/Drain	11/01	
ER Site 188	Bldg ~~6497~~ 6597Above Ground Containment Spill Tank	12/95	This site is associated with Bldg. 6597 not Bldg. 6497.
ER Site 241	Storage Yard	4/05	
OU-1309	***Tijeras Arroyo***		
~~ER Site 7~~	~~Gas Cylinder Disposal (Arroyo del Coyote)~~	~~9/00~~	Responsibility for this site was transferred to KAFB in September 2000. This site is identified on their permit as SWMU ST-107, Hospital Demolition Debris.
ER Site 16	Open Dumps (Arroyo del Coyote)	9/00	This site is also on Table 6-4, but it should be solely on Table 6-3. See Note H on the Table 6-4 markup.
ER Site 23	Disposal Trenches (Near Tijeras Arroyo)	7/00	
~~ER Site 40~~	~~Oil Spill (6000 Igloo Area)~~	~~11/97~~	This site is also on Table 6-4. It is assumed that NMED intended for this site to have controls. Thus it should be removed from this table.

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
ER Site 50	Old Centrifuge Site (Tijeras Arroyo)	9/00	This site is also on Table 6-4, but it should be solely on Table 6-3. See Note I on the Table 6-4 markup.
ER Site 77	Oil Surface Impoundment	7/00	
~~ER Site 226~~	~~Old Acid Waste Line~~	~~5/06~~	This site is a TA-I site; it is duplicated here and should be removed from this OU listing.
ER Site 227	Bunker 904 Outfall	~~5/06~~ 6/06	NMED letter of 6/2/2006 documenting the final decision for the Class 3 permit modification indicates that this site is subject to site controls. As documented in a 5/12/2006 letter to NMED, DOE and Sandia objected to land use restrictions for this site. This site should remain on Table 6-3.
ER Site 228A	Centrifuge Dump Site	9/00	This site is also on Table 6-4, but it should be solely on Table 6-3. See Note J on the Table 6-4 markup.
ER Site 228B	Centrifuge Dump	11/01	
ER Site 229	Storm Drain System Outfall (for TA-II)	~~5/06~~ 6/06	NMED letter of 6/2/2006 documenting the final decision for the Class 3 permit modification indicates that this site is subject to site controls. As documented in a 5/12/2006 letter to NMED, DOE and Sandia objected to land use restrictions for this site. This site should remain on Table 6-3.
ER Site 230	Storm Drain System Outfall (for TA-IV)	4/05	
ER Site 231	Storm Drain System Outfall (for TA-IV)	4/05	
ER Site 232	Storm Drain System Outfall	4/05	
ER Site 235	Storm Drain System Outfall	9/00	
OU-1332	***Foothills Test Area***		
ER Site 15	Trash Pits (Frustration Site)	~~11/97~~ 9/97	

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
ER Site 19	TRUPAK Boneyard Storage Area (NW End of Old Aerial Cable)	7/00	
ER Site 27	Animal Disposal Pit (Coyote Springs)	7/00	
ER Site 28-3	Mine Shafts	~~11/97~~ 9/97	
ER Site 28-5	Mine Shafts	~~11/97~~ 9/97	
ER Site 28-6	Mine Shafts	~~11/97~~ 9/97	
ER Site 28-7	Mine Shafts	~~11/97~~ 9/97	
ER Site 28-8	Mine Shafts	~~11/97~~ 9/97	
ER Site 28-9	Mine Shafts	~~11/97~~ 9/97	
ER Site 28-10	Mine Shafts	11/01	
ER Site 66	Boxcar Site	4/05	
ER Site 67	Frustration Site	11/01	
ER Site 82	Old Aerial Cable Site	11/01	
~~ER Site 87~~	~~Building 9990 Firing Site~~	~~5/06~~ 6/06	NMED letter of 6/2/2006 documenting the final decision for the Class 3 permit modification indicates that this site is subject to site controls. Thus this site should be on Table 6-4. An earlier NMED letter of 3/8/2004 and the intent to approve the Class 3 permit modification request of 3/2006 both indicate the intent to restrict future land use to recreational.
ER Site 277	New Firing Site East of Optical Range	11/01	
OU-1333	***Canyons Test Area***		

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU~~/AOC~~	Description	Date of Approval	Comments
ER Site 10	Burial Mounds (Bunker Area North of Pendulum Site)	7/00	
ER Site 12A	Open Arroyo Channel	9/00	
ER Site 12B	Buried Debris in Graded Area	7/00	
ER Site 13	LCBS Oil Surface Impoundment (Lurance Canyon Burn Site)	7/00	
ER Site 59	Pendulum Site	7/00	
ER Site 60	Bunker Area	11/01	
ER Site 63A	Balloon Test Area: Plutonium Dispersal Study Program (PDSP) Site	9/00	
ER Site 63B	Balloon/Helicopter Site	7/00	
ER Site 64	Gun Site (Madera Canyon)	9/00	
ER Site 72	Operation Beaver Site	7/00	
ER Site 81-A	Catcher Box/Sled Track	11/01	
ER Site 81-B	Impact Pad	11/01	
ER Site 81-C	New Aerial Cable Site: Former Burial Location	9/00	
ER Site 81-D	Northern Cable Area	11/01	
ER Site 81-E	Gun Impact Area	11/01	
ER Site 81-F	Scrap Yard	11/01	
ER Site 92	Pressure Vessel Test Site (Coyote Canyon Blast Area)	~~11/97~~ 9/97	
ER Site 93	Madera Canyon Rocket Launcher Pads A, B & C	7/00	

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
~~ER Site 225~~	~~AEC Storage Facility/Kirtland AFB~~	~~12/05/96~~	This site was transferred to KAFB in 1996. It is listed on their permit as SWMUs 6-32, Manzano Fire Training Area; 6-24, Manzano Sewage Treatment Facility; 6-29, Manzano Landfill; and 6-A2, Radioactive holding tanks RB-4, RB-5, RB-6, RB-8, and RB-9.
OU-1334	***Central Coyote Test Area***		
ER Site 9	Burial Site/Open Dump (Schoolhouse Mesa)	4/05	
ER Site 11	Explosive Burial Mounds	9/00	
ER Site 20	Schoolhouse Mesa Burn Site	~~2/95~~ 12/95	
ER Site 21	Metal Scrap (Coyote Springs)	9/00	
ER Site 22	Storage/Burn (West of DEER)	7/00	
ER Site 47	Unmanned Seismic Observatory	12/95	
ER Site 57-A	Workman Site – Firing Site	9/00	
~~ER Site 61-B~~	~~Cratering Area~~	~~12/5/06~~	This site was transferred to KAFB in 1996. It is listed as SWMU RW-68, Radium Dump/Slag Piles and Cratering Area on their permit.
ER Site 62	Greystone Manor Site (Coyote Springs)	12/95	
ER Site 69	Old Borrow Pit	12/95	
ER Site 70	Explosives Test Pit (Water Towers)	9/00	
ER Site 71	Moonlight Shot Area	7/00	
ER Site 88A	Firing Site: Ranch House	12/95	
ER Site 88B	Firing Site: Instrumentation Pole	9/00	
OU-1335 Southwest Test Area			

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
ER Site 6	Gas Cylinder Disposal Pit (Bldg. 9966)	11/01	
ER Site 6A	Gas Cylinder Disposal Pit	11/01	
ER Site 14	Burial Site (Bldg. 9920)	7/00	
ER Site 17	Scrap Yards/Open Dump (Thunder Range)	7/00	
ER Site 39	Oil Spill - Solar Facility	~~11/97~~ 9/97	
ER Site 53	Bldg. 9923 Storage Igloo	~~11/97~~ 9/97	
ER Site 56	Old Thunderwells (Thunder Range)	7/00	
ER Site 86	Firing Site (Bldg. 9927)	11/01	
ER Site 90	Beryllium Firing Site (Thunder Range)	9/00	
ER Site 103	Scrap Yard (Bldg. 9939)	7/00	
ER Site 112	Explosive Contaminated Sump (Bldg. 9956)	9/00	
ER Site 117	Trenches (Bldg. 9939)	11/01	
ER Site 191	EQUUS Red	11/01	
ER Site 194	General Purpose Heat Source Test Area	~~11/97~~ 9/97	
Misc. Sites			
~~None~~	~~Former Building 828 (TA-I)~~	~~4/05~~	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
~~None~~	~~TNT Site~~	~~4/05~~	This site is also included on Table 6-4. A final NMED decision letter of 4/6/2005 indicated that this site will require controls. Thus, based on the administrative record, this site should be on Table 6-4 instead of Table 6-3.

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
~~ER Site 195~~	~~Experimental Test Pit~~	~~11/05~~	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
~~ER Site 277~~	~~New Firing Site East of Optical Range~~	~~11/01~~	This site is also listed under OU-1332 above.
Non-ER Septic Systems			
1001	Bldg. 898 Septic System (TA-I)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1002	Bldg. 8895/MO 100 Septic System (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1003	Former Bldg. 915/922 Septic System (TA-II)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1005	Bldg. 6020 Septic system (6000 Igloo Area)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1006	Bldg. 6741 Septic System (TA-III)	~~5/06~~ 6/06	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1007	Bldg. 6730 Septic System (TA-III)	~~5/06~~ 6/06	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1008	Bldg. 6750 Septic System (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
1009	Bldg. 6620 Internal Sump (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1010	Bldg. 6536 Septic System and Seepage Pit (TA-III)	~~5/06~~ 6/06	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1013	Bldg. T-52 and Former bldg. 6500 South Septic System (TA-V)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1014	Former T 12, T-42 and T-43 Septic System (TA-V)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1015	Former MO 231-234 Septic System (TA-V)	~~5/06~~ 6/06	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1016	Bldg. 914 Seepage Pit (TA-II)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1017	Bldg. 897X Septic System (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1020	MO-146, MO-235 and T-40 Septic System (TA-III)	~~5/06~~ 6/06	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1021	Bldg. 859 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
1022	Bldg. 6505A Seepage Pit (TA-III)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1023	Bldg. 6505 Southwest Seepage Pit (TA-III)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1024	MO 242-245 Septic System (TA-III)	~~5/06~~ 6/06	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1025	Bldg. 6501 East Septic System (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1026	Bldg. 6501 West Septic System (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1027	Bldg. 6530 Septic System (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1028	Bldg. 6560 Septic System ~~and Seepage Pit~~ (TA-III)	~~5/06~~ 6/06	This site is not a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8. (Name should be "Bldg. 6560 Septic System (TA-III)")
~~1029~~	~~Bldg. 6584 North Septic System (TA-III)~~	~~5/06~~ 6/06	NMED letter of 6/2/2006 documenting the final decision for the Class 3 permit modification indicates that this site is subject to site controls. Thus this site should be considered a SWMU and be on Table 6-4.
1030	Bldg. 6587 Septic System (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
1032	Bldg. 6610 Septic System (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1033	Bldg. 6631 Septic System (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1037	MO 14, MO 15 Septic system (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1038	MO 154 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1039	MO 155 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1040	MO 156 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1041	T-28 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1042	T-29 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1043	T-30 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
1044	T-31 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1045	T-32-2 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1046	T-44 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1047	T-45 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1048	T-46 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1049	T-47 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1050	T-48 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1051	Bldg. 803 Outfall (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1053	Bldg. 823 Outfall (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
1054	Bldg. 829 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1055	Bldg. 838 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1056	Bldg. 839 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1057	Bldg. 847 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1058	Bldg. 850 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1059	Bldg. 857A Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1060	Bldg. 867 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1061	Bldg. 869 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1062	Bldg. 882 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
1063	Bldg. 890 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1064	Bldg. 893 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1065	Bldg. 894 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1066	Bldg. 959 Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1067	Bldg. 904E Drywell (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1068	Bldgs. 913/913A Septic System (TA-II)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1069	Bldg. 962 Drywells (TA-IV)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1070	Bldg. 962 Drywells (TA-IV)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1071	Bldg. 986 Drywell (TA-IV)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
1072	Bldg. T-52 and Former Bldg. 6500 Septic System (TA-V)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1073	Bldg. 6580 Seepage Pit (TA-V)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1074	Bldgs. 6581/6582 MO 32/57 Septic System (TA-V)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1075	Bldg. 6582 Septic system (TA-V)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1076	Bldg. 6585 Septic system (TA-V)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1077	Bldg. 6920 Septic System (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1082	Bldg. 6620 Septic System (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1083	Bldg. 6570 Septic System (TA-III)	~~1083~~ 6/06	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1085	Bldg. 6520 Septic System (TA-III)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
1086	Bldg. 6523 Septic System (TA-III)	~~1086~~ 6/06	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1088	Bldg. 6736 Seepage Pit (TA-III)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1089	Bldg. 6734 Seepage Pit (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1091	Bldg. 6720 Septic System (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1093	Bldg. 6584 West Septic System (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1096	Bldg. 6583 Septic System (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1097	SFER/127/128/130 Septic System (Lurance Canyon) (DOE Facility)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1099	Bldg. 634 Outfall (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1100	Bldg. 814 Outfall (TA-I)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU~~/AOC~~	Description	Date of Approval	Comments
1103	Bldg. 6030 Septic System (6000 Igloo Area)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1105	Bldg. 6596 Drywell (TA-V)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1106	Bldg. 6505 Interior Sump (TA-III)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1107	Bldg. 6526 Drywell (TA-III)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1108	Bldg. 6531 Seepage Pits (TA-III)	~~1108~~ 6/06	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1109	Bldg. 6530 Seepage Pit (TA-III)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1110	Bldg. 6536 Drain System (TA-III)	~~1110~~ 6/06	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1111	Bldg. 6720 Seepage Pit (TA-III)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1112	Bldg. 6590 Reactor Sump Drywell (TA-V)	11/05	This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.

DOE/Sandia Markup of Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU/~~AOC~~	Description	Date of Approval	Comments
1118	Bldg. 9966 Drywell (Thunder Range)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.
1119	Live Fire Range West Septic System (Lurance Canyon)(DOE Facility)		This site was determined to not be a SWMU and should be removed from the Permit entirely. See discussion in text of Comment PP6-8.

DOE/Sandia Final Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU	Description	Date of Approval	Comments
OU-1295	***Septic Tanks and Drainfields***		
ER Site 139	Bldg. 9964 Septic System	12/95	
ER Site 141	Bldg. 9967 Septic System	11/01	
ER Site 142	Bldg. 9970 Septic System	9/00	
ER Site 143	Bldg 9972 Septic System	9/00	
ER Site 144	Bldg 9980 Septic System	9/00	
ER Site 145	Bldg 9981/9982 Septic Systems	9/00	
ER Site 151	Bldg. 9940 Septic System	11/01	
ER Site 160	Bldg. 9832 Septic System	11/01	
OU-1302	***TA-1***		
ER Site 25	Burial Site South of TA-I	12/95	
ER Site 30	PCB Spill (Reclamation Yard)	4/05	
ER Site 32	Steam Plant Oil Spill	12/95	
ER Site 33	Motor Pool Oil Spill	4/05	
ER Site 41	Bldg. 838 Mercury Spill	12/95	
ER Site 42	Acid Spill, Bldg. 879 Water Treatment Facility	9/00	
ER Site 73	Hazardous Waste Repackaging and Storage (Bldg 895)	12/95	
ER Site 96	Storm Drain System	6/06	
ER Site 104	PCB Spill	12/95	
ER Site 186	Building 859 TCE Disposal	9/00	
ER Site 187	Septic Tank Piping for POTW	6/06	
ER Site 192	TA-I Waste Oil Tank	7/00	
ER Site 211	Bldg. 840, Former UST 840-I	9/00	
ER Site 226	Old Acid Waste Line	6/06	
OU-1303	***TA-II***		
ER Site 43	Radioactive Material Storage Yard (TA-II)	9/00	

DOE/Sandia Final Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU	Description	Date of Approval	Comments
ER Site 44	Decontamination Site & Uranium Calibration Pits (UCPs)	7/00	
ER Site 48	Bldg. 904 Septic System and HE Drain System (TA-II)	6/06	
ER Site 113	Area II Firing Sites	11/01	
ER Site 114	Explosive Burn Pit	4/05	
ER Site 135	Bldg. 906 Drain System (TA-II)	6/06	
ER Site 136	Bldg. 907 Septic System and HE Drain System (TA-II)	6/06	
ER Site 159	Bldg. 935 Septic System and Drywell (TA-II)	6/06	
ER Site 165	Bldg. 901 Septic System (TA-II)	6/06	
ER Site 166	Bldg. 919 Septic System and Seepage Pit (TA-II)	6/06	
ER Site 167	Bldg. 940 Septic System and Seepage Pits (TA-II)	6/06	
OU-1306	***TAs-III&V***		
ER Site 18	Concrete Pad	4/05	
ER Site 26	Burial Site (Western Part of TA-III)	4/05	
ER Site 31	Electrical Transformer Oil Spill	11/01	
ER Site 34	Centrifuge Oil Spill	11/01	
ER Site 35	Vibration Facility Oil Spill (TA-III)	4/05	
ER Site 36	HERMES Oil Spill (TA-V)	11/01	
ER Site 37	PROTO Oil Spill	11/01	
ER Site 51	Bldg. 6924 Pad, Tank, and Pit	11/01	
ER Site 100	Bldg. 6620 Drain/Sump	11/01	
ER Site102	Radioactive Disposal Area	11/01	
ER Site 105	Mercury Spill (Bldg. 6536)	12/95	
ER Site 107	Explosives Test Area (SouthEast TA-III)	4/05	
ER Site 111	Building 6715 Sump/Drain	11/01	
ER Site 188	Bldg 6597Above Ground Containment Spill Tank	12/95	
ER Site 241	Storage Yard	4/05	

DOE/Sandia Final Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU	Description	Date of Approval	Comments
ER Site 275	TA V Seepage Pits	7/00	
OU-1309	***Tijeras Arroyo***		
ER Site 16	Open Dumps (Arroyo del Coyote)	9/00	
ER Site 23	Disposal Trenches (Near Tijeras Arroyo)	7/00	
ER Site 50	Old Centrifuge Site (Tijeras Arroyo)	9/00	
ER Site 77	Oil Surface Impoundment	7/00	
ER Site 227	Bunker 904 Outfall	6/06	
ER Site 228A	Centrifuge Dump Site	9/00	
ER Site 228B	Centrifuge Dump	11/01	
ER Site 229	Storm Drain System Outfall (for TA-II)	6/06	
ER Site 230	Storm Drain System Outfall (for TA-IV)	4/05	
ER Site 231	Storm Drain System Outfall (for TA-IV)	4/05	
ER Site 232	Storm Drain System Outfall	4/05	
ER Site 235	Storm Drain System Outfall	9/00	
OU-1332	***Foothills Test Area***		
ER Site 15	Trash Pits (Frustration Site)	9/97	
ER Site 19	TRUPAK Boneyard Storage Area (NW End of Old Aerial Cable)	7/00	
ER Site 27	Animal Disposal Pit (Coyote Springs)	7/00	
ER Site 28-1	Mine Shafts	9/97	
ER Site 28-3	Mine Shafts	9/97	
ER Site 28-4	Mine Shafts	9/97	
ER Site 28-5	Mine Shafts	9/97	
ER Site 28-6	Mine Shafts	9/97	
ER Site 28-7	Mine Shafts	9/97	
ER Site 28-8	Mine Shafts	9/97	
ER Site 28-9	Mine Shafts	9/97	

DOE/Sandia Final Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU	Description	Date of Approval	Comments
ER Site 28-10	Mine Shafts	11/01	
ER Site 66	Boxcar Site	4/05	
ER Site 67	Frustration Site	11/01	
ER Site 82	Old Aerial Cable Site	11/01	
ER Site 277	New Firing Site East of Optical Range	11/01	
OU-1333	***Canyons Test Area***		
ER Site 10	Burial Mounds (Bunker Area North of Pendulum Site)	7/00	
ER Site 12A	Open Arroyo Channel	9/00	
ER Site 12B	Buried Debris in Graded Area	7/00	
ER Site 13	LCBS Oil Surface Impoundment (Lurance Canyon Burn Site)	7/00	
ER Site 59	Pendulum Site	7/00	
ER Site 60	Bunker Area	11/01	
ER Site 63A	Balloon Test Area: Plutonium Dispersal Study Program (PDSP) Site	9/00	
ER Site 63B	Balloon/Helicopter Site	7/00	
ER Site 64	Gun Site (Madera Canyon)	9/00	
ER Site 72	Operation Beaver Site	7/00	
ER Site 81-A	Catcher Box/Sled Track	11/01	
ER Site 81-B	Impact Pad	11/01	
ER Site 81-C	New Aerial Cable Site: Former Burial Location	9/00	
ER Site 81-D	Northern Cable Area	11/01	
ER Site 81-E	Gun Impact Area	11/01	
ER Site 81-F	Scrap Yard	11/01	
ER Site 92	Pressure Vessel Test Site (Coyote Canyon Blast Area)	9/97	
ER Site 93	Madera Canyon Rocket Launcher Pads A, B & C	7/00	
ER Site 94-A	Lurance Canyon Burn Site – Above Ground Tanks	7/00	

DOE/Sandia Final Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU	Description	Date of Approval	Comments
ER Site 94-B	Lurance Canyon Burn Site – Debris/Soil Mound Area	4/05	
ER Site 94-C	Lurance Canyon Burn Site – Bomb Burner Area and Discharge Line	11/01	
ER Site 94-D	Lurance Canyon Burn Site – Bomb Burner Discharge Pit	9/00	
ER Site 94-E	Lurance Canyon Burn Site – Small Surface Impoundment	9/00	
ER Site 94-F	Lurance Canyon Burn Site – LAARC Discharge Pit	4/05	
ER Site 94-G	Lurance Canyon Burn Site – Scrap Yard	11/01	
ER Site 94-H	Lurance Canyon Burn Site – Fuel Spill at Open Pool Test Area	4/05	
OU-1334	***Central Coyote Test Area***		
ER Site 9	Burial Site/Open Dump (Schoolhouse Mesa)	4/05	
ER Site 11	Explosive Burial Mounds	9/00	
ER Site 20	Schoolhouse Mesa Burn Site	12/95	
ER Site 21	Metal Scrap (Coyote Springs)	9/00	
ER Site 22	Storage/Burn (West of DEER)	7/00	
ER Site 47	Unmanned Seismic Observatory	12/95	
ER Site 57-A	Workman Site – Firing Site	9/00	
ER Site 57-B	Workman Site – Target Area	9/00	
ER Site 61-A	Schoolhouse Mesa Test Site: Blast Area	7/00	
ER Site 61-C	Schoolhouse Mesa Test Site: Schoolhouse Building	9/00	
ER Site 62	Greystone Manor Site (Coyote Springs)	12/95	
ER Site 65-A	Lurance Canyon Explosive Test Site: Small Debris Mound	9/00	
ER Site 65-B	Lurance Canyon Explosive Test Site: Primary Detonation Area	9/00	
ER Site 65-C	Lurance Canyon Explosive Test Site: Secondary Detonation Area	9/00	
ER Site 65-D	Lurance Canyon Explosive Test Site: Near Field Dispersion Area	9/00	

DOE/Sandia Final Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU	Description	Date of Approval	Comments
ER Site 65-E	Lurance Canyon Explosive Test Site: Far Field Dispersion Area	7/00	
ER Site 69	Old Borrow Pit	12/95	
ER Site 70	Explosives Test Pit (Water Towers)	9/00	
ER Site 71	Moonlight Shot Area	7/00	
ER Site 88A	Firing Site: Ranch House	12/95	
ER Site 88B	Firing Site: Instrumentation Pole	9/00	
OU-1335 Southwest Test Area			
ER Site 6	Gas Cylinder Disposal Pit (Bldg. 9966)	11/01	
ER Site 6A	Gas Cylinder Disposal Pit	11/01	
ER Site 14	Burial Site (Bldg. 9920)	7/00	
ER Site 17	Scrap Yards/Open Dump (Thunder Range)	7/00	
ER Site 38	Oil Spills (Bldg 9920)	7/00	
ER Site 39	Oil Spill - Solar Facility	9/97	
ER Site 53	Bldg. 9923 Storage Igloo	9/97	
ER Site 54	Pickax Site (Thunder Range)	7/00	
ER Site 55	Red Towers Site (Thunder Range)	9/00	
ER Site 56	Old Thunderwells (Thunder Range)	7/00	
ER Site 85	Firing Site (Bldg 9920)	7/00	
ER Site 86	Firing Site (Bldg. 9927)	11/01	
ER Site 89	Shock Tube Site (Thunder Range)	7/00	
ER Site 90	Beryllium Firing Site (Thunder Range)	9/00	
ER Site 103	Scrap Yard (Bldg. 9939)	7/00	
ER Site 108	Firing Site (Bldg 9940)	7/00	
ER Site 112	Explosive Contaminated Sump (Bldg. 9956)	9/00	

DOE/Sandia Final Table 6-3 Operating Units, RD&D Permitted Units, Closing Units, and Solid Waste Management Units (SWMUs) for which Corrective Action is Complete Without Controls			
SWMU	Description	Date of Approval	Comments
ER Site 117	Trenches (Bldg. 9939)	11/01	
ER Site 191	EQUUS Red	11/01	
ER Site 193	Sabotage Test Area	7/00	
ER Site 194	General Purpose Heat Source Test Area	9/97	

DOE/Sandia Markup of Table 6-4 Solid Waste Management Units (SWMUs) With Controls						
SWMU/~~AOC~~	***Description***	***Date of Approval***			***Primary Risk Driver***	***DOE/Sandia Comments***
OU-1295 Septic Tanks and Drainfields						
143	Bldg 9972 Septic System	9/00			As	This site should be moved to Table 6-3. See Note A at the end of this table.
144	Bldg 9980 Septic System	9/00			As	This site should be moved to Table 6-3. See Note B at the end of this table.
145	Bldg 9981/9982 Septic Systems	9/00			As	This site should be moved to Table 6-3. See Note C at the end of this table.
OU-1300						
211		9/00			Ni, Tl	This site should be moved to Table 6-3 and should be included under the TA-I operable unit. See Note D at the end of this table.
OU-1302 TA-1						
ER Site 98	Bldg 863 TCA Photochemical Releases	11/05			TCA	
186	Building 859 TCE Disposal	9/00			TCE	This site should be moved to Table 6-3. See Note E at the end of this table.
OU-1303 TA-II						
None						Site 2 should be added to this table.
OU-1306 TAs III&V						
36	HERMES Oil Spill (TA-V)	~~11/01~~ 4/01			Acetone	This site should be moved to Table 6-3. See Note F at the end of this table.
275	TA V Seepage Pits	7/00			As, n-Nitroso-dipropylamine	This site should be moved to Table 6-3. See Note G at the end of this table.

DOE/Sandia Markup of Table 6-4 Solid Waste Management Units (SWMUs) With Controls						
SWMU/~~AOC~~	***Description***	***Date of Approval***			***Primary Risk Driver***	***DOE/Sandia Comments***
OU-1309	***Tijeras Arroyo***					
ER Site 16	Open Dumps (Arroyo del Coyote)	9/00			Cd	This site should be moved to Table 6-3. See Note H at the end of this table.
ER Site 40	Oil Spill (6000 Igloo Area)	~~11/97~~ 9/97			TPH	This site also appears on Table 6-3, but we assume that NMED intended to impose controls for this site and the site should remain on this table.
ER Site 50	Old Centrifuge Site (Tijeras Arroyo)	9/00			As, Cd	This site should be moved to Table 6-3. See Note I at the end of this table.
ER Site 228A	Centrifuge Dump Site	9/00			Cd, benzo(a)pyrene, SVOCs	This site should be moved to Table 6-3. See Note J at the end of this table.
OU-1332	***Foothills Test Area***					
ER Site 28-1	Mine Shafts	~~12/97~~ 9/97				This site should be moved to Table 6-3. See Note K at the end of this table.
ER Site 28-4	Mine Shafts	~~12/97~~ 9/97				This site should be moved to Table 6-3. See Note L at the end of this table.
OU-1333	***Canyons Test Area***					
ER Site 65-A	Lurance Canyon Explosive Test Site: Small Debris Mound	9/00			Depleted Uranium (DU)	This site should be moved to Table 6-3. See Note M at the end of this table.
ER Site 65-B	Lurance Canyon Explosive Test Site: Primary Detonation Area	9/00			Cd, Hg, DU	This site should be moved to Table 6-3. See Note N at the end of this table.
ER Site 65-C	Lurance Canyon Explosive Test Site: Secondary Detonation Area	9/00			DU	This site should be moved to Table 6-3. See Note O at the end of this table.

DOE/Sandia Markup of Table 6-4 Solid Waste Management Units (SWMUs) With Controls						
SWMU/~~AOC~~	***Description***	***Date of Approval***			***Primary Risk Driver***	***DOE/Sandia Comments***
ER Site 65-D	Lurance Canyon Explosive Test Site: Near Field Dispersion Area	9/00			Ag, DU	This site should be moved to Table 6-3. See Note P at the end of this table.
ER Site 65-E	Lurance Canyon Explosive Test Site: Far Field Dispersion Area	7/00			As, Se, Cd, DU	This site should be moved to Table 6-3. See Note Q at the end of this table.
94-A	Lurance Canyon Burn Site – Above Ground Tanks	7/00			DU	This site should be moved to Table 6-3. See Note R at the end of this table.
94-B	Lurance Canyon Burn Site – Debris/Soil Mound Area	4/05			DU	This site should be moved to Table 6-3. See Note S at the end of this table.
94-C	Lurance Canyon Burn Site – Bomb Burner Area and Discharge Line	11/01			DU	This site should be moved to Table 6-3. See Note T at the end of this table. In NMED letter of 5/30/01, this site was accepted for residential land use.
94-D	Lurance Canyon Burn Site – Bomb Burner Discharge Pit	9/00			DU	This site should be moved to Table 6-3. See Note U at the end of this table.
94-E	Lurance Canyon Burn Site – Small Surface Impoundment	9/00			DU	This site should be moved to Table 6-3. See Note V at the end of this table.
94-F	Lurance Canyon Burn Site – LAARC Discharge Pit	4/05			DU	This site should be moved to Table 6-3. See Note W at the end of this table.
94-G	Lurance Canyon Burn Site – Scrap Yard	11/01			DU	This site should be moved to Table 6-3. See Note X at the end of this table.
94-H	Lurance Canyon Burn Site – Fuel Spill at Open Pool Test Area	4/05			DU	This site should be moved to Table 6-3. See Note Y at the end of this table.
OU-1334	***Central Coyote Test Area***					
57-B	Workman Site – Target Area	9/00			As, Se	This site should be moved to Table 6-3. See Note Z at the end of this table.

DOE/Sandia Markup of Table 6-4 Solid Waste Management Units (SWMUs) With Controls						
SWMU/~~AOC~~	***Description***	***Date of Approval***			***Primary Risk Driver***	***DOE/Sandia Comments***
61-A	Schoolhouse Mesa Test Site: Blast Area	7/00			As, Se, Cd	This site should be moved to Table 6-3. See Note AA at the end of this table.
61-C	Schoolhouse Mesa Test Site: Schoolhouse Building	9/00			RDX	This site should be moved to Table 6-3. See Note BB at the end of this table.
OU-1334 Central Coyote Test Area						
38	Oil Spills (Bldg 9920)	7/00			TPH	This site should be moved to Table 6-3. See Note CC at the end of this table.
54	Pickax Site (Thunder Range)	7/00			Explosives	This site should be moved to Table 6-3. See Note DD at the end of this table.
55	Red Towers Site (Thunder Range)	9/00			As	This site should be moved to Table 6-3. See Note EE at the end of this table.
85	Firing Site (Bldg 9920)	7/00			As	This site should be moved to Table 6-3. See Note FF at the end of this table.
89	Shock Tube Site (Thunder Range)	7/00			As, Cd, Be	This site should be moved to Table 6-3. See Note GG at the end of this table.
108	Firing Site (Bldg 9940)	7/00			Cd	This site should be moved to Table 6-3. See Note HH at the end of this table.
109	Firing Site (Bldg 9956)	7/00			As, Cd, Cr, Cu, Be	
115	Firing Site (Bldg 9930)	9/00			As, Cd, Se	
193	Sabotage Test Area	7/00			As, Cd, Se	This site should be moved to Table 6-3. See Note II at the end of this table.
Misc. Sites						

DOE/Sandia Markup of Table 6-4 Solid Waste Management Units (SWMUs) With Controls						
SWMU/~~AOC~~	***Description***	***Date of Approval***			***Primary Risk Driver***	***DOE/Sandia Comments***
None	TNT Site				Explosives	This site also appears on Table 6-3 and should remain solely on Table 6-3. See Note JJ at the end of this table.

NOTES

A. In April 2000, the DOE/SNL provided a response to a Request for Supplemental Information (RSI) request dated 2/8/2000 from the NMED. As part of the RSI response, a human health risk assessment was provided. At Site 143, As has a maximum concentration of 13.8 milligram/kilogram (mg/kg) which is above the background concentration of 7 mg/kg for subsurface soil; this is the only soil sample of those collected that was above the background concentration. Because the site has been adequately characterized, average concentrations are more representative of actual conditions. The upper confidence limit (UCL) for As concentrations at this site is 5.9 mg/kg which is below the background concentration. With the removal of As, the total estimated excess cancer risk is 3 E-10 and the total hazard index (HI) is less than 1. This site meets the risk guidelines for residential land use.

B. A revised risk assessment for this site was submitted to NMED in March 2006. The maximum As concentration of 6.6 mg/kg exceeded the NMED background concentration of 5.6 mg/kg; the cancer risk using this concentration is 2E-5 for a residential scenario which exceeds NMED guidelines for residential risk. However, because the site has been adequately characterized, average concentrations are more representative of actual conditions. The UCL for As concentrations at this site is 3.8 mg/kg and this concentration is less than the background concentration. With the removal of As, the total estimated excess cancer risk for a residential scenario is 2E-7 and the total HI is 0.10. This site meets the risk guidelines for residential land use.

C. A revised risk assessment for this site was submitted to NMED in March 2006. The maximum As concentration is 5.2 mg/kg which is less than the NMED background concentration of 7 mg/kg. The total estimated cancer risk for this site under a residential scenario is 5E-8 and the total HI is 0.05. This site meets the risk guidelines for residential land use.

D. A risk assessment was submitted to the NMED for this site in August 1999 in response to an NMED RSI of February 1998. Although the Ni concentration of 158 mg/kg exceeds the background concentration of 25.4 mg/kg, and the Tl concentration of 1.1 mg/kg exceeds the background concentration of <1.1 mg/kg, for a residential scenario the total HI is 0.6 and total estimated excess cancer risk is 2E-6. This site meets residential risk guidelines.

E. Although trichloroethylene (TCE) was the original contaminant of concern at this site, no evidence of TCE contamination was found.

F. NMED letter of 4/25/2001 determined that this site was acceptable under a residential risk scenario. Based on the administrative record this site should be moved to Table 6-3. As additional support to the administrative record, the following information is included: When the 95th

UCL of the mean acetone concentration (2.24 mg/kg) was considered in the risk assessment, the total HI for all constituents for residential land use was reduced to 0.5. Whereas using the maximum concentration of 12 mg/kg, the HI for acetone was 2.12. This discussion is found in Residential Risk Screening Document Supplemental Information to Support No Further Action Determination for 14 Sandia National Laboratories, New Mexico Solid Waste Management Units. This site meets the risk guidelines for residential land use.

G. A revised risk assessment for this site was submitted to NMED in March 2006. Although several organic constituents were detected, all but two were J values, and none of the organics had a significant contribution to risk; the hazard index for each organic and the sum of the hazard indices were all less than 1.0. N-nitrosodipropylamine had a cancer risk of 1E-6, well below the current NMED guideline of 1E-5. The maximum As concentration of 4.7 exceeded the background value of 4.4 mg/kg. The UCL for As concentrations at this site is 3.18 mg/kg and this concentration is less than the background concentration. With the removal of As, the total estimated excess cancer risk for a residential scenario is 2E-6 and the total HI is 0.10. This site meets residential risk guidelines.

H. A revised risk assessment for this site was submitted to NMED in March 2006. Although the maximum concentration of 1.22 J for Cd exceeded the background value of 1 mg/kg, the risk associated with this constituent for a residential scenario is an HI of 0.03 and a cancer risk of 1.0E-8. (The original No Further Action (NFA) proposal submitted in September 1999 did indicate greater risk associated with Cd but when the residential scenario risk assumptions were updated to those presently used, this risk was significantly reduced.) For a residential scenario, the total HI for this site is 0.12 and the total cancer risk is 2E-8. This site meets residential risk guidelines using maximum concentrations for the constituents.

I. A revised risk assessment for this site was submitted to NMED in March 2006. The maximum As concentration of 8.0 mg/kg exceeded the NMED background concentration of 4.4 mg/kg; the cancer risk using this concentration is 2E-5 for a residential scenario which exceeds NMED guidelines for residential risk. However, because the site has been adequately characterized, average concentrations are more representative of actual conditions. The UCL for As concentrations at this site is 5.15 mg/kg; the total estimated excess cancer risk for a residential scenario is 1E-5 using this concentration and the total HI is 0.80. The incremental HI is 0.43 and estimated incremental cancer risk is 1.97 E-6 for the residential land-use scenario. Thus, by using realistic concentrations in the risk calculations that more accurately depict actual site conditions and by considering incremental risk, the HI and estimated excess cancer risk are lower than NMED guidelines. This site meets residential risk guidelines.

J. A revised risk assessment for this site was submitted to NMED in March 2006. UCLs were used for the two main contributors to cancer risk, benzo(g,h,i)perylene and benzo(a)pyrene; the total estimated excess cancer risk is 4E-6 and the total HI is 0.50 when the UCLs are used for these two constituents. This site meets residential risk guidelines.

K. This site should not be on this table because the proposed controls are designed only to prevent inadvertent access and are not related to protection from residual contamination. See Comment PP6-15 for additional explanation on types of allowable controls.

L. This site should not be on this table because the proposed controls are designed only to prevent inadvertent access and are not related to protection from residual contamination. See Comment PP6-15 for additional explanation on types of allowable controls.

M. In 2004, this site was resampled for arsenic because the original samples were of questionable quality. Using the maximum concentration from this resampling effort, a revised risk assessment for this site was submitted to NMED in March 2006. The maximum As concentration of

6.22 is below the background value of 9.8 mg/kg. For a residential scenario, the total HI is 0.22 and the total estimated excess cancer risk is 7E-8; both values are below the NMED guidelines. This site meets residential risk guidelines for nonradiological constituents of concern (COCs). The radiological risk assessment recognized that there is one duplicate sample that had a U-235 activity of 0.192 picoCurie/gram (pCi/g) that slightly exceeded the background of 0.16 pCi/g. No radiological risk assessment was performed. Consistent with NMED's 01/08/2007 letter on Environmental Restoration (ER) Site 28-2, radiological risk will not be considered in Corrective Action Complete determinations. During the radiological surveys of 65-A, no radiological areas were detected. Based upon the results of the risk assessments, this site meets residential risk guidelines.

N. A revised risk assessment for this site was submitted to NMED in March 2006. Cd and Hg, although above background, presented risks that were well below NMED risk guidelines. For a residential scenario, the total HI is 0.65 and the total estimated excess cancer risk is 4E-7; both values are below the NMED guidelines. The radiological risk assessment recognized that there is a minimum detectable activity (MDA) for U-238 of 3.55 pCi/g that exceeded the background of 2.31 pCi/g. The radiological risk assessment indicated that this site was acceptable for recreational and residential use. During the gamma radiation survey of 65-B, numerous buried depleted uranium (DU) fragments and soil area sources were investigated and removed. Consistent with NMED's 01/08/2007 letter on ER Site 28-2, radiological risk will not be considered in Corrective Action Complete determinations. Based upon the results of risk assessments, this site meets residential risk guidelines.

O. The NFA proposal submitted to the NMED in May 1999 includes a risk assessment. The total HI is 0.2 and the total estimated excess cancer risk is 9E-7. The radiological risk assessment recognized that there was an MDA for U-238 of 3.76 pCi/g that exceeded the background of 2.31 pCi/g , and an MDA for U-235 of 0.275 that exceeded the background of 0.16. The radiological risk assessment indicated that this site was acceptable for recreational and residential use. During the gamma radiation survey of 65-C, numerous buried DU fragments and soil area sources were investigated and removed. Consistent with NMED's 01/08/2007 letter on ER Site 28-2, radiological risk will not be considered in Corrective Action Complete determinations. Based upon the results of the risk assessments, this site meets residential risk guidelines.

P. The NFA proposal submitted to the NMED in September 1999 includes a risk assessment. The site meets residential risk guidelines for nonradiological COCs. The total HI is 0.2 and there is no risk attributable to cancer. The radiological risk assessment recognized that there was an MDA for U-238 of 3.83 pCi/g that exceeded the background of 2.31 pCi/g , an MDA for U-235 of 0.34 that exceeded the background of 0.16, and an activity of Th-232 at 1.09 pCi/g that exceeded the background activity of 1.03 pCi/g. The radiological risk assessment indicated that this site was acceptable for recreational and residential use. During the gamma radiation survey of 65-D, numerous buried DU fragments and soil area sources were investigated and removed. Consistent with NMED's 01/08/2007 letter on ER Site 28-2, radiological risk will not be considered in Corrective Action Complete determinations. Based upon the results of the risk assessments, this site meets residential risk guidelines.

Q. A revised risk assessment for this site was submitted to NMED in March 2006. The maximum Se and Cd concentrations were above their respective background concentrations but the risks associated with them were well below NMED risk guidelines. The site was resampled for As in 2004 because the original samples were of questionable quality. When the resampled results are used, the maximum As concentration is 7.9 and it is below the background concentration of 9.8. For a residential scenario, the total HI is 0.36 and the total estimated excess cancer risk is 1E-7; both values are below the NMED guidelines. During the gamma radiation survey of 65-E, numerous buried DU radiation anomalies were investigated and removed. The radiological risk assessment recognized an activity for U-238 of 20.8 pCi/g that exceeded the background of 2.31 pCi/g , an activity for U-235 of 0.26 that exceeded the background of 0.16, an activity for U-234 of 2.6 that exceeded the

background of 2.31 pCi/g, and an activity for Cs-137 of 1.03 pCi/g that exceeded the background activity of 0.52 pCi/g. The radiological risk assessment indicated that this site was acceptable for recreational and residential use. Consistent with NMED's 01/08/2007 letter on ER Site 28-2, radiological risk will not be considered in Corrective Action Complete determinations. Based upon the results of the risk assessments, this site meets residential risk guidelines.

R. A revised risk assessment for this site was submitted to NMED in March 2006. Using maximum concentrations, this site met residential risk guidelines for nonradiological COCs. For a residential scenario, the total HI is 0.00 and the total estimated excess cancer risk is 7E-7; both values are below the NMED guidelines. In October 1993, an unexploded ordnance (UXO) survey found one trip flare as live ordnance and one slap flare and one rifle-propelled illuminator round as ordnance debris. A radiological survey was conducted in 1993 and 1994 and found no surface gamma radiation anomalies. A radiological risk assessment conducted for this site recognized an MDA for U-238 of 3.10 pCi/g that exceeded the background of 2.31 pCi/g and an MDA for U-235 of 0.224 that exceeded the background of 0.16. The radiological risk assessment indicated that this site was acceptable for recreational and residential use. Consistent with NMED's 01/08/2007 letter on ER Site 28-2, radiological risk will not be considered in Corrective Action Complete determinations. Based upon the results of the risk assessments, this site meets residential risk guidelines.

S. A revised risk assessment for this site was submitted to NMED in October 2003. Using maximum concentrations, this site met residential risk guidelines for nonradiological COCs. For a residential scenario, the total HI is 0.07 and the total estimated excess cancer risk is 3E-8; both values are below the NMED guidelines. In October 1993, an unexploded ordnance (UXO) survey found one trip flare as live ordnance and one slap flare and one rifle-propelled illuminator round as ordnance debris. A radiological survey conducted in 1993 and 1994 found several point-source and area-source gamma radiation anomalies that were removed. A radiological risk assessment conducted for this site recognized a maximum activity for U-238 of 71.2 pCi/g that exceeded the background of 2.31 pCi/g, a maximum activity for U-235 of 1.11 that exceeded the background of 0.16, and a maximum activity for Th-232 of 1.2 pCi/g that exceeded the background activity of 1.03 pCi/g. The radiological risk assessment indicated that this site was acceptable for recreational and residential use. Consistent with NMED's 01/08/2007 letter on ER Site 28-2, radiological risk will not be considered in Corrective Action Complete determinations. Based upon the results of the risk assessments, this site meets residential risk guidelines.

T. The NFA proposal submitted to the NMED in March 2001 included a risk assessment. Using maximum concentrations, this site met residential risk guidelines for nonradiological COCs. For a residential scenario, the total HI is 0.03 and there was no risk attributable to cancer. In October 1993, an unexploded ordnance (UXO) survey found one trip flare as live ordnance and one slap flare and one rifle-propelled illuminator round as ordnance debris. A radiological survey was conducted in 1993 and 1994 and three point-sources were removed. A radiological risk assessment conducted for this site recognized a maximum activity for U-238 of 11.9 pCi/g that exceeded the background activity of 2.31 pCi/g, an MDA for U-235 of 0.256 that exceeded the background activity of 0.16, and a maximum activity for Th-232 of 1.09 pCi/g that exceeded the background activity of 1.03 pCi/g. The radiological risk assessment indicated that this site was acceptable for recreational and residential use. Consistent with NMED's 01/08/2007 letter on ER Site 28-2, radiological risk will not be considered in Corrective Action Complete determinations. Based upon the results of risk assessments, this site meets residential risk guidelines.

U. The NFA proposal submitted to the NMED in May 1999 included a risk assessment. Using maximum concentrations, this site meets residential risk guidelines for nonradiological COCs. For a residential scenario, the total HI is 0.00 and the total estimated excess cancer risk

is 9E-9. Using maximum concentrations, this site met residential risk guidelines for nonradiological COCs. In October 1993, an unexploded ordnance (UXO) survey found one trip flare as live ordnance and one slap flare and one rifle-propelled illuminator round as ordnance debris. A radiological survey was conducted in 1993 and 1994; no surface gamma radiation anomalies were detected. A radiological risk assessment conducted recognized an MDA for U-235 of 0.213 pCi/g that exceeded the background of 0.16 pCi/g. The radiological risk assessment indicated that this site was acceptable for recreational and residential use. Consistent with NMED's 01/08/2007 letter on ER Site 28-2, radiological risk will not be considered in Corrective Action Complete determinations. Based upon the results of risk assessments, this site meets residential risk guidelines.

V. The NFA proposal submitted to the NMED in September 1999 included a risk assessment. Using maximum concentrations, this site met residential risk guidelines for nonradiological COCs. For a residential scenario, the total HI is 0.1 and the total estimated excess cancer risk is 9E-8. In October 1993, an unexploded ordnance (UXO) survey found one trip flare as live ordnance and one slap flare and one rifle-propelled illuminator round as ordnance debris. A radiological survey was conducted in 1993 and 1994; one large surface gamma radiation anomaly was detected and cleaned up. A radiological risk assessment conducted recognized a maximum activity for U-238 of 15.7 pCi/g that exceeded the background of 2.31 pCi/g and a maximum activity for Th-232 of 1.16 pCi/g that exceeded the background concentration of 1.03 pCi/g, and a maximum concentration of 0.21 pCi/g that exceeded the background activity of 0.16 pCi/g for U-235. The radiological risk assessment indicated that this site was acceptable for recreational and residential use. Consistent with NMED's 01/08/2007 letter on ER Site 28-2, radiological risk will not be considered in Corrective Action Complete determinations. Based upon the results of risk assessments, this site meets residential risk guidelines.

W. The supplemental risk document submitted to the NMED in October 2003 revised the nonradiological risk assessment that was submitted to the NMED in September 2001. Using maximum concentrations, this site meets residential risk guidelines for nonradiological COCs. For a residential scenario, the total HI is 0.37 and the total estimated excess cancer risk is 7E-7. In October 1993, an unexploded ordnance (UXO) survey found one trip flare as live ordnance and one slap flare and one rifle-propelled illuminator round as ordnance debris. A radiological survey was conducted in 1993 and 1994; no gamma radiation anomalies were detected within the boundary of Site 94-F. When excavating soil contaminated with jet fuel, DU contaminated soil was discovered. The DU-contaminated soil was removed. A radiological risk assessment was submitted to the NMED as part of the NFA proposal for site 94-F in September 2001. This risk assessment recognized a maximum activitiy for U-238 of 22.9 pCi/g that exceeded the background of 2.31 pCi/g and an MDA for U-235 of 0.217 pCi/g that exceeded the background of 0.16 pCi/g. The radiological risk assessment indicated that this site was acceptable for recreational and residential use. Consistent with NMED's 01/08/2007 letter on ER Site 28-2, radiological risk will not be considered in Corrective Action Complete determinations. Based upon the results of risk assessments, this site meets residential risk guidelines.

X. The NFA proposal submitted to the NMED in March 2001 included a risk assessment. Using maximum concentrations, this site meets residential risk guidelines for nonradiological COCs. For a residential scenario, the total HI is 0.02 and the total estimated excess cancer risk is 1E-7. In October 1993, an unexploded ordnance (UXO) survey found one trip flare as live ordnance and one slap flare and one rifle-propelled illuminator round as ordnance debris. A radiological survey was conducted in 1993 and 1994; two point source gamma radiation anomalies and three area source gamma radiation anomalies were detected (within the site boundaries) and cleaned up. A radiological risk assessment conducted for the site recognized a maximum activity for U-235 of 0.191 pCi/g that exceeded the background of 0.16 pCi/g and a maximum activity for Th-232 of 1.09 pCi/g that exceeded the background concentration of 1.03 pCi/g. The radiological risk assessment

indicated that this site was acceptable for recreational and residential use. Consistent with NMED's 01/08/2007 letter on ER Site 28-2, radiological risk will not be considered in Corrective Action Complete determinations. Based upon the results of risk assessments, this site meets residential risk guidelines.

Y. The supplemental risk submitted to the NMED in October 2003 revised the nonradiological risk assessment that was submitted to the NMED in September 2002. Using maximum concentrations, this site meets residential risk guidelines for nonradiological COCs. For a residential scenario, the total HI is 0.02 and the total estimated excess cancer risk is 9E-10. In October 1993, an unexploded ordnance (UXO) survey found one trip flare as live ordnance and one slap flare and one rifle-propelled illuminator round as ordnance debris. A radiological survey was conducted in 1993 and 1994; no gamma radiation anomalies were detected within the boundary of Site 94-H. No radiological COCs exceeded background concentrations; therefore, a radiological risk assessment was not conducted. Consistent with NMED's 01/08/2007 letter on ER Site 28-2, radiological risk will not be considered in Corrective Action Complete determinations. Based upon the results of risk assessments, this site meets residential risk guidelines.

Z. A revised risk assessment for this site was submitted to NMED in March 2006. The revised risk assessment indicated that this site meets residential risk guidelines. The maximum As concentration of 5.9 mg/kg was above the background concentration of 5.6 mg/kg. However, the UCL for As was 4.9 mg/kg which is below the background concentration. Although the maximum Se concentration of 78 J mg/kg is above the background concentration of <1 mg/kg, Se does not have a significant risk contribution. (The original NFA proposal submitted in September 1997 did indicate greater risk associated with Se but when the residential scenario risk assumptions were updated to those presently used, this risk was significantly reduced.) For a residential scenario, the total HI is 0.37 and the total estimated excess cancer risk is 8E-8; both values are below the NMED guidelines. Based upon the results of risk assessments, this site meets residential risk guidelines.

AA. A revised risk assessment for this site was submitted to NMED in March 2006. The maximum As concentration of 20.8 mg/kg is above the background concentration of 5.6 mg/kg. However, the UCL for As is 4.2 mg/kg which is below the background concentration. Although the maximum Se concentration of 2.8 mg/kg is above the background concentration of <1 mg/kg, Se does not have a significant risk contribution. Additionally the maximum Cd concentration of 6.5 mg/kg does not have a significant contribution to risk. (The original NFA proposal submitted in September 1998 did indicate greater risk associated w/ Se and Cd but when the residential scenario risk assumptions were updated to those presently used, the risk associated with these constituents was significantly reduced.) For a residential scenario, the total HI is 0.31 and the total estimated excess cancer risk is 5E-7; both values are below the NMED guidelines. Based upon the results of risk assessments, this site meets residential risk guidelines.

BB. A revised risk assessment for this site was submitted to NMED in March 2006. The maximum cyclotrimethylenetrinitramine (RDX) concentration of 0.56 mg/kg does not have a significant contribution to risk. (The original NFA proposal submitted in May 1999 did indicate greater risk associated with RDX but when the residential scenario risk assumptions were updated to those presently used, the risk associated with these constituents was significantly reduced.) For a residential scenario, the total HI is 0.20 and the total estimated excess cancer risk is 5E-7; both values are below the NMED guidelines. Based upon the results of risk assessments, this site meets residential risk guidelines.

CC. No risk was performed for this site but soil sampling was conducted. Total petroleum hydrocarbon (TPH) concentrations were not detected above the method detection limit (MDL) of 40 mg/kg. According to the underground storage tank regulations, only TPH concentrations greater than 100 mg/kg are of concern.

DD. In the NFA proposal of October 1996, there was one soil sample that had a detected trinitrotoluene (TNT) concentration of 3 ppm. The remainder of the soil samples had no detections of TNT. The maximum concentration of TNT detected at this site does not present a risk under a residential land use scenario. See Comment PP6-15 for additional explanation on types of allowable controls.

EE. A revised risk assessment for this site was submitted to NMED in March 2006. The maximum As concentration of 10.9B mg/kg is above the background concentration of 5.6 mg/kg. However, the UCL for As is 4.52 mg/kg which is below the background concentration. With the use of the UCL for As, this site meets the risk guidelines for residential land use. For a residential scenario, the total HI is 0.12 and the total estimated excess cancer risk is 8E-8; both values are below the NMED guidelines. Based upon the results of risk assessments, this site meets residential risk guidelines.

FF. A revised risk assessment for this site was submitted to NMED in March 2006. The maximum As concentration of 4.6 mg/kg is above the background concentration of 4.4 mg/kg. However, the UCL for As is 2.9 mg/kg which is below the background concentration. With the use of the UCL for As, this site meets the risk guidelines for residential land use. For a residential scenario, the total HI is 0.22 and the total estimated excess cancer risk is 1E-7; both values are below the NMED guidelines. Based upon the results of risk assessments, this site meets residential risk guidelines.

GG. A revised risk assessment for this site was submitted to NMED in March 2006. The non-radiological risk analysis included in the NFA proposal submitted to NMED in 1997 included concentrations from on-site laboratory analytical data. The on-site laboratory analytical data had elevated detection limits for some metals including As, Cd, and Se (the maximum on-site concentration for As, Cd and Se was assumed to be one-half of the MDL for these constituents or 25 mg/kg for As, 10 mg/kg for Cd, and 25 mg/kg for Se). As, Cd and Se were not detected in any samples analyzed by the on-site lab, and Cd and Se were not detected in any samples analyzed by the off-site lab. In the March 2006 risk assessment, based on an agreement with NMED, the on-site data with elevated laboratory detection limits were eliminated from the risk assessment. Thus the maximum concentration used in the 2006 risk assessment was 6.4 mg/kg for As, 0 .55 mg/kg (one-half of the off-site MDL) for Cd and 0.55 mg/kg (one-half of the off-site MDL) for Se. The 6.4 mg/kg for As is above the background concentration of 4.4 mg/kg; however, the UCL for As is 4.4 mg/kg which is equivalent to the background concentration. When the Cd and Se concentrations used in the risk assessment are based on off-site laboratory analytical data and As is eliminated from the risk calculations, this site meets residential risk guidelines For the residential scenario, the total HI is 0.74 and the total estimated excess cancer risk is 4E-7; both values are below the NMED guidelines. Based upon the results of risk assessments, this site meets residential risk guidelines.

HH. A revised risk assessment for this site was submitted to NMED in March 2006. The maximum concentration of 1.63 mg/kg for Cd is above the background concentration of 0.9 mg/kg but Cd did not contribute significantly to risk. (The original NFA proposal submitted in June 1998 did indicate greater risk associated with Cd but when the residential scenario risk assumptions were updated to those presently used, the risk associated with Cd was significantly reduced.) For a residential scenario, the total HI is 0.17 and the total estimated excess cancer risk is 4E-8; both values are below the NMED guidelines. Based upon the results of risk assessments, this site meets residential risk guidelines.

II. A revised risk assessment for this site was submitted to NMED in March 2006. This risk assessment used As results from a resampling effort that was conducted in 2004; this effort was undertaken because the original samples were of questionable quality. The maximum concentration for As after these resampling efforts is 3.72 mg/kg which is below the background concentration of 4.4 mg/kg. The maximum concentration of 5 mg/kg (which is one-half the method detection limit) for Cd is above the background concentration of 0.9 mg/kg but Cd did

not contribute significantly to risk. Also the maximum concentration of 25 mg/kg for Se (which is one-half the maximum detection limit) is above the background concentration of <1 mg/kg but Se did not contribute significantly to risk. The original NFA proposal submitted in August 1997 did indicate greater risk associated with Cd and Se but when the residential scenario risk assumptions were updated to those presently used, the risk associated with Cd and Se was significantly reduced.) For a residential scenario, the total HI is 0.30 and the total estimated excess cancer risk is 6E-8; both values are below the NMED guidelines. Based upon the results of risk assessments, this site meets residential risk guidelines.

JJ. In an NMED letter of 1/23/2004, this site was accepted for residential land use.

DOE/Sandia Final Table 6-4 Solid Waste Management Units (SWMUs) Corrective Action Complete With Controls					
SWMU	***Description***	***Date of Approval***	***Clean Up Level Achieved***	***Controls***	***Primary Risk Drivers***
OU-1302 TA-1					
98	Bldg 863 TCA Photochemical Releases	11/05	Industrial	Land use	As, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(ghi)perylene, Carbazole, Dibenzo(a,h)anthracene
190	Steam Plant Tank Farm	6/06	Industrial	Land use	Benzene
OU-1303 TA-II					
2	Classified Waste Landfill	6/06	Industrial	Land use	Cd, PCBs
OU-1309 Tijeras Arroyo					
40	Oil Spill (6000 Igloo Area)	9/97	Industrial	Land use	TPH
OU-1332 Foothills Test Area					
87	Building 9990 Firing Site	6/06	Recreational	Land use	As, Cd, Cu, Se, U
OU-1334 Central Coyote Test Area					
109	Firing Site (Bldg 9956)	7/00	Industrial	Land use	As, Cd, Se
115	Firing Site (Bldg 9930)	9/00	Industrial	Land use	As
Misc. Sites					
None	TNT Site	4/05	Industrial	Land use	TNT
Non-ER Septic Systems					
1029	Bldg. 6584 North Septic System (TA-III)	6/06	Industrial	Land use	As, Benzo(a)Pyrene, Benzo(g,h,i)perylene

Enclosure H

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT PART 7

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP7-1	7.2.1	133	The Permittees shall conduct post-closure care for the CAMU Containment Cell identified in Permit Condition 7.1 above, beginning after completion of closure of the Unit on May 10, 2004, and continuing for 30 years after that date, except that the 30-year post-closure care period may be shortened or extended in accordance with 40 C.F.R. § 264.117(a)(2) as follows.	Consistent with Section 16.0 of Permit Attachment 16 and with 40 CFR 264.117(a)(1), post-closure care began after completion of closure, which was certified on October 15, 2003. Please revise to read: The Permittees shall conduct post-closure care for the CAMU Containment Cell identified in Permit Condition 7.1 above, beginning after completion of closure of the Unit on October 15, 2003, and continuing for 30 years after that date, except that the 30-year post-closure care period may be shortened or extended in accordance with 40 C.F.R. § 264.117(a)(2) as follows.
PP7-2	7.2.2	134	Because remediation waste will remain in the CAMU, the CAMU containment cell is subject to post-closure care. Therefore, the Permittees shall comply with the requirements for landfills, as contained in 40 C.F.R. § 264.310(b), and as described in Permit Attachment 16, and as follows. *1–4 (not included in comment)* 5. Protect and maintain surveyed benchmarks used in complying with the surveying and recordkeeping requirements of 40 C.F.R. § 264.309 (as described in Section 16.8 of Permit Attachment 16).	DOE/Sandia note the CAMU containment cell is not a landfill; therefore the requirements of 40 CFR 264.552(e)(6)(v) are applicable, rather than the requirements of 40 CFR 264.309 and 310. Select provisions of landfill post-closure care are appropriate for the CAMU, (e.g., maintaining the integrity of the final cover). Item 5 is not applicable or necessary for compliance with the requirements of 40 CFR 264.552(e)(6)(v), and it is not described in the recordkeeping requirements in Section 16.8 of Permit Attachment 16. Therefore, it should be deleted. Please revise as follows: Because remediation waste will remain in the CAMU, the CAMU containment cell is subject to post-closure care. Therefore, the Permittees shall comply with the requirements of 40 CFR 264.552(e)(6)(v), as described in Permit Attachment 16, and as follows. *1–4 (not included in comment)*

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PP7-101*	7.7	135	The Permittees shall inspect the components, structures, and equipment at the CAMU in accordance with the Inspection, Maintenance, Repair Activities and Frequencies described in Section 16.11 of Permit Attachment 16 and the CAMU Post-Closure Inspection and Maintenance/Repair Schedule in Appendix 1, Attachment 16.	Inspections are described in Section 16.6 of Permit Attachment 16. Please revise the cross-reference as follows: The Permittees shall inspect the components, structures, and equipment at the CAMU in accordance with the Inspection, Maintenance, Repair Activities and Frequencies described in Sections 16.6.5 and 16.6.6 of Permit Attachment 16 and the CAMU Post-Closure Inspection and Maintenance/Repair Schedule in Appendix 1, Permit Attachment 16.

*Comment is more administrative in nature

Enclosure I

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 1

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA1-1	1.2.1	138	The gates (and doors where present) to all Units shall be closed and locked during non-operating hours.	If the gates are locked, it is not necessary for the doors to also be locked. DOE/Sandia note the condition as stated is not consistent with Permit Attachment 10. Please revise to read: The gates or doors to all Units shall be closed and locked during non-operating hours.
PA1-2	1.2.1	138	Entrance is through five gates, staffed by armed military police or contractors, and requires identification, badges and vehicle passes issued by KAFB or by the Facility. Visitors must have a KAFB or Facility sponsor and sign an entry log to enter KAFB and the Facility. The gates to KAFB and the Facility are shown on Figure 1-3.	DOE/Sandia note access procedures have changed slightly, and the draft Permit should reflect the most current information. DOE/Sandia will provide an updated figure under separate cover. Please revise to read: Entrance is through five general-purpose gates and several special-purpose gates, staffed by armed military police or contractors, and requires appropriate identification issued by KAFB or by the Facility. Visitors must have a KAFB or Facility sponsor and appropriate identification to enter KAFB and the Facility. The gates to KAFB and the Facility are shown on Figure 1-3.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA-101*	1.1	137	The Facility occupies an area of approximately 2,842 acres within the 80-square-mile KAFB (Figure 1-1).	DOE/Sandia note the five TAs occupy approximately 2,842 acres, as discussed in Comment PP1-4. The Facility is defined in Permit Part 1, Section 1.6 as the TAs and remote test areas; the total area is approximately 15,054 acres (23.5 square miles). Please revise accordingly.

*Comment is more administrative in nature

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA1-102*	Table 1-1	138	**DRAFT PERMIT TEXT** Note: only the rows shown below are included in this comment **TABLE 1-1 Permitted Units at the Facility** Unit Name: Manzano Storage Bunkers (Units 37034, 37118, 37045, 37055, and 37057) Acronym: MSB Location and Size: In Manzano Area on KAFB: 0.4 acres occupied by bunkers (approximately 1,600 to 2,100 square feet in each bunker) Types of Operations: Storage **DOE/SANDIA COMMENT** DOE/Sandia have submitted revised information to NMED regarding the size of Bunker 37118; it should be incorporated. Please revise as follows: **TABLE 1-1 Permitted Units at the Facility** Unit Name: Manzano Storage Bunkers (Units 37034, 37118, 37045, 37055, and 37057) Acronym: MSB Location and Size: In Manzano Area on KAFB: 0.4 acres occupied by bunkers (approximately 1,600 to 2,400 square feet in each bunker) Types of Operations: Storage	
PA1-103*	Figure 1-4	after 143		Traffic patterns and waste transportation routes have changed slightly, and the draft Permit should reflect the most current information. DOE/Sandia will provide an updated figure under separate cover.
PA1-104*	Figures 1-1 and 1-5	after 143		The figures do not reflect the most current information available. DOE/Sandia will provide updated figures under separate cover.

*Comment is more administrative in nature

Enclosure J

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 2

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA2-1	2.0	144	The Permittees conduct treatment and storage of hazardous and mixed wastes at the Thermal Treatment Unit (TTU), Hazardous Waste Management Unit (HWMU), Radioactive and Mixed Waste Management Unit (RMWMU), and Auxiliary Hot Cell Unit (AHCU), and store mixed and radioactive wastes at the MSB Units.	Management of radioactive waste is not covered under the NMHWMA or this draft Permit, as discussed in General Comment G-A; thus it is not necessary to specify that radioactive wastes are stored at the MSB. Also, this list implies that both treatment and storage are conducted at every Permitted Unit but the MSB. Please revise to read: The Permittees conduct treatment and/or storage of hazardous and/or mixed wastes at the Thermal Treatment Unit (TTU), Hazardous Waste Management Unit (HWMU), Radioactive and Mixed Waste Management Unit (RMWMU), Auxiliary Hot Cell Unit (AHCU), and MSB Units.
PA2-2	2.0	144	The information in this Permit Attachment, together with the Facility-specific information provided in Permit Attachments 3, 4, 5, 6, and 7, describe the required waste management practices for each of the Permitted Units.	DOE/Sandia note the Unit-specific requirements in Permit Attachments 3-7 describe practices and requirements at the individual Permitted Units. In most cases they supplement the requirements in this Permit Attachment. In some cases, however, the Unit-specific requirements are not consistent with this Permit Attachment; these cases reflect conditions and requirements at the individual Units, and serve to promote effective waste management operations and protection of human health and the environment. In cases of inconsistencies, the Unit-specific requirements should take precedence. Please revise to read: The information in this Permit Attachment, together with the Unit-specific information provided in Permit Attachments 3, 4, 5, 6, and 7, describe the required waste management practices for each of the Permitted Units. If there is a conflict between the provisions of this Permit Attachment and the provisions of the Permit Attachments 3 through 7, the provisions of the Attachment specific to the particular Permitted Unit shall supersede the provisions of this Permit Attachment.
PA2-3	2.1.1	145	Accumulated liquids from precipitation or snowmelt, for which there is no evidence of a release, may be discharged to the ground or to the sanitary sewer if sampling and analysis data indicate that the accumulated liquids are not hazardous.	This permit condition addresses liquids collected in secondary containment structures and areas. It does not apply to storm water retention ponds at the HWMU and RMWMU as these do not serve as secondary containment. Please clarify this by revising to read: Accumulated liquids in secondary containment systems from precipitation or snowmelt, for which there is no evidence of a release, may be discharged to the ground or to the sanitary sewer if sampling and analysis data indicate that the accumulated liquids are not hazardous.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA2-4	2.1.2.1	146	The Permittees shall take measures to prevent accidental ignition or reaction of ignitable and reactive hazardous or mixed wastes. *1–4 (not included in comment)* 5. Water-reactive wastes shall not be stored in waste management areas equipped with automatic water sprinkler systems. When water-reactive wastes are present in such waste management areas (e.g. for treatment or temporary staging), the Permittees shall isolate the wastes with water-resistant barriers such as cabinets or over pack drums to keep water from coming in contact with the waste *6 (not included in comment)*	If the water-reactive wastes are in containers when they are present in areas equipped with automatic sprinklers, the containers serve to keep water from coming into contact with the wastes. In these cases, the requirements for extra isolation are redundant. Please revise the item shown to read: 5. Water-reactive wastes shall not be stored in waste management areas equipped with automatic water sprinkler systems, except when being staged for treatment or for off-site shipment. When water-reactive wastes are present in such waste management areas (e.g. for treatment or temporary staging), the Permittees shall take appropriate measures to ensure water does not come into contact with the waste.
PA2-5	2.1.2.1	146	The Permittees shall take measures to prevent accidental ignition or reaction of ignitable and reactive hazardous or mixed wastes. *1–5 (not included in comment)* 6. Buildings and areas where operations include open containers of ignitable or reactive wastes shall be equipped with intrinsically safe (spark-proof) electrical systems. All other buildings shall be equipped with electrical systems that meet applicable local and other building codes.	Use of intrinsically safe electrical systems is not required by applicable local and other building codes in all instances where operations include open containers of ignitable or reactive wastes. In these cases, the requirements for such intrinsically safe systems are redundant. Please revise the item shown to read: 6. Buildings and areas where operations include open containers of ignitable or reactive wastes shall be equipped with electrical systems that meet applicable codes. The Permittees shall take precautions if necessary to prevent accidental ignition or reaction of ignitable and reactive hazardous or mixed wastes.
PA2-6	2.1.2.2	147	Containers holding ignitable or reactive wastes shall be located at least 50 feet from the TA boundary at all times and shall be protected from sources of ignition or reaction. [40 C.F.R. § 264.176].	DOE/Sandia note the HWMU and MSB are not located within a SNL TA. Accordingly, please revise to: Containers holding ignitable or reactive wastes shall be located at least 50 feet from the TA boundary with the following exceptions: at the MSB where they shall be stored at least 50 feet from the fence restricting access by non-Facility personnel at all times, and at the HWMU where they shall be stored at least 50 feet from the Facility property line. Containers holding ignitable or reactive wastes shall be protected from sources of ignition or reaction. [40 C.F.R. § 264.176].

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA2-7	2.1.3.1	147	The Permittees shall assure that communications and alarm systems and fire protection, spill control, and decontamination equipment are inspected or tested according to the inspection plans and schedules detailed in Permit Attachment 11. Maintenance, repair, and replacement of emergency equipment shall be performed as needed to ensure proper function and in a timely manner. In addition to the above, the Permittees shall test fire suppression equipment on monthly, quarterly, and annual schedules, based on the National Fire Protection Association (NFPA) 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems" (NFPA, 2002). Monthly tests shall include visual checks of valves and pressure gauges. Quarterly tests shall include checks of water flow, switches, and alarms. Annual activities shall include valve inspection and maintenance.	DOE/Sandia note the requirements for inspection and testing of the fire protection systems are fully specified through reference to the NFPA requirements. Please revise to read: The Permittees shall ensure that communications and alarm systems and fire protection, spill control, and decontamination equipment are inspected or tested according to the inspection plans and schedules detailed in Permit Attachment 11. Maintenance, repair, and replacement of emergency equipment shall be performed as needed to ensure proper function and in a timely manner. The Permittees shall also test fire suppression equipment at intervals based on NFPA 25 "*Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*" (NFPA 2002, as updated and revised).
PA2-8	2.1.3.2	148	In addition to the communications and alarm systems described in each Unit-specific Attachment of this Permit, on-site personnel shall carry pagers, two-way radios, or cellular telephones so that they can contact or be contacted by on-site emergency support personnel at all times. In order to enhance safety, waste management personnel shall work in pairs and maintain visual or voice contact when managing wastes. [40 C.F.R. § 264.34].	DOE/Sandia note 40 CFR 264.34 does not require that personnel have access to other personnel and multiple means of communication at all times. Rather, the requirement is for "immediate access to an internal alarm or emergency communications device, either directly or through visual or voice contact with another employee", "whenever hazardous waste is being poured, mixed, spread, or otherwise handled". Two-way radios, pagers, cellular telephones, and working in pairs are illustrations of means of communication that are typically available. DOE/Sandia note that requiring two personnel to be present at all times when managing waste or use of particular communications equipment will not enhance safety in some cases (e.g., small quantities of wastes, limited work space, or operations involving reactive wastes). The Application describes use of two persons only during waste handling operations at the MSB; this precaution is taken to provide additional protection of human health and the environment because the Units are not routinely occupied. Please revise to read: If the communications and alarm systems described in each Unit-specific Attachment of this Permit are not immediately available, on-site personnel working alone shall carry two-way radios or cellular telephones so that they can contact emergency personnel. Alternatively, waste management personnel shall work in pairs and maintain visual or voice contact, and one member of the pair shall have access to two-way radios, cellular telephones, or the communications and alarm systems described in each Permit Attachment [40 C.F.R. § 264.34].

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA2-9	2.1.4.1	148	Only closed waste containers shall be accepted for transportation by vehicles to the Permitted Units. Prior to transport, containers shall be inspected to ensure that they are properly closed, labeled, and in suitable condition for transport.	DOE/Sandia note the wastes accepted for transport to the Permitted Units may include large pieces of equipment and other self-contained items. Please revise as follows: Only closed waste containers or large self-contained waste items shall be accepted for transportation by vehicles to the Permitted Units. Prior to transport, containers and items shall be inspected to ensure that they are properly closed, labeled, and in suitable condition for transport.
PA2-10	2.1.4.1	148	If loading and unloading operations occur outdoors, they shall be conducted in an area immediately adjacent to the Permitted Unit to minimize the distance that the waste must be moved. Spills that occur during loading or unloading operations shall be promptly cleaned up in accordance with spill response procedures contained in Permit Attachment 12. All loading and unloading areas shall be level, and the asphalt, concrete, or other pavement maintained in good condition.	This is somewhat unclear because the HWMU, RMWMU, and TTU each include outdoor areas within the Permitted Unit boundary. DOE/Sandia note that it is appropriate to use the general procedures outlined in Permit Attachment 12 to respond to spills. However, use of the procedures does not constitute implementation of the Contingency Plan or designation of the spill as an emergency. DOE/Sandia further note it is not necessary that loading and unloading areas be level (e.g., the loading ramp on the west side of Building 6926 at the RMWMU) to minimize hazards in loading and unloading operations. Please revise to read: If loading and unloading operations occur outdoors, they shall be conducted so as to minimize the distance that the waste must be moved. Spills that occur during loading or unloading operations shall be promptly cleaned up in accordance with spill response procedures contained in Permit Attachment 12; however such cleanup operations do not necessarily constitute implementation of the Contingency Plan or designation of the spill as an emergency as defined in Permit Attachment 12. The asphalt, concrete, or other pavement shall be maintained in good condition in all loading and unloading areas.
PA2-11	2.1.4	149	Permitted Units shall be designed and operated to prevent hazards, i.e., to minimize the possibility of fire, explosion, or any unplanned or nonsudden releases of hazardous or mixed waste or hazardous constituents to the environment. [40 C.F.R. § 270.14(b)(8)].	DOE/Sandia note 40 CFR 270.14(b)(8) addresses the contents of permit applications rather than the requirements of 40 CFR 264.31 that are applicable to preparedness and prevention. In addition, the draft Permit addresses releases of hazardous constituents rather than hazardous waste constituents as specified in 40 CFR 264.31. Please delete the reference to 40 CFR 270.14 and revise the language of the Permit to be identical to the regulation, as discussed in General Comment G-C.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA2-12	2.1.4.1	149	Vehicles, forklifts, drum dollies, pallet jacks, and other tools used for the transport and management of wastes shall be used as appropriate during loading and unloading operations. Small containers may be loaded or unloaded manually from waste-transport vehicles. A forklift or hydraulic lift shall be used to load or unload larger containers. For loads that are moved with a forklift or hydraulic lift, the containers of waste shall be held together on a pallet with straps or shrink-wrap and shall be strapped to the forklift or hydraulic lift in a manner to prevent the containers from shifting or falling. Fasteners and clamps shall be used with drum dollies. Waste-handling equipment shall be maintained and operated in accordance with manufacturers' guidance. Only qualified personnel trained in hazardous and mixed waste management procedures shall be allowed to manage waste at the Permitted Units, and they shall work in pairs. The Permittees shall be aware of weather conditions and other operations that could adversely affect the safety of waste management operations, and shall exercise caution in operating equipment such as forklifts. The Permittees shall halt waste management operations if weather conditions or other operations adversely impact safety. [40 C.F.R. § 270.14(b)(8)(i)].	As discussed in General Comment G-G, the Application includes descriptions of typical waste handling equipment and operations as illustrations of ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. The waste handling equipment and detailed operations described are typical rather than prescriptive because they are continually adjusted as needed for the specific hazardous and mixed wastes being handled at any time in the Permitted Units. Including prescriptive handling requirements for fastening containers to lifts is redundant, and the requirement to use specific fastening methods may lead to operations that are less protective of worker safety (e.g., containers that are strapped together may block the forklift driver's view and be more cumbersome than using a special forklift attachment to transport two drums at a time). Similarly, DOE/Sandia note the prescriptive requirements for number of personnel are unnecessary and may be counterproductive, as discussed in General Comment G-G and individual comments addressing Permit Attachments 3 through 7. Awareness of the weather and use of two people during waste handling activities may be appropriate at the MSB; these issues are best addressed through requirements in Permit Attachment 7. Please delete the reference to 40 CFR 270.14 as discussed in Comment PA2-11 and revise to read: Vehicles, forklifts, drum dollies, pallet jacks, and other tools used for the transport and management of wastes shall be used as appropriate during loading and unloading operations. Small containers may be loaded or unloaded manually from waste-transport vehicles. A forklift, hydraulic lift, or other mechanical device may be used as needed to load or unload larger containers. In all cases, containers of waste shall be handled in a manner to prevent shifting or falling. Waste-handling equipment shall be maintained and operated in accordance with manufacturers' guidance. Only personnel trained in accordance with the Training Plan in Permit Attachment 14 shall be allowed to handle waste at the Permitted Units.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA2-13	2.1.4.4	149	In the event of a power loss, the Permittees shall place the affected equipment in a safe state, close or cover open containers of hazardous or mixed wastes that are present, and stop operations until power is restored.	For clarity and consistency with procedures in Permit Attachment 12, please revise to read: In the event of a power loss, the Permittees shall perform the following steps if safe to do so: place the affected equipment in a safe state, close or cover open containers of hazardous or mixed wastes that are present, and stop operations until power is restored.
PA2-14	2.1.4.5	149	Facility personnel at Permitted Units shall be required to use appropriate PPE to protect themselves from hazards. Such hazards may include handling heavy containers, radiation, operating waste-handling equipment, weather conditions, and contact with or other exposure to hazardous or mixed wastes and hazardous constituents. Personnel handling closed containers of wastes shall wear PPE that includes steel-toed safety shoes and appropriate gloves (heavy abrasion-resistant gloves with or without chemical-resistant outer gloves). And, as appropriate, personnel shall also be required to wear safety glasses or goggles, coveralls, and hard hats.	The PPE described in the Application illustrates ways in which DOE/Sandia meet the requirements of 40 CFR 264 to be protective of human health and the environment. These illustrations should be detailed in the Permit in a general fashion to meet the variety of potential conditions. Please revise to read: Facility personnel at Permitted Units shall be required to use appropriate PPE to protect themselves from hazards. Such hazards may include handling heavy containers, explosives, radiation, operating waste-handling equipment, weather conditions, and contact with or other exposure to hazardous or mixed wastes and hazardous waste constituents.
PA2-15	2.1.5	150	The Permittees are not authorized to manage hazardous wastes with organic concentrations equal to or greater than 10 percent by weight in process during storage. Therefore Subpart BB regulations do not apply to the Permitted Units.	This condition does not accurately reflect DOE/Sandia operations. As described in the Application, equipment that is subject to the requirements of 40 CFR 264 Subpart BB is used (but not routinely used) at the Permitted Units, and DOE/Sandia note that any such equipment is exempt from the requirements in accordance with 40 CFR 264.1050(f) because it is used less than 300 hours per year. Please revise to read: The Permittees are not authorized to manage hazardous wastes with organic concentrations equal to or greater than 10 percent by weight in process equipment identified in 40 CFR 264 Subpart BB for more than 300 hours per year. Therefore, Subpart BB regulations do not apply to the Permitted Units.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA2-16	Table 2-1	150		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

Table 2-1
Potential Equipment/System Failures and Solutions

Equipment/System	Solution to Failure or Outage
Lights	Permittees shall repair/replace battery-operated lights operate in the buildings in each Permitted Unit.
Pumps and other equipment	Permittees shall use portable manually- or pneumatically-operated equipment.
Container-handling equipment	Permittees shall obtain replacement forklifts and drum-handling equipment from the Facility's transportation department.
Vehicles	Personnel shall obtain replacements for vehicles from the Facility's transportation department.
Fire Sprinklers	Permittees shall use portable fire extinguishers.

DOE/SANDIA COMMENT

The specific requirements in this table are not consistent with other parts of the draft Permit or the information provided in the Application. The Application includes information to illustrate actions that could be taken to mitigate the effects of power outages. Including these actions as prescriptive requirements in the draft Permit is likely to lead to unsafe conditions, such as the requirement to use portable fire extinguishers whenever fire sprinklers are not operational (this requirement is also not fully consistent with the procedures in Permit Attachment 12, Section 12.8).

Please revise as follows:

Table 2-1
Potential Equipment/System Failures and Solutions

Equipment/System	Solution to Failure or Outage
Lights	Permittees shall maintain battery-operated emergency lights as needed in the buildings in each Permitted Unit.
Pumps and other equipment	Permittees shall use portable manually- or pneumatically-operated equipment as needed.
Container-handling equipment	Permittees shall obtain replacement equipment, as needed.
Vehicles	Personnel shall obtain replacements for vehicles, as needed.
Fire Sprinklers	Only if safe to do so, Permittees shall use appropriate alternative fire suppression equipment

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA2-17	2.2.1	152	Waste containers that may be stored at the Permitted Units include, but are not limited to, 30-, 55-, 83-, 85-, and 110-gallon steel, polyethylene, and fiber drums; fiberglass-reinforced plastic or plywood boxes; various steel boxes; metal over pack boxes; cardboard shipping containers; gas cylinders; roll-off bins; lab pack containers; various small containers (e.g., 1-, 2-, 5-, 10-, and 20-gallon drums or pails); bags; and some oversized, irregularly-shaped containers.	DOE/Sandia note the wastes managed at the Permitted Units include large pieces of equipment and other self-contained items. To clarify, please revise to read: Waste containers that may be stored at the Permitted Units include, but are not limited to, 30-, 55-, 83-, 85-, and 110-gallon steel, polyethylene, and fiber drums; fiberglass-reinforced plastic or plywood boxes; various steel boxes; metal over pack boxes; cardboard shipping containers; gas cylinders; roll-off bins; lab pack containers; various small containers (e.g., 1-, 2-, 5-, 10-, and 20-gallon drums or pails); bags; and some oversized, irregularly-shaped containers (e.g. equipment and other self-contained large items).
PA2-18	2.2.1	153	Pursuant to 40 C.F.R. §§ 262.34(a)(2) and 262.34(a)(3), waste containers shall be labeled clearly with the accumulation start date and the words "hazardous waste." Containers shall also be clearly labeled with a description of the hazardous waste and constituents contained therein.	DOE/Sandia note waste generation and accumulation activities at SNL that are subject to the requirements of 40 CFR 262.34(a) are outside the scope of this Permit. Please see General Comment G-B for further discussion. In addition, 40 CFR 262.34(a) merely specifies that containers be "labeled or marked clearly with the words 'Hazardous Waste'". Please see General Comment G-C for further discussion of consistency between the regulations and the requirements in the draft Permit. Please delete this paragraph.
PA2-19	2.2.2	153	Pursuant to 40 C.F.R. § 264.173, waste containers at the Facility shall be handled in a manner that will not cause them to rupture or leak. Containers at the Facility shall be kept closed except when waste is added to or removed from a container, or when the contents of a container need to be repackaged, or waste is being inspected or sampled.	This requirement is applicable only to operations covered by this Permit at the Permitted Units. Please revise to read: Pursuant to 40 C.F.R. § 264.173, waste containers at each Permitted Unit shall be handled in a manner that will not cause them to rupture or leak. Containers at each Permitted Unit shall be kept closed except when waste is added to or removed from a container, when the contents of a container need to be repackaged, waste is being inspected or sampled, or waste is being treated.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA2-20	2.2.2.1	153	Remedial actions shall include transferring the hazardous waste from the leaking or damaged container to a container that is in good condition or over packing the container into another container that is in good condition.	The Application includes descriptions of remedial actions as illustrations of ways in which DOE/Sandia meet the requirements of 40 CFR 264.171. Including prescriptive requirements for transferring waste or overpacking containers is redundant and may lead to operations that are less protective of worker safety (e.g., exposure to chemical or radiological hazards). Please revise to read: If appropriate, remedial actions shall include transferring the hazardous waste from the leaking or damaged container to a container that is in good condition or over packing the container into another container that is in good condition.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA2-101*	2.1.2.2	146	The Permittees shall use characterization information for each waste and published data regarding chemical properties of hazardous waste constituents in the wastes (e.g., material safety data sheets [MSDSs], "NIOSH Pocket Guide to Chemical Hazards" [DHHS, 1994], and *Bretherick's Handbook of Reactive Chemical Hazards*, Urben, 1995) to identify potential consequences of treatment or other mixing activities.	These references have been revised and updated since the Permittees submitted the Application; the Permit should reflect the updates. Please revise to read: The Permittees shall use characterization information for each waste and published data regarding chemical properties of hazardous waste constituents in the wastes (e.g., material safety data sheets [MSDSs], "NIOSH Pocket Guide to Chemical Hazards" [DHHS, 1994] as revised and updated, and *Bretherick's Handbook of Reactive Chemical Hazards*, Urben, 1995, as revised and updated) to identify potential consequences of treatment or other mixing activities.

*Comment is more administrative in nature

Enclosure K

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 3

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA3-1	3.1	155	The Hazardous Waste Management Unit (HWMU) occupies 1.35 acres on Facility property between Technical Area I (TA-I) and TA-II (Figure 1-2 of Attachment 1). It is a fenced compound with several buildings and three hazardous waste management areas used for storage and packaging of hazardous wastes (Figure 3-1 of this Attachment); non-hazardous waste oils are also stored at the HWMU.	DOE/Sandia note there are actually four hazardous and mixed waste management areas, and the description is not entirely consistent with the information provided in the Application. Waste oils are addressed in Section 3.3.7; including them in this section is somewhat confusing. Additionally, as discussed in General Comment G-A, DOE/Sandia believe the Permit should not restrict mixed waste management at the HWMU. Accordingly, please revise to read: The Hazardous Waste Management Unit (HWMU) occupies 1.35 acres on Facility property between Technical Area I (TA-I) and TA-II (Figure 1-2 of Attachment 1). It is a fenced compound with several buildings and hazardous waste management areas used for storage and packaging of hazardous and mixed wastes (Figure 3-1 of this Attachment).
PA3-2	3.1	155	The nearest residential areas are located west of Pennsylvania Avenue, north of Hardin Boulevard (west of TA-I), more than one mile away from the HWMU (Figure 1-8 of Attachment 1).	These homes have been demolished. Please revise to read: The nearest residential areas are located east of Wyoming Avenue, north of F Street (north of TA-I), approximately 0.8 miles away from the HWMU (Figure 1-8 of Attachment 1).
PA3-3	3.3.4	157	The entire floor of the building and the bottom seven inches of wall surface in each recessed area shall be covered with an epoxy-based chemical-resistant coating. The coating shall form a continuous protective barrier over the concrete and protect the floor from the effects of any solvents and corrosive chemicals that may be released from the containers.	DOE/Sandia note the concrete floor, including the base and sides of each recessed area, is free of cracks and gaps, and is sufficiently impervious to contain leaks and spills until the collected material is detected and removed in compliance with 40 CFR 264.175(b)(1). The entire floor and the bottom seven inches of wall surface in each recessed area are covered with an epoxy-based chemical-resistant coating; however, this coating is not necessary for compliance with 40 CFR 264.175(b)(1-4) as the concrete is sufficiently impervious. Accordingly, please revise to read: The building floor and the walls in the cells are painted. The entire floor of the building and the bottom seven inches of wall surface in each recessed area shall be maintained as needed to be free from cracks and gaps.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA3-4	3.3.4	158	The recessed area in each holding cell is 5 feet by 4.5 feet and 7 inches deep, with a capacity of 98 gallons. The recessed floor area under the packaging area is 5 feet by 12 feet and 7 inches deep, with an actual capacity of 261 gallons. For safety considerations, the capacity for each holding cell shall be limited to 71 gallons, and the capacity for the packaging area shall be limited to 191 gallons.	DOE/Sandia chose to use the lower capacity for consistency with existing Permit NM5890110518-1. Please revise to: The recessed area in each holding cell is 5 feet by 4.5 feet and 7 inches deep, with an actual capacity of 98 gallons. The recessed floor area under the packaging area is 5 feet by 12 feet and 7 inches deep, with an actual capacity of 261 gallons. The capacity utilized for each holding cell is limited to 71 gallons, and the capacity for the packaging area is limited to 188 gallons.
PA3-5	3.3.4	158	Based upon the secondary containment capacity standard used at the Facility (10% of the stored volume or the volume of the largest container), each of the eight holding cells in the Hazardous Waste Packaging Building shall be limited to storing a maximum of three 55-gallon drums, or an equivalent volume. The packaging area shall be limited to holding a maximum of 10 55-gallon drums, or an equivalent volume.	DOE/Sandia note the storage capacities in the draft Permit are not consistent with current permitted capacities as specified in Permit NM5890110518-1 and in the Application. Please see General Comment G-F for further discussion. Please revise to read: Based upon the secondary containment capacity (equal to 10% of the stored volume or the volume of the largest container), each of the eight holding cells in the Hazardous Waste Packaging Building shall be limited to storing a maximum of thirteen 55-gallon drums, or an equivalent volume. The packaging area shall be limited to holding a maximum of 34 55-gallon drums, or an equivalent volume. 40 CFR 264.175(b)(3)
PA3-6	3.3.4	158	Water reactive wastes shall not be managed in the Hazardous Waste Packaging Building, except during repackaging activities which shall not exceed one day.	This condition is not consistent with the requirements of Permit NM5890110518-1 or with the Application. DOE/Sandia note that water-reactive wastes may be managed on a temporary basis in areas with automatic water sprinkler systems as long as the water does not come in contact with the wastes. Please revise to read: Water reactive and spontaneously ignitable wastes shall not be managed in the Hazardous Waste Packaging Building, except on a temporary basis during receipt, repackaging, and staging activities.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA3-7	3.3.5	158	The entire floor (all cells and the walkway) shall be coated with an epoxy-based chemical-resistant coating. The coating shall protect the concrete from the effects of solvents and corrosive chemicals that could be released on the floor in the event of a spill.	DOE/Sandia note the concrete floor, including the base and sides of each recessed area, is free of cracks and gaps, and is sufficiently impervious to contain leaks and spills until the collected material is detected and removed in compliance with 40 CFR 264.175(b)(1). The entire floor is covered with an epoxy-based chemical-resistant coating; however, this coating is not necessary for compliance with 40 CFR 264.175(b)(1-4) as the concrete is sufficiently impervious. Accordingly, please revise to read: The building floor (all cells and the walkway) are painted. The entire floor of the building and the sides of the recessed areas shall be maintained as needed to be free from cracks and gaps.
PA3-8	3.3.5	158	Waste containers shall be placed on metal grating over the secondary containment area, or, if they do not contain liquids, on pallets on the reinforced concrete floor in Cell 5.	This condition is not consistent with the requirements of 40 CFR 264.175, with Permit NM5890110518-1 or with the Application. In particular, the restriction on storage of liquids in Cell 5 is inconsistent. Pallets are used when liquids are present in Cell 5; the pallets serve to elevate the containers as required by 40 CFR 264.176(b)(2). The Permittees may also occasionally store large self-contained items (e.g., waste equipment). Please see General Comment G-F for additional discussion on capacity restrictions. Please revise to read: Waste containers shall be placed on metal grating over the secondary containment areas, or on pallets on the reinforced concrete floor in Cell 5. If no containers of bulk liquids are stored in Cell 5, containers may be stored directly on the floor. Large self-contained items (e.g. waste equipment) may be stored on pallets or on the floor in Cell 5, as applicable.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA3-9	Table 3-1	159		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 3-1
SECONDARY CONTAINMENT CAPACITY FOR BUILDING 958

Cell No.	Secondary Containment Capacity (gallons)	Maximum Volume Expressed as Number of 55-Gallon Drums Stored
1	542	21
2	434	21
3	434	21
4	434	21
5	4,136	126
6	434	21
7	434	21
8	434	21

a A portion of the secondary containment capacity in Cell 5 is taken up by pallets, and the aisle space is not included in the calculations.

DOE/SANDIA COMMENT

DOE/Sandia note the storage capacities in the draft Permit are not consistent with current permitted capacities as specified in Permit NM5890110518-1 and in the Application. Please see General Comment G-F for further discussion, and revise Table 3-1 as follows:

TABLE 3-1
SECONDARY CONTAINMENT CAPACITY FOR BUILDING 958

Cell No.	Secondary Containment Capacity (gallons)	Maximum Storage Capacity Expressed as Number of 55-Gallon Drums
1	542	98
2	434	79
3	434	79
4	434	79
5	4,136	518
6	434	79
7	434	79
8	434	79

Please revise the footnote to provide additional information regarding Cell 5:

Note A portion of the secondary containment capacity in Cell 5 is taken up by pallets, and the central aisle space is not included in the calculations. Maximum storage capacity was based on an effective capacity of 2849 gallons.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA3-10	3.3.5	159	Water reactive wastes shall not be managed in the Hazardous Waste Storage Building, except during repackaging activities which shall not exceed one day.	As noted in Comment PA3-6, water-reactive wastes may be managed on a temporary basis in areas with automatic water sprinkler systems as long as the water does not come in contact with the wastes. Please revise to read: Water reactive and spontaneously ignitable wastes shall not be managed in the Hazardous Waste Storage Building, except on a temporary basis during receipt and staging activities.
PA3-11	3.3.6	159	Each building has three doors, each with a three-point locking system to provide access and security. Each has a 6-inch-deep integral spill containment reservoir under the entire building; the containment capacity is 500 gallons. The secondary-containment sub-floor is constructed of continuously welded 10-gauge steel, which shall be epoxy-coated to resist chemical attack; the coating shall be compatible with reactive wastes. The floors are 1-inch-thick epoxy-coated, fire resistant plywood. The load-bearing capacity of the floor for each structure is 250 pounds per square foot. The inside walls and ceiling shall also be coated with chemical-resistant epoxy.	The locking features provide additional protection for Unit personnel but are not required for management of hazardous or mixed wastes or hazardous waste constituents. Locked doors are not necessary for access control or security during non-operational hours, as discussed in Comment PA10-2. DOE/Sandia note the inside surfaces (walls, bottom, ceiling, and floor) of each building are painted; these painted surfaces in the sump at the bottom of each modular building are free of cracks or gaps and are sufficiently impervious to contain leaks and spills until the collected material is detected and removed in accordance with 40 CFR 264.175(b)(1). The painted sump and floor fully satisfy the requirements of 40 CFR 264.175(b)(1-4). Please revise to read: Each building has three doors that can be locked. Each building has a 6-inch deep integral spill containment reservoir under the entire building; the containment capacity is 500 gallons. The reservoirs are constructed of continuously welded 10-gauge steel or equivalent. The inside surfaces (bottom and sides) of each reservoir shall be painted to provide additional protection against degradation of the secondary containment. The sumps shall be maintained as needed to be free from cracks and gaps. Containers shall be stored on painted 1-inch-thick fire resistant plywood or equivalent over the reservoirs. The plywood shall be maintained as needed to support containers and elevate them above any accumulated liquid.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA3-12	3.3.6	159	Each building rests on structural supports that elevate it and shall allow visual inspections of the underside of the spill containment reservoir. The storage capacity shall be limited to 1,250 gallons for each building.	DOE/Sandia note the storage capacities for the modular buildings in the draft Permit are not consistent with current permitted capacities as specified in Permit NM5890110518-1 and in the Application. Please see General Comment G-F for further discussion. It is not necessary to inspect the underside of the modular buildings on a regular basis because degradation of the reservoirs will be evident in the inspections that include the inside surfaces of each containment reservoir. Including the undersides of the buildings does not increase protection of human health or the environment; it increases the risk of injury to site personnel due to the difficulties of physical access. Please revise to read: Each building rests on structural supports that elevate it and shall allow visual checks of the underside of the spill containment reservoir if there is evidence of deterioration on the interior surfaces. The storage capacity shall be limited to 5,000 gallons (equivalent to 91 55-gallon drums) for each building.
PA3-13	3.3.6	159	The modular storage buildings are located west of Building 958 (Figure 3-2 and Appendix 3-1 photograph) and are used for storage of ignitable and reactive wastes, including, but not limited to, lithium batteries, gas cylinders, and flammable solids.	DOE/Sandia note the Application includes descriptions of typical waste management practices as illustrations of ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. Not all ignitable wastes are stored in the modular buildings. The specific wastes stored in the modular buildings at any time depends on the overall inventory of wastes present at the HWMU; the storage locations for individual items are adjusted as needed to meet Permit and regulatory requirements for ignitable, reactive, and incompatible wastes, prevent hazards, protect human health and the environment, and maintain effective operations. Including detailed specifications for storage of specific wastes may lead to conditions that are less protective of worker safety (e.g., the Permittees must maintain capabilities for storage of lithium batteries whether they are present or not, reducing capabilities for other water-reactive wastes that could also be present at the Permitted Unit). Please revise to read: The modular storage buildings are located west of Building 958 (Figure 3-2 and Appendix 3-1 photograph) and are used for storage of wastes such as ignitable solids and water reactives.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA3-14	3.3.7	160	A covered, open, bermed, concrete-line area used for the storage of nonhazardous waste oils prior to shipment offsite for recycling and waste packaging supplies is located in the northeast corner of the HWMU. Storage of used oil is subject to compliance with 40 C.F.R. Part 279. An empty drum crusher is located within the area. Only drums that meet the definition of empty under 40 C.F.R. § 261.7(b)(1) shall be crushed in the drum crusher.	DOE/Sandia find this description to be somewhat confusing due to mixed descriptions of multiple features and operations at the HWMU. Please revise to read: A covered, open, bermed, concrete-lined area is located in the northeast corner of the HWMU. It is primarily used for the storage of nonhazardous waste (such as used oil) prior to shipment offsite for recycling. The area is also used to store packaging supplies. Storage of used oil is subject to compliance with 40 C.F.R. Part 279. A second covered, open, bermed, concrete-lined area is attached to the west side of Building 959. An empty drum crusher is located within that area. Only drums that meet the definition of empty under 40 C.F.R. § 261.7(b)(1) shall be crushed in the drum crusher.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA3-15	3.4.1	160	Potential sources of ignition that may be present at the HWMU include welding activities, open flames, hot surfaces, frictional heat, radiant heat, sparks, and engines. Precautions and practices that shall be employed at the HWMU to prevent fires or explosive reactions of waste include: 1. Ignitable and water-reactive wastes shall be segregated from other wastes and stored in the modular storage buildings. The modular storage buildings shall have exterior signs indicating the presence of ignitable and reactive wastes in the buildings. *2 (not included in comment)* 3. Ignitable and water-reactive wastes may temporarily be managed in Building 959 after receipt and during repackaging activities. Individual containers shall be labeled and be kept apart from other wastes 4 Forklifts shall not be used for waste movement in Building 959 to minimize potential sources of ignition in the building. *5 (not included in comment)* 6. The modular storage buildings shall be grounded by a 10-ft-long grounding rod and cable. They shall be equipped with a dry chemical fire suppression system to assure that water-reactive wastes shall not be exposed to water during fires or other incidents. *7–8 (not included in comment)*	DOE/Sandia note the Application includes descriptions of typical waste management practices as illustrations of ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. As noted in Comment PA3-13, the storage locations for specific wastes are adjusted as needed; when water-reactive wastes are present; they are stored in the modular buildings. Not all ignitable wastes are stored in the modular buildings. It is not necessary to specify the length of the grounding rods for the modular buildings, because the rods are fully defined by their protective function. DOE/Sandia note that the restrictions on use of forklifts in Building 959 are limited to the duration of open container operations. The forklifts may be used safely for handling heavy containers at all other times. Please revise as follows: Potential sources of ignition that may be present at the HWMU include welding activities, open flames, hot surfaces, frictional heat, radiant heat, sparks, and engines. Precautions and practices that shall be employed at the HWMU to prevent fires or explosive reactions of waste include: 1. Water-reactive wastes shall be segregated from other wastes and stored in the modular storage buildings. The modular storage buildings shall have exterior signs indicating the presence of water-reactive wastes in the buildings. 3. Water-reactive wastes may temporarily be managed in Building 959 after receipt and during repackaging activities. Individual containers shall be labeled and be kept apart from other wastes 4 Forklifts shall not be used for waste movement in Building 959 during open container operations to minimize potential sources of ignition in the building. 6. The modular storage buildings shall be grounded by a grounding rod and cable or equivalent method. They shall be equipped with a dry chemical fire suppression system to assure that water-reactive wastes shall not be exposed to water during fires or other incidents.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA3-16	3.4.3	162	If loading and unloading operations occur outdoors, they shall be done in the area immediately adjacent to a hazardous waste management area to minimize the distance that the waste must be moved. All loading and unloading areas shall be level, and the asphalt or concrete or other pavement shall be maintained in good condition. Loading and unloading areas shall be free of overhead and other obstructions to visibility and operations. Loading and unloading activities typically take place on the south side of Buildings 958 and 959 (Figure 3-4 of this Permit Attachment). Containers are typically transported within the HMWU with drum dollies or pallet jacks.	As noted in Comment PA2-10, it is not necessary that loading and unloading areas be level. DOE/Sandia also note that forklifts or other equipment may be used to move heavy containers within the HWMU. Please revise to be consistent with Permit Attachment 2: If loading and unloading operations occur outdoors, they shall be done in areas adjacent to hazardous waste management areas to minimize the distance that the waste must be moved. All loading and unloading areas shall be paved, and the asphalt or concrete or other pavement shall be maintained in good condition. Loading and unloading areas shall be free of overhead and other obstructions to visibility and operations. Loading and unloading activities typically take place on the south sides of Buildings 958 and 959 (Figure 3-4 of this Permit Attachment). Vehicles, forklifts, drum dollies, pallet jacks, and other tools used for the transport and management of wastes shall be used as appropriate during loading and unloading operations. Small containers may be loaded or unloaded manually from waste-transport vehicles. A forklift, hydraulic lift, or other mechanical device may be used as needed to load or unload larger containers. In all cases, containers of waste shall be handled in a manner to prevent shifting or falling. Waste-handling equipment shall be maintained and operated in accordance with manufacturers' guidance.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA3-17	3.4.5	162	A lined pond is located on the northwest side of the HWMU. The pond is capable of holding 10,000 cubic feet of liquid and is designed to receive storm water and snowmelt run-off from the HWMU. The pond shall be operated and inspected according to the requirements of this Permit Attachment. Run-off collected in the pond shall be subject to waste analysis. If the run-off is not known to be hazardous waste, the Permittees shall sample the run-off. The pond shall be inspected after every precipitation event that generates run-off into the pond. Inspection results and any remediation shall be recorded in the Operating Record. Waste analysis shall take place within 5 days of an incident. The results of the waste analysis, if available, shall be included in a 24 Hour report on the incident submitted to the Department. If the run-off present in the pond is determined to be hazardous waste or is contaminated by hazardous waste or hazardous constituents, the waste water shall be removed within 5 working days of the determination and managed as a hazardous waste through the HWMU or disposal of in the sanitary sewer provided the watercourse meets the requirements of the publicly owned treatment works. The quantity of hazardous waste or contaminated water present in the pond, the date of the incident, and the date of removal of the waste water shall be recorded in the Operating Record.	DOE/Sandia note the catchment pond does not provide secondary containment. Spills, fire-fighting water, and other releases of hazardous or mixed wastes or hazardous waste constituents to the pond are addressed in the Contingency Plan in Permit Attachment 12. The pond and discharges from it are subject to National Pollutant Discharge Elimination System (NPDES) requirements established under the Clean Water Act. Therefore, as discussed in General Comment G-B, it is not necessary to include requirements for routine operations of the catchment pond in this Permit. Please delete this section.
PA3-18	3.4.7	163	A permanent power transformer shall provide emergency power from the Facility emergency power network.	DOE/Sandia note the Application includes descriptions of resources for emergency power as illustrations of ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. The resources are typical rather than prescriptive because they are updated and adjusted as needed to serve SNL facilities. Including a prescriptive requirement for a permanent power transformer is redundant. Please revise to read: The Permittees shall provide emergency power as needed to protect human health and the environment in accordance with the requirements listed in Table 2-1 in Permit Attachment 2.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA3-19	3.4.8	163	Facility personnel shall use personal protective equipment during management of hazardous waste.	The PPE described in the Application illustrates ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. These illustrations should not be included in the Permit as requirements, because they are not applicable in all situations. Please revise to read: Facility personnel at Permitted Unit shall be required to use appropriate personal protective equipment (PPE) to protect themselves from hazards.
PA3-20	3.5	163	Requirements regarding the management of hazardous waste storage containers, information on container handling, the condition of containers, aisle space, compatibility of waste with containers, and storage configuration are contained in Permit Attachment 2. Containers larger than five gallons in volume that are stacked in Building 958 shall be stored on pallets and shall not be stacked more than two pallets high. Containers smaller than five gallons in volume may be stacked on top of one another on a single pallet, but no higher than two containers. Box-shaped containers with a volume greater than five gallons may be stacked two high without pallets in between the boxes. Containers may also be stored directly on the grating or on pallets on the floor, unless they contain liquids, in which case containers on or off pallets shall only be stored on the grating. In Building 959, containers shall be stored in the holding cells: smaller containers shall be stored on the shelves, and larger containers stored directly on the grating. Containers are typically not stacked in Building 959, but in any case, shall not be stacked higher than two containers. Containers shall not be stacked in the modular buildings (Buildings 958B and 958C).	DOE/Sandia note the storage capacities in the draft Permit are not consistent with current permitted capacities as specified in Permit NM5890110518-1 and in the Application. Please see General Comment G-F for further discussion The Application includes descriptions of typical operations as illustrations of ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. The operations (including configuration of stored containers) are typical rather than prescriptive because of the wide variety of hazardous and mixed wastes (and the variety of containers) managed at the HWMU. The requirements for configuration of containers are fully specified through reference to compliance with 40 CFR 264 Subparts B, C, and I. Including prescriptive requirements for stacking various containers is redundant, and may lead to operations that are less protective of worker safety. Please revise to read: Requirements regarding the management of hazardous waste storage containers, information on container handling, the condition of containers, aisle space, compatibility of waste with containers, and storage configuration are contained in Permit Attachment 2. In Building 958, if containers are stacked, they shall be in a stable configuration that does not exceed the load-bearing capacity of the reinforced concrete or the grating. In Building 959, containers shall be stored in the holding cells. If containers are stacked, they will be in a stable configuration that does not exceed the load- bearing capacity of the reinforced concrete or the grating and conforms to the same limitations as for Building 958. In Buildings 958B and 958C, if containers are stacked, they will be in a stable configuration that does not exceed the load-bearing capacity of the floor and conforms to the same limitations as for Building 958.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA3-101*	3.0	155	Figures specific to the HWMU units are provided at the end of this Attachment and include the following. 1. Figure 3-1: Traffic Routes and controls 2. Figure 3-2: HWMU floor plan 3. Figure 3-3: Building 958 floor plan 4. Figure 3-4: Hazardous waste management areas 5. Figure 3-5: Access controls 6. Figure 3-6: Drainage controls 7. Figure 3-7: Fire hydrant location	This list does not match the actual figures. Please revise to read: Figures specific to the HWMU are provided at the end of this Permit Attachment and include the following. 1. Figure 3-1: Hazardous Waste Management Unit Layout, Traffic Routes and Controls 2. Figure 3-2: Hazardous Waste Packaging Building (Building 959), Floor Plan 3. Figure 3-3: Hazardous Waste Storage Building (Building 958), Floor Plan 4. Figure 3-4: Hazardous Waste Management Unit Access Control Features 5. Figure 3-5: Hazardous Waste Management Unit Drainage Control Features 6. Figure 3-6: Hazardous Waste Management Unit Location of Fire Hydrants
PA3-102*	3.3.3	157	Figure 3-5 of this Permit Attachment shows access control features at the HWMU (e.g., fences, gates).	Access controls are shown on Figure 3-4. Please revise accordingly.
PA3-103*	3.3	156	Appendix 3-1 of this Permit Attachment contains five photographs of the HWMU.	The last photograph (taken on September 2, 1999) was mistakenly included in the electronic files provided to NMED by DOE/Sandia. It has been superseded by the other more recent photographs. Please delete the photograph and revise to read: Appendix 3-1 of this Permit Attachment contains four photographs of the HWMU.

*Comment is more administrative in nature

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA3-104*	3.3.4	157	The Hazardous Waste Packaging Building is the easternmost hazardous waste management area and is a 1,800-square-foot (ft^2) pre-cast concrete building with an eave height of 12 feet (ft) (Figures 3-1 and 3-2 of this Permit Attachment and Appendix 3-1 photograph). Eight waste-holding cells with half-height concrete masonry walls and a waste packaging area are located in the building. The packaging area contains a fume hood and flexible ventilation hoses attached to a local negative-pressure ventilation system that exhausts to the exterior of the building. All the cells and the packaging area have recessed floors that are constructed of reinforced concrete and are covered with metal grating. Waste containers are placed on shelves over the metal grating. The load-bearing capacities of the metal grating and the reinforced concrete floor are 450 and 2,000 pounds per ft^2, respectively. The entire floor of the building and the bottom seven inches of wall surface in each recessed area shall be covered with an epoxy-based chemical-resistant coating. The coating shall form a continuous protective barrier over the concrete and protect the floor from the effects of any solvents and corrosive chemicals that may be released from the containers. Figures 3-2 and 3-3 of this Permit Attachment are the floor plans of Buildings 959 and 958, respectively. The individual shelves are covered with removable chemical-resistant grating, and they shall have edges to hold the containers in place. The shelves are not designed to provide secondary containment. The recessed areas provide secondary containment.	DOE/Sandia find this description to be somewhat confusing due to mixed descriptions of multiple features of the building. Also, the concrete floor, including the base and sides of each recessed area, is sufficiently impervious to meet the requirements of 40 CFR 264.175(b)(1). Please see Comment PA3-3 for additional discussion, and revise to read: The Hazardous Waste Packaging Building is the easternmost hazardous waste management area and is a 1,800-square-foot (ft^2) pre-cast concrete building with an eave height of 12 feet (ft) (Figures 3-1 and 3-2 of this Permit Attachment and Appendix 3-1 photograph). Eight waste-holding cells with half-height concrete masonry walls and a waste packaging area are located in the building. The packaging area contains a fume hood and flexible ventilation hoses attached to a local negative-pressure ventilation system that exhausts to the exterior of the building. The building floor and the walls in the cells are painted. The entire floor of the building and the bottom seven inches of wall surface in each recessed area shall be maintained as needed to be free from cracks and gaps. Figures 3-2 and 3-3 of this Permit Attachment are the floor plans of Buildings 959 and 958, respectively. All the cells and the packaging area have recessed floors that are constructed of reinforced concrete and are covered with metal grating. The load-bearing capacities of the metal grating and the reinforced concrete floor are 450 and 2,000 pounds per ft^2, respectively. Waste containers are placed on the metal grating or on shelves over the grating. The individual shelves are covered with removable chemical-resistant grating, and they shall have edges to hold the containers in place. The shelves are not designed to provide secondary containment. The recessed areas provide secondary containment.
PA3-105*	Attach-ment 3	after 163	Figures and photographs	The figures and photographs do not reflect the most current information available. DOE//Sandia will provide updated figures and photographs under separate cover.

*Comment is more administrative in nature

Enclosure L

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 4

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-1	4.0	165	The TTU shall only be used for thermal treatment of reactive wastes exhibiting the hazardous waste characteristics of reactivity (D003), ignitability (D001) and toxicity (D011) generated only by Facility operations in Building 6715. Treatment residues shall be transported to off-site permitted facilities for treatment and disposal.	DOE/Sandia note this description of the waste treated at the TTU does not include all the constituents or applicable waste codes. It does not match existing Permit NM5890110518-2, other Sections of the draft Permit, the Application, or ongoing operations. Please see Comment PA8-1 for additional discussion of the potentially corrosive characteristic of some of the SASN waste treated at the TTU. DOE/Sandia are responsible for characterizing the treatment residues and the collected precipitation in accordance with the WAP and the requirements of 40 CFR 261. DOE/Sandia are responsible for managing hazardous wastes in accordance with the requirements of 40 CFR 262, and are responsible for arranging further off-site management that is compliant with all applicable requirements of 40 CFR 260-270, as discussed in General Comment G-B. Additionally, management of treatment residues is addressed elsewhere in the Permit and the last sentence is not fully consistent with the requirements in this section. Please revise to read: The TTU shall only be used for thermal treatment of reactive wastes generated by Facility operations in Building 6715; these wastes exhibit the hazardous waste characteristics of reactivity (D003), ignitability (D001), and toxicity (D011); potentially exhibit the corrosivity (D002) hazardous waste characteristic; and may contain spent solvents (F003 and F005).
PA4-2	4.1.1.1	166	Treatment residues shall be transported to the Hazardous Waste Management Unit (HWMU) for storage prior to treatment or disposal. Catch tank water shall also be transported to the HWMU for proper management.	The Application includes information about transportation of residues as examples of vehicles that might be entering or exiting the Building 6715 compound; these are examples only. Management of residues and collected precipitation is the responsibility of the Permittees, as discussed in General Comment G-B, and it is addressed in other parts of the Permit. Please delete these two sentences, as they are not related to the description of traffic in this section.
PA4-3	4.3	167	The Permittees monitor ambient air quality at several stations. The two stations nearest the TTU are located north of TA-III and at the southeast corner of TA-III near the Radioactive and Mixed Waste Management Unit.	The Application includes information about the environmental setting of the TTU in accordance with the requirements of 40 CFR 264 Subpart X, including information about ambient air quality. The ambient air monitoring activities at SNL are not subject to the requirements of this Permit. Please delete these sentences.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-4	4.4	169	An enclosure on the east side of the cage houses three propane burners, which shall be remotely activated from inside Building 6715. Two propane burners shall be positioned to heat the burn pan. A third burner shall be positioned to ignite the contents of the burn pan and flammable vapors above the pan.	The Application includes a description of the current burner configuration to illustrate TTU operations. DOE/Sandia note the burners may need minor adjustments to provide the most effective waste treatment. Please revise to read: An enclosure on the east side of the cage houses three propane burners, which shall be remotely activated from inside Building 6715 during treatment operations. The burners shall be positioned to heat the pan and ignite the wastes in the burn pan and the flammable vapors above the pan.
PA4-5	4.4	169	Liquid wastes to be treated shall be transferred from Building 6715 to the TTU through flexible transfer hoses utilizing a remotely operated peristaltic pump. The hoses shall be contained inside a metal channel to provide secondary containment. The flexible hoses and channel terminate approximately 5 feet from the burn pan and metal tubing shall be used to transfer the waste the final distance into the burn pan. Solid items to be treated in the TTU (e.g., wipes, rags, filters, and small pieces of combustible or inert test debris) shall be manually loaded into the burn pan.	DOE/Sandia note this condition is not consistent with Permit NM5890110518-2 or with the description of operations in the Application. Liquid wastes are pumped to the TTU to the extent possible to minimize personnel handling of the explosive wastes. Solid items that are treated at the TTU are loaded manually; however, they are kept saturated or submerged because the explosive sensitivity is significantly reduced by saturating the explosive with acetone or water. To ensure the solid items are fully saturated, there is generally free liquid in the waste containers; this liquid is manually loaded into the burn pan. Specifying that all liquids shall be transferred through the tubing will lead to operations that are less protective of worker safety by prohibiting full saturation of solid items. Please revise to read: Liquid wastes to be treated may be transferred from Building 6715 to the TTU through flexible transfer hoses utilizing a remotely operated peristaltic pump. The hoses shall be contained inside a metal channel to provide secondary containment. The flexible hoses and channel terminate approximately 5 feet from the burn pan and metal tubing shall be used to transfer the waste the final distance into the burn pan. Solid items to be treated in the TTU (e.g., wipes, rags, filters, and small pieces of combustible or inert test debris) saturated or submerged in water and/or acetone shall be manually loaded into the burn pan.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-6	4.4	169	Liquids that might accumulate at the TTU shall be contained within a secondary containment system (i.e., the entire steel-lined concrete pad that drains through a filter into a catch tank).	Precipitation that accumulates on the pad (because the TTU is located outside) drains in to the catch tank, as described here. Liquids should not be released from the pan during treatment, loading, or unloading. If liquid wastes were released into the secondary containment area, they would be collected and transferred to the burn pan for treatment of explosives. Please revise to read: Any liquids released during waste transfer or treatment will accumulate in the secondary containment. The collected liquids shall be transferred to the burn pan for treatment.
PA4-7	4.4	170	A circular tank located north of the Unit and south of Building 6715 is primarily utilized as a process tank for collecting non-hazardous waste from test operations; wastewater collected in this tank shall not be treated at the TTU.	DOE/Sandia test the water in the tank to check for the presence of SASN residues. If residues are present, the water may or may not exhibit the hazardous waste characteristic of toxicity due to the presence of silver. The presence of residues means the water must be treated in the same manner as other SASN-containing wastes; it is transferred to the TTU for treatment of the SASN. Please revise to read: A circular tank located north of the Unit and south of building 6715 is primarily utilized as a process tank for collecting non-hazardous water waste from test operations. The contents of this tank are sampled to check for the presence of explosive SASN residues. If such residues are detected in this tank, the contents of this tank shall be treated at the TTU.
PA4-8	4.4	170	Treatment operations occur periodically at the TTU and typically involve burns with durations of one to three days.	As described in the Application, the Unit is not operated continuously during treatment operations. Please revise as follows: Treatment operations occur periodically at the TTU and typically involve intermittent burns during one to three days.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-9	4.5.1	170	The TTU is limited to treatment of the following quantities of reactive/ignitable wastes during treatment operations. 1. The maximum amount of waste treated during any treatment operation shall not exceed 2.4 pounds (1.092 kilograms). 2 *(not included in comment)* 3. The maximum amount of waste (solid and liquid combined) that can be treated per calendar year shall not exceed 190 pounds (86 kilograms), or 1,200 gallons.	Items 1 and 3 are not consistent with Permit NM5890110518-2 or with the information provided in the Application. The quantities and composition of the non-explosive constituents may vary according to the waste-generating activities; thus the waste is best described according to the net explosive weight. DOE/Sandia generate up to 86 kg of waste contaminated with less than 1.092 kg of explosives. All the wastes must be treated in the TTU as soon as possible to minimize hazards to Unit personnel and the environment. The maximum quantities in Item 3 are applicable to each individual treatment event, not to the entire calendar year. The 1200 gallon limit is unnecessary. Please revise to: 1. The maximum net explosive weight of explosives treated during any treatment operation shall not exceed 2.4 pounds (1.092 kilograms). 3. The maximum amount of waste (solid and liquid combined) that can be treated per treatment operation shall not exceed 190 pounds (86 kilograms).
PA4-10	4.5.2	171	The burn pan lid shall be raised temporarily, if needed, to ignite the burners.	The lid does not need to be raised to ignite the burners. However, the lid does need to be raised during treatment. The need to keep the lid closed as much as possible is addressed in the last sentence of the previous paragraph. Please revise to read: The burn pan lid shall be raised during treatment.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-11	4.5.2	171	To provide additional assurance of complete combustion, the Permittees shall operate the burners for at least 30 to 60 minutes after the last treatment event of the day is complete to ensure that all the explosives are deactivated and the ignitable liquids are combusted. The Permittees shall also use visual and audible evidence to determine if treatment has been completed. The cessation of audible popping noises and visual flashes of light and puffs of smoke indicate complete deactivation of the reactive waste. Evidence of the complete combustion of ignitable liquids includes the absence of large yellow flames from the burn pan and the absence of liquid inside the burn pan. After treatment and/or the post-treatment burn conducted after the last treatment of the day are complete, the Permittees shall turn off the propane burners and lower the lid to preclude wind dispersal of treatment residues and water infiltration into the burn pan during the cool-down period.	The burners are operated for at least 30 minutes after each treatment instead of once at the end of the day; this provides additional protection for workers and the environment. At the completion of this additional post-treatment burn, the lid is immediately lowered. Operating personnel do not check for the absence of liquids to determine treatment completion because this inspection cannot be performed remotely with the facility cameras. Inspecting for liquids in the burn pan would require close proximity of the facility operators. Due to the elevated temperature of the burn pan and its surroundings, personnel inspection cannot be performed safely until the pan has cooled. Please revise to read: The Permittees shall use visual and audible evidence to determine if treatment has been completed. The cessation of audible popping noises and visual flashes of light and puffs of smoke indicate complete deactivation of the reactive waste. Evidence of the complete combustion of ignitable liquids includes the absence of large yellow flames and the absence of black smoke from the burn pan. To provide additional assurance of complete combustion, the Permittees shall operate the burners for at least 30 minutes after the last visual or audible evidence of waste treatment to ensure that all the explosives are deactivated and the ignitable liquids are combusted. After treatment and the additional post-treatment burn, the Permittees shall turn off the propane burners and immediately lower the burn pan lid to preclude wind dispersal of treatment residues and water infiltration into the burn pan during the cool-down period.
PA4-12	4.5.2	171	The cool-down period varies, but shall not exceed 24 hours. After the cool-down period, the Permittees shall perform a post-treatment inspection within one hour to check for any untreated waste in the burn pan and contamination or "kick-out" of untreated waste on the steel-lined concrete pad.	Based on operating experience, DOE/Sandia have determined four hours is the minimum cool-down period to allow personnel to safely approach the burn pan. The post-treatment inspection generally occurs within 24 hours, but it would be delayed if the treatment event preceded a non-work day. Please revise to read: The cool-down period varies, but shall be at least 4 hours. After the cool-down period, the Permittees shall perform a post-treatment inspection within one business day to check for any untreated waste in the burn pan and contamination or "kick-out" of untreated waste on the steel-lined concrete pad.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-13	4.5.2	171	If any kick-out is observed, the Permittees shall wet it with water, wipe it up with wet paper wipes, and place the wet wipes in the burn pan for treatment later that same day. Untreated waste remaining in the pan and kick-out returned to the burn pan shall be treated as soon as possible subject to the conditions of this Permit.	DOE/Sandia note treatment may not be possible on the day of kick-out clean up due to restrictions of the Permit, (e.g. weather conditions, time of day). This Permit Condition includes two different instructions for the timing of the treatment. As an alternative to returning the cleaned up kick-out wastes to the burn pan, operating personnel can accumulate the wastes (saturated with water and/or acetone) in a satellite accumulation area inside Building 6715 until treatment in compliance with the Permit is possible. Accumulating the wastes inside the building will further minimize the potential for wind dispersal. Please revise to read: If any kick-out is observed, the Permittees shall wet it with water and wipe it up with wet paper wipes. The wet paper wipes shall either be returned to the burn pan for treatment later that same day or returned to Building 6715 until treatment in compliance with the Permit is possible. Untreated waste remaining in the pan and kick-out cleanup wastes shall be treated as soon as possible subject to the conditions of this Permit.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-14	4.5.2	172	Following the post-treatment inspection and removal of treatment residues in cases where kick-out was observed, the Permittees shall perform an additional review within 24 hours by checking surfaces of the affected areas with a portable propane burner to determine whether additional kick-out (small particles that are not visually observed during the post-treatment inspections) is present. Visible kick-out identified during this review shall be collected as described above and treated in the burn pan. The Permittees shall also perform this additional review following operations where kick-out was not observed.	This condition is not consistent with Permit NM5890110518-2. During normal TTU operations and maintenance, personnel frequently perform a wide variety of routine activities that involve contact with parts of the Unit. Residual untreated explosive material is not routinely present during normal operations, and therefore would not cause a hazard to workers performing most of the frequent and routine activities that involve direct contact with the burn cage, equipment, pad, or surrounding area. Thus the additional review is not necessary in all cases. DOE/Sandia note that periodic inspections using the portable propane burner seldom detect any unreacted explosive kick-out. Depending on the TTU operations, the post-treatment inspection may be performed on a day preceding a non-work day, or the weather may not be suitable for use of the portable propane burner within 24 hours. During the reviews, DOE/Sandia have observed that detecting small particles with a propane flame effectively decomposes these small particles (as evidenced by small popping sounds, sparkles, and small puffs of smoke), eliminating the reactive characteristic of the particles. The residue from this review and decomposition process can be safely managed along with the treatment residue from the burn pan. Please revise to read: Following the post-treatment inspection and removal of treatment residues in cases where kick-out was observed, the Permittees may perform an additional review within one business day (subject to weather restrictions listed in Permit Part 4 and this Attachment) by checking surfaces of the affected area with a portable propane burner to determine whether small quantities of additional kick-out (small particles that are not visually observed during the post-treatment inspections) are present. Removable kick-out identified during this review shall be collected as described above and treated in the burn pan unless the kick-out particles are effectively decomposed (as evidenced by small popping sounds, sparkles, and small puffs of smoke). Decomposed kick-out may be managed along with the treatment residue from the burn pan.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-15	4.5.3	172	To minimize exposure of people to toxic or hazardous air emissions, the TTU open burning activities shall be conducted only: 1. Between sunrise and sunset. 2. When the wind speed at the TTU is less than or equal to 10 miles per hour. *3 (not included in comment)*	The operating hours and upper limit in allowable wind speed are not consistent with the current Permit, and it is not clear from the draft Permit that either of these restrictions applies only to treatment operations at the TTU. In order to protect workers and the environment, Unit personnel should be able to adjust the operations as needed in response to the weather, and to complete treatment in a timely manner if it has started. During the past four years, DOE/Sandia have demonstrated that the TTU can be operated at wind speeds up to 20 miles per hour in compliance with the Permit conditions, and in a manner that is protective of human health and the environment. The windscreens on the south and north sides of the TTU and the burner housing on the east side of the cage, coupled with the depth and relatively small capacity of the burn pan and the close proximity of the burners provide adequate combustion at ambient wind speeds up to 20 mph. The windscreens and burner housing extend more than 20 inches above the top of the burn pan and burners. The windscreens are attached at the top and have openings at the bottom to provide protection from direct winds while allowing airflow for combustion. The positive pressure and flow rate of the burners provide a sturdy flame, and the burners are located near the burn pan to maximize treatment effectiveness. Following treatment, the burn pan lid is lowered to provide containment and the ash is removed from the pan in accordance with the Permit. Please revise as follows: To minimize exposure of people to toxic or hazardous air emissions, the TTU open burning activities shall be conducted only: 1. Between 7 AM and 7 PM. Operations may continue beyond 7 PM only in case of an emergency or if necessary to complete treatment that is underway. 2. When the wind speed at the TTU is less than or equal to 20 miles per hour (32 km/hour).

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-16	4.5.3	172	To minimize exposure of people to toxic or hazardous air emissions, the TTU open burning activities shall be conducted only: *1 and 2 (not included in comment)* 3 When threatening weather is less than 10 miles from the TTU. Threatening weather is defined as tornadoes; electrical storms with or without precipitation of any type; snow storms with a visibility of less than 2000 feet; rain with accumulations greater than 0.3 inch per hour; or any hail, sleet, sandstorm or ice storms.	As discussed in Comment PP4-13, dust or sandstorms caused by blowing wind are addressed by the general restrictions on wind speed, making inclusion of sandstorms in the description of threatening weather redundant. DOE/Sandia note sandstorms that are "dust devils" are sporadic and unpredictable. Due to their rapid formation and cessation, the Unit operator cannot effectively cease treatment operations for dust devils. Please revise item 3 to read: 3. When threatening weather is less than 10 miles (16 km) of the TTU. Threatening weather is defined as winds in excess of 35 miles per hour (56 km/hr); tornadoes; electrical storms with or without precipitation of any type; snow storms with a visibility of less than 2000 feet; rain with accumulations greater than 0.3 inch per hour; or any hail, sleet, and/or ice storms.
PA4-17	4.5.4	172	After the last treatment event of the day, the TTU burners shall be operated for a minimum of 30 minutes after there is no visual (sparks) or audible evidence of untreated reactive hazardous waste remaining in the burn pan.	As discussed in Comment PA4-11, this Permit condition is not consistent with current operations, in which DOE/Sandia operate the burners for at least 30 minutes at the end of each treatment, rather than once at the end of the day to provide additional protection for workers and the environment. The criteria for determining when untreated waste is no longer present should be clarified. Additionally, this Permit condition should not require non-compliance with the conditions restricting operation in the event of weather, daylight, or other factors. Please revise to read: Waste treatment operations shall be monitored for evidence of untreated waste including audible evidence such as popping sounds and visual evidence such as flashes of light, puffs of smoke, and large yellow flames. When the wastes have been treated as indicated by no visual or audible evidence of unreacted waste, the burners will be operated for a minimum of 30 minutes to provide further assurance of treatment completion, unless weather or other conditions do not permit continued operation.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-18	4.5.5	173	Because the TTU is located outside, the steel-lined concrete pad periodically collects water from precipitation events, and the water drains through a filter into a catch tank. The water contains some soil and may possibly contain silver-bearing particulates if such particulates are present on the pad. This water shall be sampled and analyzed to determine if it is hazardous waste or is contaminated with hazardous waste or hazardous constituents prior to disposal.	DOE/Sandia note any soil is incidental, and the water can be characterized in accordance with Permit Attachment 9 and this Attachment without sampling and analysis. This is not consistent with Permit Part 4, which requires the Permittees to make a waste determination in accordance with 40 CFR 262.11, and manage the water appropriately. Please revise to read: Because the TTU is located outside, the steel-lined concrete pad periodically collects water from precipitation events, and the water drains through a filter into a catch tank. The water typically contains incidental dust and soil that has blown on to the pad and may also contain elemental silver if the pad is contaminated with kick out that was not removed. The water shall be characterized in accordance with Permit Attachment 9 and shall be managed appropriately.
PA4-19	4.5.5	173	This assessment for the presence of contamination and the cleansing of the burn pad and surrounding areas shall be performed within one hour of the termination of treatment operations. The Permittees shall wet contaminated areas with water and decontaminate them with wet paper wipes as described below in Section 4.8.3 of this Permit Attachment. As with precipitation, the wash water contains some soil and silver-bearing particulates. Prior to disposal, this water shall be sampled and analyzed to determine if it is hazardous or if it is contaminated with hazardous waste or hazardous constituents.	As discussed in Comment PA4-12, DOE/Sandia have determined four hours is the minimum cool-down period to allow personnel to safely approach the burn pan. The post-treatment inspection generally occurs within 24 hours, but it would be delayed if the treatment preceded a non-work day. Additionally, this condition should indicate that cleaning is required only if contamination is identified. Please revise to read: This assessment for the presence of contamination and the cleansing of the burn pad and surrounding areas shall be performed within one business day of the termination of treatment operations. If contamination is identified, the Permittees shall wet contaminated areas with water and decontaminate them with wet paper wipes as described below in Section 4.8.3 of this Permit Attachment. The wash water shall be managed in accordance with Permit Condition 4.5.2; it shall be treated if known or suspected to contain unreacted SASN. Otherwise, the water shall be characterized in accordance with Permit Attachment 9 and shall be managed appropriately.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-20	4.5.5	173	If the accumulated water in the catch tank was generated by either precipitation or wash water it shall be assumed to exceed City of Albuquerque wastewater discharge parameters and shall not be discharged directly to the Technical Area III sanitary sewer system without sampling and analyzing such water. The Permittees shall collect a sample of accumulated water within 24 hours following each rainstorm prior to its disposal. Each sample shall be analyzed for silver to determine whether the waste water meets the city discharge limits. If wastewater in the catch tank was generated by a process other than one of those listed above, then the accumulated wastewater shall be managed as a hazardous waste, as described in the Waste Analysis Plan contained in Permit Attachment 9 unless, sampling and analysis of the waste water determines that it is not hazardous.	As generators of the water in the catch tank, DOE/Sandia are responsible for compliance with the requirements of 40 CFR 261, 262, and some parts of 40 CFR 265, as discussed in General Comment G-B. These include (but are not limited to) determining whether the water is a solid waste and characterizing it as needed to determine appropriate management requirements as specified in Permit Part 4. DOE/Sandia have collected water in the catch tank during the past four years of TTU operations. It has been sampled and analyzed, and meets the City of Albuquerque wastewater discharge limits. The requirement to sample the water within 24 hours is not consistent with the WAP (Permit Attachment 9). Please revise to read: The accumulated wash water and/or precipitation or other wastewater in the catch tank shall be characterized in accordance with Permit Attachment 9 and shall be managed appropriately.
PA4-21	4.5.6.1	173	Wastes shall not be stored at the TTU prior to treatment, and all wastes shall be treated within eight (8) hours after placement into the TTU burn pan.	Personnel safety, weather, darkness, power failures, and equipment failures are some of the more common conditions that will limit DOE/Sandia's ability to follow this requirement to treat all wastes within 8 hours in compliance with Permit operating requirements. These must be considered, and this condition must be consistent with Section 4.6.4 of this Permit Attachment. Please revise to read: Wastes shall not be stored at the TTU prior to treatment, and all wastes shall be treated within eight (8) hours after placement into the TTU burn pan, unless precluded by weather, darkness, power failure, or other conditions that do not permit operation. If treatment cannot be completed within eight (8) hours, the Permittees shall consider personnel safety and existing conditions in determining whether to unload the burn pan or allow the waste to remain in the burn pan with the lid closed until normal operations can resume. If waste is to remain in the burn pan, the operator shall ensure the waste is saturated with water and shall close the lid. The Permittees shall continue treatment after resumption of normal operating conditions. Prior to igniting the burners, the operator shall ensure the waste is saturated with water.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-22	4.5.6.1	173	No other materials or wastes that would produce undesirable reactions (e.g., explosion, toxic fumes, or structural damage) at the TTU shall be located or treated at the TTU.	This condition should be clarified to reflect that small detonations may occur during normal operations at the TTU; such detonations would have no effect outside the burn cage. Please revise to read: No other materials or wastes that would produce undesirable reactions (e.g., toxic fumes, ejected fragments, or structural damage) at the TTU shall be located or treated at the TTU.
PA4-23	4.5.7.1	174	A sign indicating operations are underway shall be placed on the Building 6715 access gate. The TTU access gates shall be closed and locked. Access gates through the fence surrounding the Building 6715 Complex shall be closed during TTU waste transfer operations and treatment events.	DOE/Sandia use an elevated flashing red light to indicate TTU treatment operations; this is more visible than a sign on the gate. The TTU access gates must remain open during manual waste transfer operations. The gates in the fence surrounding the Building 6715 compound are closed and locked. Please revise to read: A flashing red light shall be on during treatment operations to indicate hazardous operations are in progress. The TTU access gates shall be closed and locked except when Unit personnel need to enter. Access gates through the fence surrounding the Building 6715 compound shall be closed and locked during TTU waste transfer and treatment operations.
PA4-24	4.5.7.2	174	Solid items, saturated in water, shall be loaded manually into the burn pan.	DOE/Sandia note the items may be submerged in water and/or acetone to maintain the explosive-contaminated solids in a safe condition. The water is poured into the burn pan and treated. Please see Comment PA4-5 for additional discussion. Please revise to read: Solid items, saturated or submerged in liquid (water and/or acetone), shall be loaded manually into the burn pan, with the liquid.
PA4-25	4.5.7.2	174	The same operator who manually loads the TTU burn pan shall control the gas burner system.	The operator controls the burner system by keeping the key. Please revise to read: The same operator who manually loads the TTU burn pan shall control the gas burner system key.
PA4-26	4.5.7.3	174	Liquids shall be transferred to the burn pan through the waste transfer pump and lines.	As noted in Section 4.5.7.2, liquids may be included with the solid items that are manually placed in the burn pan. Please revise to read: Liquids shall be transferred to the burn pan through the waste transfer pump and lines or carried with solid items and placed in the burn pan.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-27	4.5.8	174	In order to ensure that residual untreated waste is not present to cause a hazard to workers, the Permittees shall check surfaces for kickout with a portable propane burner as described below. 1. Prior to maintenance or repair activities on the burn cage or on the steel-lined concrete pad in the burn cage: If such activities involve hot work or friction (such as welding, cutting, or grinding), the Permittees shall check the burn cage and pad for kickout. 2. Following observation of kickout that occurs during treatment operations: If kickout is observed, the Permittees shall check the affected area for kickout following the post-treatment inspection procedures as described in Section 4.5.2 of this Permit Attachment. 40 C.F.R. § 270.14(b)(9) and 40 C.F.R. § 264.17.	DOE/Sandia note the portable propane burner provides valuable information with respect to treatment effectiveness. Additionally, 40 CFR 270.14(b)(9) addresses contents of permit applications and is not directly relevant to the requirements of 40 CFR 264.17 that the Permittees are required to meet in operating the TTU. Please delete the reference to 40 CFR 270.14 and add the following item: 3. Evaluation of treatment effectiveness and kickout inspection: Permittees may periodically review TTU surfaces with portable propane burner to evaluate treatment effectiveness. Permittees may also use the portable propane burner to inspect for small amounts of kickout that are visually undetectable.
PA4-28	4.6.3	175	Unloading activities include removal of treatment residue from the burn pan and contaminated water from the catch tank followed by containerizing the treatment residue and waste water. Containers with treatment residue or waste water shall be loaded onto a flatbed truck or other suitable vehicle for transport to the Hazardous Waste Management Unit (HWMU). Vehicles shall be loaded on the paved area southeast of Building 6715 as shown in Figure 4-3 of this Permit Attachment. The surface where loading takes place shall be level and the pavement shall be maintained in good condition. There shall also be sufficient room for vehicles used to transport wastes to safely maneuver in the loading area.	DOE/Sandia note this section of the draft Permit addresses loading and unloading; it should not contain requirements for management of treatment residues and wastewater. Please revise to read: Unloading activities include removal of treatment residue from the burn pan and contaminated water from the catch tank followed by containerizing the treatment residue and waste water. Vehicles shall be loaded on the paved area southeast of Building 6715 as shown in Figure 4-3 of this Permit Attachment. The surface where loading takes place shall be level and the pavement shall be maintained in good condition. There shall also be sufficient room for vehicles used to transport wastes to safely maneuver in the loading area.
PA4-29	4.6.5	176	Hazards associated with the waste treated at the TTU (e.g., the explosive nature of the wastes) increase the potential for personnel exposure to hazardous waste or hazardous constituents as well as to explosions. These hazards are addressed through Unit design and operations: *1– 4 (not included in comment)* 5. The Permittees shall check the surfaces of the burn cage, the pad, and the surrounding area with a portable propane burner before maintenance and repair activities to ensure that residual untreated reactive hazardous waste is not present to cause a hazard to workers.	This condition is not consistent with Section 4.5.8 of the draft Permit or with current Permit NM5890110518-2. Please revise to: 5. In order to ensure that residual untreated reactive hazardous waste is not present to cause a hazard to workers, the Permittees shall check the surfaces of the burn cage and the pad with a portable propane burner before maintenance and repair activities that involve hot work or friction (such as welding, cutting, or grinding).

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-30	4..6.5	176	In addition to the hazards associated with equipment operation and treatment of explosives, there are three sources of noise during treatment: *1–2 (not included in comment)* 3. Warning bell/buzzer: The warning bell/buzzer is designed to alert Unit personnel to treatment operations. The bell/buzzer sound is louder than that of the propane burners or detonation of SASN crystals.	DOE/Sandia note the buzzer is adequate for alerting personnel to treatment operations; however, it is not quite as loud as the loudest detonations observed during treatment operations over the past four years. Please revise as follows to clarify: In addition to the hazards associated with equipment operation and treatment of explosives, there are three sources of noise during treatment: 3. Warning bell/buzzer: The warning bell/buzzer is designed to alert Unit personnel to treatment operations. The bell/buzzer sound is louder than that of the propane burners and comparable with the detonation of SASN crystals.
PA4-31	Table 4.1	179	Note: only the rows shown below are included in this comment **TABLE 4-1** **Estimated Maximum Quantities of Hazardous Wastes and Constituents in SASN Wastes** d: In normal operations, all the explosive would be applied to the test article, and a trace would remain in the solution to be treated at the TTU. Some explosive would also be present on the solid items treated.	DOE/Sandia note that not all the explosive is applied during the tests; the quantity applied depends on the test, and there is always some waste. Please revise footnote d in Table 4-1 to read: d. In normal operations, most of the explosive would be applied to the test article, and residual explosive would remain in the liquid to be treated at the TTU. Some explosive would also be present on the solid items treated.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-32	4.7.3	179	At the TTU, eight situations present the potential for the release of hazardous waste or hazardous constituents to the environment. Each situation is addressed below: 1. <u>Transfer of liquid wastes to the TTU burn pan</u> Liquid wastes shall be transferred to the Unit through enclosed tubing equipped with secondary containment. No more than 20.8 gallons of liquid wastes shall be present in the Unit at any time, limiting the maximum release to 20.8 gallons. Spills on the ground or on the TTU pad will be wetted with water using spray hoses. When saturated with water, the reactive hazardous waste is considered stable by the Permittees. The spilled, wet waste shall then be wiped or scooped up and deposited in the burn pan for treatment. Similarly, contaminated soils shall be wetted, excavated, and placed in the TTU burn pan for treatment. 2. <u>Transfer of solid items to the TTU open burn pan</u> Solid items such as explosive-contaminated paper and filters shall be containerized and carried to the TTU burn pan by personnel trained and qualified to manage the waste. Solids that are spilled during transfer shall be handled in the same manner as described above for liquids. *3–8 (not included in comment)*	Liquids may be present with the solid items, and should be noted in this description for clarity. Please revise to read: At the TTU, eight situations present the potential for the release of hazardous waste or hazardous constituents to the environment. Each situation is addressed below: 1. <u>Transfer of liquid wastes to the TTU burn pan</u> Liquid wastes shall be transferred to the Unit through enclosed tubing equipped with secondary containment or manually placed in the burn pan with the solid items described below. No more than 20.8 gallons of liquid wastes shall be present in the Unit at any time, limiting the maximum release to 20.8 gallons. Spills on the ground or on the TTU pad will be wetted with water using spray hoses. When saturated with water, the reactive hazardous waste is considered stable by the Permittees. The spilled, wet waste shall then be wiped or scooped up and deposited in the burn pan for treatment. Similarly, contaminated soils shall be wetted, excavated, and placed in the TTU burn pan for treatment. 2. <u>Transfer of solid items to the TTU open burn pan</u> Solid items such as explosive-contaminated paper and filters shall be containerized and carried to the TTU burn pan by personnel trained and qualified to manage the waste. The containerized solids may contain free liquids to ensure the solids are fully saturated. Solids that are spilled during transfer shall be handled in the same manner as described above for liquids.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-33	4.7.3	180	At the TTU, eight situations present the potential for the release of hazardous waste or hazardous constituents to the environment. Each situation is addressed below: *1–2 (not included in comment)* 3. Run-off of potentially contaminated precipitation Once waste is transferred to the burn pan, treatment shall take place immediately in accordance with the conditions of this Permit. In the unlikely event of spillage from the burn pan, spilled waste shall be contained on the steel-lined concrete pad. Any precipitation or spillage in the steel-lined concrete pad drains through a settling basin and filter into the catch tank. In addition, no untreated waste shall be allowed to remain for extended periods of time in the burn pan. No treatment residues shall be allowed to remain in the burn pan for more than 25 hours. 4. Discharge of potentially contaminated precipitation from the catch tank Water collected in the catch tank is managed as described in Section 4.5.1 of this Permit Attachment. *5–6 (not included in comment)* 7. Kick- out of untreated waste during treatment Kick-out (described in Section 4.5.2) may occur, and has been occasionally observed on the steel-lined concrete pad. Kick-out on the pad shall be identified during the post-treatment inspection, wetted, wiped up, and placed back into the pan for treatment. Kick-out on the berm shall be handled in the same manner as described above for spilled liquids. 8. Emission of particulates following treatment Treatment residues shall be removed from the burn pan within 25 hours after the treatment event. The burn pan shall be covered between treatment events.	Treatment and removal of residue from the burn pan may be delayed, as noted in previous comments, because of weather restrictions, and because the activities that generate the explosive wastes occur over several days, with intermittent TTU operations as needed. Operating personnel do not remove residues until the end of the test; this maximizes personnel safety and prevents unnecessary delays in TTU operation. The reference to Section 4.5.1 is incorrect; the reference should be to Section 4.5.5. DOE/Sandia note treatment may not be possible on the day of kick-out clean up due to restrictions in the Permit, (e.g. weather conditions, time of day). As an alternative to returning the cleaned up kick-out wastes to the burn pan, operating personnel can accumulate the wastes in a satellite accumulation area inside Building 6715 until treatment in compliance with the Permit is possible. Accumulating the wastes inside the building will further minimize the potential for wind dispersal. Please revise to read: At the TTU, eight situations present the potential for the release of hazardous waste or hazardous constituents to the environment. Each situation is addressed below: 3. Run-off of potentially contaminated precipitation Once waste is transferred to the burn pan, treatment shall take place immediately in accordance with the conditions of this Permit, unless weather or other conditions preclude or delay treatment. In the unlikely event of spillage from the burn pan, spilled waste shall be contained on the steel-lined concrete pad. Any precipitation or spillage in the steel-lined concrete pad drains through a filter into the catch tank. Treatment residues shall be removed from the burn pan within one business day, unless another burn is scheduled within one business day, or removal is precluded or delayed due to weather or unforeseeable conditions, including emergencies. 4. Discharge of potentially contaminated precipitation from the catch tank Water collected in the catch tank is managed as described in Section 4.5.5 of this Permit Attachment. 7. Kick- out of untreated waste during treatment Kick-out (described in Section 4.5.2) may occur, and has been

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-33 (cont)				occasionally observed on the steel-lined concrete pad. Kick-out on the pad shall be identified during the post-treatment inspection, wetted, wiped up, and placed back into the pan for treatment or returned to the adjacent building 6715 until treatment in compliance with the Permit is possible. Untreated waste remaining in the pan and kick-out cleanup wastes shall be treated as soon as possible subject to the conditions of this Permit. Kick-out on the berm shall be handled in the same manner as described above for spilled liquids. 8. Emission of particulates following treatment Treatment residues shall be removed from the burn pan within one business day unless another burn is scheduled within one business day or weather or other conditions preclude or delay removal. The burn pan shall be covered between treatment operations.
PA4-34	Table 4-2	182	**DRAFT PERMIT TEXT** Note: only the rows shown below are included in this comment **TABLE 4-2 Summary of Fate and Transport Mechanisms at the TTU** Fate and Transport Mechanism: Migration to groundwater — Degree of Importance: Low Fate and Transport Mechanism: Transformation/degradation — Degree of Importance: Low **DOE/SANDIA COMMENT** Migration to groundwater and transformation/degradation are not important because they do not exist at the TTU. Thus they should not be considered at all. Please revise Table 4-2 to read: **TABLE 4-2 Summary of Fate and Transport Mechanisms at the TTU** Fate and Transport Mechanism: Migration to groundwater — Degree of Importance: None Fate and Transport Mechanism: Transformation/degradation — Degree of Importance: None	

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-35	Table 4-3	183	**DRAFT PERMIT TEXT** Note: only the rows shown below are included in this comment **TABLE 4-3** **Full-Time Occupants of Buildings near the TTU in TA-III** **Building** / **Distance From TTU (feet)** / **Direction From TTU** / **Number of Full-time Occupants** / **Approximate Percentage of Time Downwind from the TTU[a]** 6536[c] / 795 / SE / 5 / 5-10 6539[d] / 470 / E / 8 / 5-10 a Based on prevailing winds during daylight hours, based on data from 2001-2003. Range indicates some variation from year to year. b The TTU may or may not be continuously occupied. Personnel who are present during tests and treatment have the highest potential for exposure. c Building is scheduled to be demolished by September 30, 2006. d Building is scheduled to be operational by September 30, 2006. **DOE/SANDIA COMMENT** Building 6536 has been demolished, and Building 6539 has additional full-time occupants. Please delete the row for Building 6536, delete footnotes c and d, and revise the table as follows: **TABLE 4-3** **Full-Time Occupants of Buildings near the TTU in TA-III** **Building** / **Distance From TTU (feet)** / **Direction From TTU** / **Number of Full-time Occupants** / **Approximate Percentage of Time Downwind from the TTU[a]** 6539 / 470 / E / 10 / 5-10 a Based on prevailing winds during daylight hours, based on data from 2001-2003. Range indicates some variation from year to year. b The TTU may or may not be continuously occupied. Personnel who are present during tests and treatment have the highest potential for exposure.	
PA4-36	4.9.2	184	The proposed current and future land use at the TTU is industrial. In addition, the onsite receptors are actually not expected to exceed 50 days per year operational use at the TTU (i.e., the actual annual exposure period is less than 20% of the modeled exposure). Therefore, use of the industrial SSLs to calculate potential risk is conservative. Groundwater is not considered to be a reasonably likely exposure pathway. Vapors released during treatment operations at the TTU are not expected to significantly contribute to the operational risk due to the following factors. *1–5 (not included in comment)* 6. The nearest continuously occupied building is 795 feet away from the TTU and upwind most of the time (Table 4-3).	Building 6539 is complete and has full-time occupants. It is now the building nearest the TTU. Please revise item 6 to read: 6. The nearest continuously occupied building is 470 feet away from the TTU and upwind most of the time (Table 4-3).

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA4-101*	4.0	165	The entire area within the fence of Building 6715 complex is 8,140 square feet.	DOE/Sandia note the area within fence surrounding the Building 6715 complex is not relevant to the Permitted Unit. The area within the fence surrounding the TTU is 8,140 square feet, and the TTU itself occupies 196 square feet. Please revise accordingly.
PA4-102*	4.1.1.1	166	Fewer than 15 vehicles typically enter or exit the TTU per week.	This traffic information applies to the Building 6715 compound, rather than the TTU. Please revise to read: Fewer than 15 vehicles typically enter or exit the Building 6715 compound per week. Fewer than 15 vehicles enter or exit the TTU per year.
PA4-103*	4.1.1.2	166	The southeast corner of Building 6715 Complex is paved.	The entire complex is paved. Please revise accordingly.
PA4-104*	4.6.2	175	Information on equipment testing and maintenance at the TTU, access to communications or alarm systems, and hazards prevention is contained in Section 2.1.2.4 of Permit Attachment 2.	There is no Section 2.1.2.4; the correct reference is Section 2.1.3.1. Please revise accordingly.
PA4-105*	Attach-ment 4	166 - 189	Acronyms	The following acronyms appear in the text of this Permit Attachment but are not defined in the list of acronyms at the beginning of the draft Permit. Please include them in the Acronym List: A/BCAQCB Albuquerque/Bernalillo County Air Quality Control Board COPC chemical of potential concern
PA4-106*	Attach-ment 4	after 188	Figures and photographs	The figures and photographs do not reflect the most current information provided in the Application. DOE//Sandia will provide updated figures and photographs under separate cover.

*Comment is more administrative in nature

Enclosure M

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 5

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-1	Attach-ment 5	190 - 208	Permit Attachment 5	DOE/Sandia note several instances that mention mixed wastes in requirements that are applicable to both hazardous and mixed wastes (e.g., Section 5.3). Please see General Comment G-A for additional discussion and revise throughout this Attachment. DOE/Sandia also note numerous parts of this Permit Attachment that address hazardous constituents; these should address hazardous waste constituents instead for consistency with the applicable regulations (e.g., Section 5.7). Please see General Comment G-C for additional discussion and revise throughout this Attachment.
PA5-2	5.3	192	In each waste management area (except where noted), containers holding liquid mixed wastes shall be stored on portable spill pallets or pans. These are commercially available units consisting of a tub made of a heavy-duty inert material such as polyethylene or polypropylene with a heavy-duty inert plastic grating cover. The pallets or pans shall be designed to be resistant and impervious to corrosives, solvents, and other liquids. The containers of liquids (typically 5- to 55-gallon capacity) shall be stored on grating. Any liquids released from the containers drain through the grating into a tub. The pallets come in various sizes and capacities designed for use with 55-gallon drums or other standard containers, as required by 40 C.F.R. § 264.175(b)(1-3).	The Application includes numerous descriptions of items such as spill pallets and spill pans that illustrate ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. DOE/Sandia note that these items are available from multiple vendors, and they come in sizes, shapes, and materials for various applications, including but not limited to applications where it is necessary for the units to be impervious to corrosives, solvents, and other liquids. Thus, the description represents a typical design rather than a prescriptive specification because the units are selected for the specific application. The prescriptive requirements regarding design and features of spill pallets are unnecessary because the Permittees are required to provide adequate secondary containment as required by 40 CFR 264.175(b)(1-4). Please revise to read: In each waste management area (except where noted), containers holding liquid hazardous or mixed wastes shall be stored on portable spill pallets or pans. These are commercially available units consisting of a tub made of a heavy-duty inert material such as polyethylene or polypropylene with an inert grating cover. The pallets come in various sizes and capacities designed for use with 55-gallon drums or other standard containers and shall provide adequate secondary containment as required by 40 CFR 264.175(b)(1-3). The containers shall be stored in a stable configuration; the weight shall not exceed the grating capacity.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-3	5.3	192	Mixed wastes shall be stored inside one of the buildings or inside transportainers in the outdoor storage area. Transportainers are 10- to 40-cubic-yard transportable containers, which typically have doors at one end and can be lifted onto a large flatbed truck for transportation. Wastes in the containers shall be protected from precipitation by either the buildings or transportainers, and by the slope of the pavement and concrete pads outside the buildings that direct storm water away from the doorways, in accordance with 40 C.F.R. § 270.14(b)(8)(ii).	DOE/Sandia note this requirement is unnecessarily prescriptive. In most cases, containers of hazardous or mixed wastes or self-contained hazardous or mixed waste items are stored inside transportainers, unless they are too large. However, such storage is not required. The wastes are stored in compliance with 40 CFR 264 Subpart I, and adequate secondary containment is provided for containers of liquids that are stored in the outdoor area. Please see Comment PA5-1 and General Comment G-A regarding limitations on management of hazardous and mixed wastes. DOE/Sandia note 40 CFR 270.14 is cited; however, this provision addresses contents of permit applications and is not directly relevant to the requirements of 40 CFR 264 that the Permittees are required to meet in operating the RMWMU. Please revise to read: Hazardous and mixed wastes are typically stored inside one of the buildings or inside transportainers in the outdoor storage area. Mixed wastes may be stored outside due to large size, large quantity, and lack of available space in the buildings or transportainers, or other reason. Mixed or hazardous wastes that are stored outside shall meet the requirements of 40 CFR 264 Subpart I.
PA5-4	5.3.1	192	The exterior walls are 2-ft thick, while the interior walls are 1-ft thick. The shared wall between the north and south parts of the building is 1.5-ft thick.	This information is not correct and it is inconsistent with the rest of the building description in this paragraph. Please delete these two sentences.
PA5-5	5.3.1	193	Building 6920 consists of two bays (North and South) sharing an office area near the west end of the building that are isolated from each other by a wall with an interior airlock.	There is no direct access from the office area to either bay. Please revise to read: Building 6920 consists of two bays (north and south) that are isolated from each other by a wall, with an interior airlock and an office area near the west end of the building.
PA5-6	5.3.1	193	There are seven exterior personnel doors and four cargo entrances to the building, as well as separate entrances to the exterior mechanical and electrical rooms. The personnel doors provide access to the North and South Bays and to all sides of the building. There is a cargo entrance (i.e., roll-up door) at each end of each bay. Rollup doors enclose the airlocks on the south bay.	Please revise to provide the correct number of doors. There are six exterior personnel doors and four cargo entrances to the building, as well as separate entrances to the exterior mechanical and electrical rooms. The personnel doors provide access to the North and South Bays and to all sides of the building but the south side. There is a cargo entrance (i.e., roll-up door) at each end of each bay. Rollup doors enclose the airlocks on the south bay.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-7	5.3.2	193	The storage capacity of the existing North Bay shall be limited to 1,677.5 gallons of waste. Treatment in the North Bay shall be limited to physical treatment and macroencapsulation.	This storage capacity is not consistent with Part A of the Application approved by NMED on June 21, 2002. Neither the storage nor the types of treatment are consistent with Part A or Part B of the current Application, as discussed in General Comment G-F. Please revise to read: The storage capacity of the existing north bay shall be limited to 6000 gallons of waste. Thermal deactivation shall not be performed in the north bay; all other RMWMU treatment is permitted.
PA5-8	5.3.2	193	The floor in the North Bay slopes from the doorways toward one or more shallow (6-in.-deep) blind sumps covered with grating. Containers of liquid wastes shall be stored on portable spill pallets or pans. Floors, (including the sumps), and the walls in the waste management areas of Building 6920 shall be sealed with a chemical-resistant epoxy, which shall be designed to withstand degradation by chemical substances and resist wear from forklift traffic.	Not all the sumps in the north bay are covered with grating, and they are not used to provide secondary containment. DOE/Sandia note that 40 CFR 264.175(b)(1) requires that the base underlying the containers be free of cracks or gaps and be sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed; this requirement is fully satisfied through use of spill pallets and pans. The floor and walls in the north bay are painted, but sealing the concrete floor, sumps, and walls with a chemical-resistant epoxy is not required for compliance with the regulations or for protection of human health or the environment. Please revise to read: The floor in the north bay slopes from the doorways toward one or more shallow (6-in.-deep) blind sumps, some of which are covered with grating. Containers of liquid hazardous and mixed wastes shall be stored on portable spill pallets or pans. The floors and walls in the waste management areas of Building 6920 are painted. The floors shall be maintained as needed to be free from cracks and gaps.
PA5-9	5.3.2	193	The RMWMU North Bay shall include two enclosed areas (shown in Figure 5-2 of this Permit Attachment) that are equipped with a negative-pressure exhaust system. The exhaust shall pass through a high-efficiency particulate air (HEPA) filter train before being released to the environment through an exhaust stack. The filters shall remove particulates entrained in the airflow.	DOE/Sandia note the enclosures and exhaust systems are designed and operated to address radiological constituents. In addition, they serve to control particulate hazardous waste constituents. Prescriptive requirements in the draft Permit regarding the enclosures and exhaust systems may limit DOE/Sandia's ability to protect Unit workers from physical or radiological hazards associated with repackaging or treating mixed wastes. Please revise to read: The RMWMU north bay includes two enclosed areas (shown in Figure 5-2 of this Permit Attachment) that are equipped with a negative-pressure exhaust system. The exhaust passes through a high-efficiency particulate air (HEPA) filter train before being released to the environment through an exhaust stack. The filters remove particulates entrained in the airflow.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-10	5.3.3	193	Treatment in the South Bay shall be limited to chemical and thermal deactivation, stabilization, amalgamation, macroencapsulation, and physical treatment.	As noted in Section 5.7.4 of this Permit Attachment and discussed in Comment PA5-37, stabilization and solidification often occur simultaneously and both may be goals of the treatment process; thus, it is appropriate to mention both. Accordingly, please revise to read: Treatment in the South Bay shall be limited to chemical and thermal deactivation, stabilization and solidification, amalgamation, macroencapsulation, and physical treatment.
PA5-11	5.3.3	193	The storage capacity of the South Bay and airlocks shall be limited to 1,677.5 gallons.	This storage capacity is not consistent with Part A of the Application approved by NMED on June 21, 2002. Neither the storage nor the types of treatment are consistent with Part A or Part B of the current Application, as discussed in General Comment G-F. Please revise to read: The storage capacity of the south bay and airlocks shall be limited to 7,430 gallons.
PA5-12	5.3.3	193	The floor in the south bay shall slope from the doorways toward one or more shallow (6-inches-deep) blind sumps covered with grating which provide secondary containment. Containers of liquid mixed wastes shall be stored over or near the sumps in the south bay or on portable spill pallets or pans. Floors (including the sumps), and the walls in the waste management areas of Building 6920 shall be sealed with a chemical-resistant epoxy, which shall be designed to withstand degradation by chemical substances and resist wear from forklift traffic.	DOE/Sandia note that one blind sump (along the south wall) in the south bay is used to provide secondary containment. The concrete sides and base in the sump underlying the containers are free of cracks or gaps, and are sufficiently impervious to contain leaks and spills until the collected material is detected and removed in compliance with 40 CFR 264.175(b)(1). In other parts of the south bay and airlocks, the requirements of 40 CFR 264.175(b)(1-4) are fully satisfied through use of portable spill pallets or pans, as discussed in Comment PA5-8. The floor and walls of the south bay are painted, but sealing the concrete floor and walls with a chemical-resistant epoxy is not required for compliance with the regulations or for protection of human health or the environment. Please revise to read: The south bay has a shallow (6-inches-deep) concrete blind sump covered with grating along the south wall. Containers of liquid hazardous and mixed wastes shall be stored over the sump or on portable spill pallets or pans. In the airlocks, containers of liquid hazardous and mixed waste shall be stored on portable spill pallets or pans. The floors and walls in the waste management areas of Building 6920 are painted. The floors and sump shall be maintained as needed to be free from cracks and gaps.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-13	5.3.3	194	In the RMWMU, there are four small rooms in the South Bay (Figure 5-2 of this Permit Attachment) where the Permittees conduct treatment and storage. A commercially available fume hood with a negative-pressure ventilation system shall be located in one of these rooms. Another local ventilation system is located in another of the rooms. The exhaust from both of these systems is combined and shall pass through a HEPA filter train before being released to the environment through the exhaust stack. The filters shall remove particulates entrained in the airflow of each system.	Please see Comment PA5-9 regarding the fume hood and ventilation systems protecting Unit workers from physical or radiological hazards associated with repackaging or treating the wide variety of mixed wastes managed at the Permitted Unit. DOE/Sandia also perform repackaging operations in these rooms. Please revise to read: In the RMWMU, there are four small rooms in the south bay (Figure 5-2 of this Permit Attachment) where the Permittees conduct repackaging, treatment, and storage. A commercially available fume hood with a negative-pressure ventilation system is located in one of these rooms. Another local ventilation system is located in another of the rooms. The exhaust from both of these systems is combined and passes through a HEPA filter train before being released to the environment through the exhaust stack. The filters remove particulates entrained in the airflow of each system.
PA5-14	5.3.4	194	The floors are 6 inches thick concrete slab-on-grade. The floors in the assay area on the south side of the building shall be sealed with a chemical-resistant epoxy that extends up the walls for 6 inches.	Please see Comment PA5-8 regarding secondary containment. DOE/Sandia use portable spill pallets and pans in the assay area to fully satisfy the requirements of 40 CFR 264.175(b)(1-4). Sealing the floor and walls with a chemical-resistant epoxy is not required for compliance with the regulations or for protection of human health or the environment. Please revise to read: The floors are 6 inches thick concrete slab-on-grade. The floors throughout the waste management areas shall be maintained as needed to be free from cracks and gaps.
PA5-15	5.3.4	194	The maximum storage capacity shall be limited to 1,953 gallons.	This storage capacity and types of treatment are not consistent with Part A of the Application approved by NMED on June 21, 2002 or with Part A or Part B of the current Application, as discussed in General Comment G-F. Please revise to read: The maximum storage capacity shall be limited to 7,810 gallons.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-16	5.3.4	194	Building 6921 waste treatment area, shown on Figure 5-3 of this Permit Attachment shall be equipped with a commercially available fume hood with a negative-pressure ventilation system. The ventilation airflow from the hood shall pass through a HEPA filter train before being released to the environment through an exhaust stack. The filters shall remove particulates entrained in the airflow.	Please see Comment PA5-9 regarding use and requirements for the fume hood. Please revise to read: Building 6921 waste treatment area, shown on Figure 5-3 of this Permit Attachment is equipped with a commercially available fume hood with a negative-pressure ventilation system. The ventilation airflow from the hood passes through a HEPA filter train before being released to the environment through an exhaust stack. The filters remove particulates entrained in the airflow.
PA5-17	5.3.4	194	Treatment in Building 6921 shall be limited to chemical and thermal deactivation, stabilization, amalgamation, macroencapsulation, and physical treatment.	As discussed in Comment PA5-37, both stabilization and solidification may be goals of the treatment process, thus, it is appropriate to include both. Please revise to read: Treatment in Building 6921 shall be limited to chemical and thermal deactivation, stabilization and solidification, amalgamation, macroencapsulation, and physical treatment.
PA5-18	5.3.5	194	Buildings 6925 and 6926 are used for storage and some treatment of mixed waste at the RMWMU.	Limited repackaging operations may also be conducted in these buildings. Please revise to read: Buildings 6925 and 6926 are used for storage, repackaging, and some treatment of hazardous and mixed waste at the RMWMU.
PA5-19	5.3.5	194	Building 6925 has a total storage area of approximately 4,000 ft^2. The maximum storage capacity of Building 6925 shall be limited to 20,790 gallons. No waste shall be stored in Building 6926.	The prohibition on hazardous and mixed waste storage in Building 6926 is not consistent with the information in Table 3-1 in Permit Part 3, with the information in Permit Attachment 8, or with the information in Part A of the Application approved by NMED on June 21, 2002. The capacities for Buildings 6925 and 6926 are not consistent with Part A or Part B of the current Application, as discussed in General Comment G-F. Please revise to read: Each building (6925 and 6926) has a total storage area of approximately 4,000 ft^2. The maximum storage capacity of each building shall be 83,160 gallons.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-20	5.3.5	194	The concrete floors in both buildings shall be covered with a chemical-resistant epoxy coating.	Please see Comment PA5-8 regarding use of portable spill pallets or pans to fully satisfy the requirements of 40 CFR 264.175(b)(1-4). Sealing the floors with a chemical-resistant epoxy is not required for compliance with the regulations or for protection of human health or the environment. Please revise to read: The concrete floors in both buildings shall be maintained as needed to be free from cracks and gaps.
PA5-21	5.3.6	195	Each building has two 5-ft wide doors, and each door has a single-point locking mechanism with inside safety release. Each building shall be vented. The inside walls and ceiling of each building shall be covered with an epoxy coating which shall be designed to be resistant to reactive wastes. Each modular storage building shall have a 5.5-inch deep integral spill containment reservoir under the entire building; the capacity is 650 gallons. The reservoirs are constructed of 10-gauge American Society for Testing and Materials A36 steel and shall be coated with a chemical-resistant epoxy. The building floors shall be epoxy-coated steel grating.	The description of the doors is not accurate; the total width is 5 feet, which facilitates container movement. The locking and venting features provide additional protection for Unit personnel but are not required for management of hazardous or mixed wastes or hazardous waste constituents. DOE/Sandia note the inside surfaces (walls, bottom, ceiling, and floor) of each building are painted; these painted surfaces in the sump at the bottom of each modular building are free of cracks or gaps and are sufficiently impervious to contain leaks and spills until the collected material is detected and removed in accordance with 40 CFR 264.175(b)(1). The painted sump and the floor grating fully satisfy the requirements of 40 CFR 264.175(b)(1-4). Sealing the inside surfaces with a reactive-chemical-resistant epoxy is not required for compliance with the regulations or for protection of human health or the environment. Please revise to read: Each building is vented and has double doors with an inside safety release. Each modular storage building shall have a 5.5-inch deep integral spill containment reservoir under the entire building; the capacity is 650 gallons. The reservoirs are constructed of 10-gauge American Society for Testing and Materials A36 steel or equivalent. The inside surfaces (bottom and sides) of each reservoir shall be painted to provide additional protection against degradation of the secondary containment. The sumps shall be maintained as needed to be free from cracks and gaps. Containers shall be stored on painted steel grating or equivalent over the reservoirs. The grating shall be maintained as needed to support containers and elevate them above any accumulated liquid.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-22	5.3.6	195	Each building shall rest on structural supports that elevate it and allow visual inspection of the underside of the spill containment reservoir for any evidence of deterioration on the interior surfaces. The maximum storage capacity at each building shall be limited to 275 gallons.	DOE/Sandia note the storage capacities for the modular buildings in the draft Permit are not consistent with current permitted capacities as specified in Part A of the Application approved by NMED on June 21, 2002. Furthermore, DOE/Sandia note that all the capacities in Part A and Part B of the Application have been established in full compliance with the requirements of 40 CFR 264 Subpart I, with consideration of the physical size and characteristics of each area and the requirements for secondary containment, as discussed in General Comment G-F. The modular buildings rest on structural supports which serve to elevate the units slightly. It is not necessary or effective to inspect the underside of the modular buildings on a regular basis because degradation of the containment reservoirs will be evident in the inspections that include the inside surfaces of each reservoir. Including the undersides of the buildings does not increase protection of human health or the environment; it increases the risk of injury to site personnel due to the difficulties of physical access. Please revise to read: Each building rests on structural supports that elevate it and shall allow visual checks if there is evidence of deterioration on the interior surfaces. Visual checks for deterioration of the spill containment reservoirs are made by inspecting the interior of the units. The maximum storage capacity at each building shall be limited to 1,100 gallons.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-23	5.3.7	195	The outdoor waste storage area may be used for storage of containerized mixed wastes. It has an area of approximately 48,500 ft^2. The total storage capacity shall be limited to 4,950 gallons. The area shall be covered, curbed, and paved with a berm on the east end of the site, and shall slope toward the water retention pond. In the event of any releases of liquid wastes in the outdoor storage area, the curbing and berms and the retention pond shall capture the released liquids, including precipitation so that mixed waste or hazardous constituents will not exit the area. Containers of mixed wastes are stored inside enclosed steel transportainers.	DOE/Sandia note the storage capacities for the outdoor area in the draft Permit is not consistent with the capacity as specified in Part A of the Application approved by NMED on June 21, 2002. Please see General Comment G-F for further discussion. DOE/Sandia also note this requirement is unnecessarily prescriptive. As discussed in Comment PA5-3, containers or individual items are stored inside transportainers, unless they are too large. However, such storage is not required, nor is use of steel transportainers. The wastes are stored in compliance with 40 CFR 264 Subpart I, and adequate secondary containment is provided in compliance with 40 CFR 264.175(b)(1-4) for containers of liquids that are stored in the outdoor area. The outdoor area is not covered. Further, DOE/Sandia note the RMWMU retention pond is designed and used for management of storm water; it does not provide secondary containment for hazardous or mixed waste management activities. Spills, fire-fighting water, and other releases of hazardous or mixed wastes or hazardous waste constituents to the pond are addressed in the Contingency Plan in Permit Attachment 12. The pond and discharges from it are subject to National Pollutant Discharge Elimination System (NPDES) requirements established under the Clean Water Act. Therefore, as discussed in General Comment G-B, it is not necessary to include requirements for routine operations of the retention pond in this Permit, and it should be deleted from this section of the Permit. Please revise to read: The outdoor waste storage area may be used for storage of hazardous or mixed wastes. It has an area of approximately 48,500 ft^2. The total storage capacity shall be limited to 19,800 gallons. Hazardous and mixed wastes are typically stored inside one of the buildings or inside transportainers in the outdoor storage area. Hazardous or mixed wastes may be stored outside due to large size, large quantity, and lack of available space in the buildings or transportainers, or other reason. Mixed or hazardous wastes that are stored outside shall meet the requirements of 40 CFR 264 Subpart I.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-24	5.4.2	196	Sources of ignition that may be present at the RMWMU include welding activities, open flames, hot surfaces, frictional heat, radiant heat, sparks, and engines. Pursuant to 40 C.F.R. § 264.17, the Permittees shall employ the precautions and practices described in the management of ignitable, reactive, and incompatible waste as presented in Section 2.1.2 of Permit Attachment 2. Additional RMWMU-specific features, potential ignition and reaction sources, precautions, and practices shall include: *1 (not included in comment)* 2. Ignitable and reactive wastes may also be stored in Building 6925, and may only be kept temporarily, not to exceed one day, in Buildings 6920, 6921, and 6926 for treatment, packaging, and staging for shipment. Individual containers shall be labeled and they shall be kept apart from other wastes. The Permittees shall place a portable sign near the wastes or use prominent labels to identify them as ignitable and/or reactive. 3. Water-reactive wastes shall not be stored in areas equipped with water sprinklers for fire suppression. They may be managed only temporarily, not to exceed one day, in Buildings 6920, 6921, 6925, and 6926 for treatment, packaging, and staging for shipment. If water-reactive wastes are present, they shall be isolated from water as described in Section 2.1.2 of Permit Attachment 2, and their location shall be identified by the Permittees through the use of signs or labels. *4 (not included in comment)* 5. The modular storage buildings shall be grounded by a 10-ft-long grounding rod and cable. They shall be equipped with a dry chemical fire suppression system to assure that water-reactive wastes shall not be exposed to water during any fire emergencies. 6. Wastes shall be mixed together only on a limited basis during treatment and repackaging operations at the Unit. Ignitable and reactive wastes shall be treated or mixed on a case-by-case basis. The Permittees shall plan each such operation carefully to identify the hazards and potential consequences. The Permittees shall use waste characterization data and/or published chemical information (e.g., "NIOSH Pocket Guide to Chemical Hazards" [DHHS, 1994] or other chemical or engineering handbook) as appropriate for each waste in the planning process. The Permittees shall conduct the operations according to the plan in order to control the hazards and prevent uncontrolled reactions. *7 (not included in comment)*	DOE/Sandia note these requirements are unnecessarily prescriptive and are not consistent with the information provided in the Application. With respect to the location of ignitable and water-reactive wastes, treatment, repackaging, and staging operations may take more than one day to complete. Ignitable or reactive wastes may be stored in any of the buildings as needed to utilize features of that particular building (e.g., separate rooms). It is not always feasible to label containers during treatment operations. It is not necessary to specify the length of the grounding rods for the modular buildings, because the rods are fully defined by their protective function. DOE/Sandia use the most current edition of the NIOSH Pocket Guide to Chemical Hazards; the Permit should reflect that it is updated periodically. Please revise as follows: 2. Ignitable and reactive wastes may also be stored in Buildings 6920, 6921, 6925, and 6926 for treatment, packaging, storage, and staging for shipment. Individual containers shall be labeled during storage and they shall be kept apart from other wastes. The Permittees shall place a portable sign near the wastes or use prominent labels to identify them as ignitable and/or reactive. 3. Water-reactive wastes shall not be stored in areas equipped with water sprinklers for fire suppression. They may be managed only temporarily in Buildings 6920, 6921, 6925, and 6926 for treatment, packaging, and staging for shipment. 5. The modular storage buildings shall be grounded by a grounding rod and cable or equivalent method. They shall be equipped with a dry chemical fire suppression system to assure that water-reactive wastes shall not be exposed to water during any fire emergencies. 6. Wastes shall be mixed together only on a limited basis during treatment and repackaging operations at the Permitted Unit. Ignitable and reactive wastes shall be treated or mixed on a case-by-case basis. The Permittees shall plan each such operation carefully to identify the hazards and potential consequences. The Permittees shall use waste characterization data and/or published chemical information (e.g., "NIOSH Pocket Guide to Chemical Hazards" [DHHS, 1994] as revised and updated, or other chemical or engineering handbook) as appropriate for each waste in the planning process. The Permittees shall conduct the operations according to the plan in order to control the hazards and prevent uncontrolled reactions.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-25	5.4.3.3	197	In addition, personnel shall carry pagers, two-way radios, or cellular telephones so that they can contact or be contacted by on-site and Facility emergency support personnel at all times. In order to enhance safety, personnel shall work in pairs and maintain visual or voice contact when handling wastes. [40 C.F.R § 264.32(a) and (b) and 40 C.F.R § 264.34].	DOE/Sandia note 40 CFR 264.34 does not require that personnel have access to other personnel and multiple means of communication at all times. Rather, the requirement is for "immediate access to an internal alarm or emergency communications device, either directly or through visual or voice contact with another employee", "whenever hazardous waste is being poured, mixed, spread, or otherwise handled". Two-way radios, pagers, cellular telephones, and working in pairs are illustrations of means of communication that are typically available. DOE/Sandia note that requiring two personnel to be present at all times when managing waste or requiring use of particular communications equipment will not enhance safety in some cases (e.g., small quantities, limited work space, or operations involving reactive wastes). The Application describes use of two persons only during waste handling operations at the MSB; this precaution is taken as needed to provide additional protection of human health and the environment because these Units are not routinely occupied. Please revise to read: If the communications and alarm systems described in each Unit-specific Attachment of this Permit are not immediately available, on-site personnel working alone shall carry two-way radios or cellular telephones so that they can contact emergency personnel. Alternatively, waste management personnel shall work in pairs and maintain visual or voice contact, and one member of the pair shall have access to two-way radios, cellular telephones, or the communications and alarm systems described in each Permit Attachment [40 C.F.R. § 264.34].

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-26	5.5.1	198	The ramp on the west side of Building 6926 shall slope gently up to the dock, allowing forklift operators to drive onto trailers of trucks parked at the dock. The dock and ramp shall be maintained in good condition and shall be covered with a corrugated metal roof to provide protection from weather. Unit personnel typically use the loading dock for loading and unloading waste from trucks. Drums and other containers of waste shall be strapped together on a pallet before being loaded onto vehicles, or the containers shall be loaded individually. Containers are typically transported within the Unit using forklifts, drum dollies or pallet jacks. [40 C.F.R § 270.14(b)(8)(i)].	DOE/Sandia note the Application includes descriptions of typical waste handling equipment and operations as illustrations of ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. The equipment and detailed operations are typical rather than prescriptive because they are continually adjusted as needed for the specific hazardous and mixed wastes being handled at any time in the Permitted Units. Including prescriptive handling requirements for fastening containers to lifts is redundant, and the requirement to use specific fastening methods or waste handling equipment may lead to operations that are less protective of worker safety (e.g., containers that are strapped together may block the forklift driver's view and be more cumbersome than using a special forklift attachment to transport two drums at a time). Additionally, 40 CFR 270.14(b)(8)(i) should not be cited, as discussed in Comment PA5-3. Please revise to read: The ramp on the west side of Building 6926 slopes up to the dock, allowing forklift operators to drive onto trailers of trucks parked at the dock. The dock and ramp shall be maintained in good condition. Containers of waste shall be handled in a manner to prevent shifting or falling. A forklift, hydraulic lift, or other mechanical device may be used as needed for loading or unloading larger containers and for transporting them within the Permitted Unit.
PA5-27	5.5.3	199	Due to the depth to groundwater (approximately 480 feet) at the RMWMU and Unit operating procedures, the potential is small to impact groundwater or other water supplies as a result of waste-management operations at and around the Unit. Spills shall be contained within the buildings or within secondary containment systems, and shall be cleaned up promptly. Any spills occurring outside the RMWMU buildings shall be contained and cleaned up promptly so as not to contaminate surface water or groundwater. [40 C.F.R § 270.14(b)(8)(iii)].	DOE/Sandia note this condition is not consistent with conditions in the Permit Parts or Permit Attachments applicable to the HWMU, TTU, and AHCU. Please revise to read: The Permittees shall conduct waste management activities at the RMWMU in accordance with this Permit.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-28	5.5.8	200	During storage activities, the Permittees do not routinely manage wastes with organic concentrations equal to or greater than 10 percent by weight. Equipment used in such service at the RMWMU shall be used for less than 300 hours per calendar year if it is to be exempt from the regulatory requirement (40 C.F.R. § 264.1052 through 1060) as noted in 40 C.F.R. § 264.1050(f). The equipment list shall be maintained in the RMWMU records. The hours of equipment use shall also be noted in the records.	DOE/Sandia note that the requirements of 40 CFR 264 Subpart BB apply only to air emissions from equipment (e.g., pumps, valves, or compressors) that contacts hazardous wastes with organic concentrations equal to or greater than 10 percent by weight. Such equipment may used at the RMWMU during treatment and could potentially be used during storage. Please revise to read: During storage and treatment activities, the Permittees do not routinely manage hazardous or mixed waste with organic concentrations equal to or greater than 10% by weight in process equipment that is subject to the requirements of 40 CFR 264 Subpart BB. Equipment used in such service shall be used for less than 300 hours per calendar year if it is to be exempt from the regulatory requirement (40 C.F.R. § 264.1052 through 1060) as noted in 40 C.F.R. § 264.1050(f). In addition, the equipment list shall be maintained in the RMWMU records. The hours of equipment use shall also be noted in the records.
PA5-29	5.7	201	Prior to any treatment at the RMWMU and the AHCU, the Permittees must obtain approval from the Department. The Permittees must submit a detailed treatment plan for approval by the Department for each waste that is to be treated.	Treatment operations at the RMWMU have historically required 15 to 30 separate detailed treatment plans each year due to the variety of wastes generated at SNL/NM, as discussed in Comment PP4-18. Immediate modifications to the plans are sometimes required in response to conditions encountered during treatment operations. DOE/Sandia note NMED has historically required 60 to 120 days to acknowledge receipt of documents submitted in accordance with the FFCO; this time has been considerably longer for documents that require review and approval. The mutual goal of NMED and the Permittees should be timely treatment of the waste and protection of human health and the environment. Please see General Comment G-G for additional discussion regarding this requirement. Please revise as follows: Prior to any treatment at the RMWMU and the AHCU, the Permittees must prepare a detailed treatment plan. The treatment plan shall describe, at a minimum, the wastes to be treated, the volume of the wastes, the methods of treatment, and how treatment efficacy will be verified. These plans will be retained in the Operating Record in accordance with Permit Attachment 13.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-30	5.7	201	The Permittees' waste treatment practices currently involve various technologies at the RMWMU, and include the following methods. 1. Chemical deactivation (performed in the South Bay of Building 6920 or in the treatment area in Building 6921). *2 (not included in comment)* 3. Stabilization (performed in the South Bay of Building 6920 or in the treatment area in Building 6921). 4. Amalgamation (performed in the South Bay of Building 6920 or in the treatment area in Building 6921). *5–6 (not included in comment)*	DOE/Sandia note the requirements restricting treatment to the south bay of 6920 are not consistent with the Application. Additionally, stabilization and solidification may both result from a single treatment process and should both be mentioned. Please revise as follows: The Permittees' waste treatment practices currently involve various technologies at the RMWMU, and include the following methods. 1. Chemical deactivation (performed in Buildings 6920 or 6921). 3. Stabilization and/or solidification (performed in Building 6920 or Building 6921). 4. Amalgamation (performed in Building 6920 or Building 6921).
PA5-31	5.7	201	All of the treatment at the RMWMU is batch treatment performed on single packages of waste (each package is one 55-gallon drum or less, or a single item that may be larger than a drum). Treatment shall be conducted in containers. Each type of treatment shall be performed on batches of 440 pounds of waste or less, with the exception of physical treatment, which may occasionally involve very large, heavy items. Liquid wastes shall be treated in batches of 60 gallons or less.	DOE/Sandia note it is not necessary to specify the maximum weight if the maximum quantity and the process are specified, as these are sufficient to guide and control operations, and to protect human health and the environment. Additionally, not all treatment occurs in containers. Please revise to read: All of the treatment at the RMWMU is batch treatment; it is typically performed on single packages of waste (each package is one 85-gallon drum or less, or a single item that may be larger than a drum). In the case of macroencapsulation, several containers or large items may be treated in a single batch. Treatment shall be conducted in containers unless the physical properties of the waste and the nature of the treatment process require treatment without containers (e.g., chemical deactivation of thermal batteries and some physical treatment). Liquid wastes shall be treated in batches; the Permittees shall ensure containment when liquid wastes are not treated in containers.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-32	5.7.1	202	Hydrides, deuterides, and tritides are deactivated by slow addition to an ice water bath. Deactivation of water-reactive metals such as elemental sodium and lithium involves the slow and controlled addition of an appropriate alcohol/water solution. Alcohol/water shall be added until the water reactive potential of the waste has been eliminated. Deactivation of pyrophoric metal powders and particulates may be achieved by mixing waste in a Portland cement matrix. Water-soluble oxidizers in particulate form shall be slowly dissolved in water to deactivate them as the first step in the treatment process. The resulting solution may undergo further treatment (e.g., neutralization and stabilization). Water-soluble concentrated liquid oxidizers such as hydrogen peroxide shall be diluted with water in a controlled manner to make them safer to handle before deactivation with an appropriate chemical agent such as iron filings.	The Application includes descriptions of treatment operations as illustrations, and this description contains a typographic error. DOE/Sandia tailor the specifics of the treatment processes to address the properties of each waste (e.g., adding reactive waste to an appropriate alcohol/water solution). The activities needed to meet this prescriptive condition may lead to operations that are less protective of worker safety (e.g., requiring use of an alcohol/water solution in all cases). Please revise to read: Hydrides, deuterides, and tritides are deactivated by slow addition to an ice water bath. Deactivation of water-reactive metals such as elemental sodium and lithium involves the slow and controlled addition to an appropriate alcohol/water solution. Deactivation of pyrophoric metal powders and particulates may be achieved by mixing waste in a Portland cement matrix. Water-soluble oxidizers in particulate form are typically slowly dissolved in water to deactivate them as the first step in the treatment process. The resulting solution may undergo further treatment (e.g., neutralization and stabilization/solidification). Water-soluble concentrated liquid oxidizers such as hydrogen peroxide are typically diluted with water in a controlled manner to make them safer to handle before deactivation with an appropriate chemical agent such as iron filings.
PA5-33	5.7.1	203	Water-soluble oxidizers in particulate form are typically slowly dissolved in water to deactivate them as the first step in the treatment process. The resulting solution may undergo further treatment (e.g., neutralization and stabilization/solidification). Water-soluble concentrated liquid oxidizers such as hydrogen peroxide are typically diluted with water in a controlled manner to make them safer to handle before deactivation with an appropriate chemical agent such as iron filings.	DOE/Sandia note that thermal batteries may be deactivated by introducing an electrical current to individual batteries; the current induces a chemical reaction that deactivates the reactive material contained in the battery and generates heat. This treatment is best described as chemical deactivation of the reactive component of the battery; it should be included in the discussion of chemical deactivation. Please see the preceding comment; the changes discussed therein have been incorporated into the paragraph shown to the left. Please add the following paragraph after it: The reactive material in thermal batteries may be deactivated through introduction of an electrical current that induces a chemical reaction in the material, deactivating it and generating heat. Batteries are treated one at a time in this manner; this process is not conducted in containers due to the need to dissipate the heat generated during the chemical reaction.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-34	5.7.2	204	After the resin cools and solidifies, the mold is removed, the waste form is turned over and more polyethylene is added to form a final cap on the end.	There are final polyethylene caps on both ends. Please revise to read: After the resin cools and solidifies, the mold is removed, the waste form is turned over and more polyethylene is added to form final caps on the ends.
PA5-35	5.7.2	204	The container shall also include an outer metal shell to provide additional structural strength, if appropriate.	DOE/Sandia note it is not necessary to specify the design features of the containers. The containers are manufactured by a commercial vendor. They are designed to provide treatment for hazardous and mixed wastes that can be macroencapsulated in accordance with 40 CFR 268.45. Please revise to read: The container may also include an outer metal shell to provide additional structural strength, if appropriate.
PA5-36	5.7.3	204	The Permittees shall perform physical treatment (volume reduction) of mixed waste only in Buildings 6920 and 6921. Such treatment includes: *1 (not included in comment)* 2. Removing coating and filler materials (e.g. resins) by dissolution in containers (e.g., trays or pails) in order to facilitate separation of items with hazardous waste constituents from each other or from other items. Dissolution shall take place within the fume hood(s) that are present in each building. *3–5 (not included in comment)*	The Application includes descriptions of treatment operations as illustrations. DOE/Sandia tailor the specifics of the treatment process to address the properties of each waste. It may not be physically feasible to conduct these activities within a fume hood (e.g. large or oddly shaped items). The activities needed to meet this prescriptive condition may lead to operations that are less protective of worker safety Please revise as follows: 2. Removing coating and filler materials (e.g. resins) by dissolution in containers (e.g., trays or pails) in order to facilitate separation of items with hazardous waste constituents from each other or from other items. Whenever possible, dissolution shall take place within the fume hood(s) that are present in each building.
PA5-37	5.7.4	204	**5.7.4 Stabilization**	Both stabilization and solidification may be goals of the treatment process, thus, it is appropriate to mention both. Please revise to read: **5.7.4 Stabilization and Solidification**
PA5-38	5.7.4	205	The primary use of stabilization is to immobilize toxicity characteristic metals but many stabilization agents also eliminate free liquids. Typical waste forms often suitable for stabilization include liquids, sludge, soils, and particulate-type wastes.	As noted in the preceding comment, it is appropriate to mention both stabilization and solidification. Please revise to read: The primary use of stabilization is to immobilize toxicity characteristic metals but many stabilization agents also eliminate free liquids. Typical waste forms often suitable for stabilization and /or solidification include liquids, sludge, soils, and particulate-type wastes.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-39	5.7.4	205	Waste characteristics that are important to the success of the stabilization process for liquids may include volume percent of water, oil, solvents, or other organics, pH and hazardous constituents. Waste characterization data shall be used to determine whether waste is amenable to stabilization, any necessary pretreatment requirements, and the appropriate binding agent. Once the stabilization method is selected, the binding agent is identified based on chemical compatibility with the waste form and hazardous constituents present. Pretreatment may be required to assure compatibility between the waste, the binding agent, and the containers (e.g., neutralization of liquid wastes to an acceptable pH range of 5.0 to 11.0). Once the proper binding agents have been identified, bench-scale testing is performed to determine optimum amounts of each agent.	Please see preceding two comments regarding stabilization and solidification. Additionally, DOE/Sandia note the Application includes descriptions of treatment operations as illustrations; the specifics are tailored to address the properties of each waste, and bench-scale testing may not be appropriate in all cases. Please revise to read: Waste characteristics that are important to the success of the stabilization and/or solidification process for liquids may include volume percent of water, oil, solvents, or other organics, pH and hazardous constituents. Waste characterization data shall be used to determine whether waste is amenable to stabilization or solidification, any necessary pretreatment requirements, and the appropriate binding agent(s). Once the stabilization or solidification method is selected, the binding agent is identified based on chemical compatibility with the waste form and hazardous waste constituents present. Pretreatment may be required to assure compatibility between the waste, the binding agent, and the containers (e.g., neutralization of liquid wastes to an acceptable pH range of 5.0 to 11.0). Once the proper binding agents have been identified, bench-scale testing is performed as needed to determine optimum amounts of each agent.
PA5-40	5.7.5	205	The device is a thick-walled stainless steel vacuum apparatus equipped with an internal heated plate and sensors to measure temperature and pressure. The device was designed to contain a detonation of 25 grams TNT-equivalents of reactive hazardous waste. The inside diameter of the cylinder is 8 inches, and it is 18 inches long. The device is portable and may be used in any of the treatment areas in Building 6920 or 6921. It is shown in Figure 5-8 of this Permit Attachment. Reactive waste is placed on the plate, inserted into the cold unit, the unit is sealed and filled with an inert atmosphere (e.g., nitrogen), and the temperature of the plate is slowly raised until reaching a temperature at which the reactive waste being treated decomposes. The Permittees shall use waste characterization data and/or published chemical information (e.g., "DOE Explosives Safety Manual" [DOE, 2002] or other chemical or engineering handbook) as appropriate to determine the required temperature to decompose the reactive waste.	The plate is more accurately described as a covered tray. Please revise to read: The device is a thick-walled stainless steel vacuum apparatus equipped with an internal heated covered tray and sensors to measure temperature and pressure. The device was designed to contain a detonation of 25 grams TNT-equivalents of reactive hazardous waste. The inside diameter of the cylinder is 8 inches, and it is 18 inches long. The device is portable and may be used in any of the treatment areas in Building 6920 or 6921. It is shown in Figure 5-8 of this Permit Attachment. Reactive waste is placed on the tray, inserted into the cold unit, the unit is sealed and filled with an inert atmosphere (e.g., nitrogen), and the temperature of the tray is slowly raised until reaching a temperature at which the reactive waste being treated decomposes. The Permittees shall use waste characterization data and/or published chemical information (e.g., "DOE Explosives Safety Manual" [DOE, 2002] as revised and updated, or other chemical or engineering handbook) as appropriate to determine the required temperature to decompose the reactive waste.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-41	5.8.1	207	The Permittees shall also verify treatment effectiveness using one or more of the following methods, as appropriate. 1. Visual check for completeness of chemical reaction for solid items of waste that were treated to remove the characteristic of reactivity. *2–6 (not included in comment)*	The list of methods used to verify effectiveness of chemical deactivation is not complete, and the methods for visually checking completeness of chemical reactions for solid items can be further clarified by adding examples. Please revise as follows: The Permittees shall also verify treatment effectiveness using one or more of the following methods, as appropriate. 1. Visual check for completeness of chemical reaction for solid items of waste that were treated to remove the characteristic of reactivity (e.g., color change or structural change). 7. Knowledge of process to determine whether chemical reaction(s) were completed.
PA5-42	5.8.4	207	**5.8.4 Stabilization**	As discussed in Comment PA5-37, stabilization and solidification often occur together and both may be goals of the treatment process. Please revise as follows: **5.8.4 Stabilization and Solidification Effectiveness**

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-101*	Table 5-1	,197		

DRAFT PERMIT TEXT

Note: only the rows of Table 5-1 that are shown are included in this comment.

All modular storage buildings containing waste shall be grounded by a 10-ft-long grounding rod and cable. All buildings at the RMWMU shall be equipped with automatic fire suppression systems, summarized below in Table 5-10 of this Permit Attachment.

TABLE 5-1
Fire Suppression Systems at the Radioactive and Mixed Waste Management Unit

Building Number	Applicable NFPA Standard[a]	Sprinkler Design Occupancy Classification	System Type	Sprinkler Actuation[b]
TP150	17	N/A	Automatic dry chemical	?
TP153	17	N/A	Automatic dry chemical	?

a National Fire Protection Association (NFPA), 2000, 2002
b Sprinklers are either glass bulb (GB) or fusible solder (FS) type, designed to open at temperatures of 155°F or higher.

DOE/SANDIA COMMENT

The modular buildings do not have sprinklers, the grounding rods are previously described, the table number is incorrect, and the NFPA standards are updated periodically. Please revise as follows:

All buildings at the RMWMU shall be equipped with automatic fire suppression systems, summarized below in Table 5-1 of this Permit Attachment.

TABLE 5-1
Fire Suppression Systems at the Radioactive and Mixed Waste Management Unit

Building Number	Applicable NFPA Standard[a]	Sprinkler Design Occupancy Classification	System Type	Sprinkler Actuation[b]
TP150	17	N/A	Automatic dry chemical	N/A
TP153	17	N/A	Automatic dry chemical	N/A

a National Fire Protection Association (NFPA), 2000, 2002. as revised and updated
b Sprinklers are either glass bulb (GB) or fusible solder (FS) type, designed to open at temperatures of 155°F or higher.

PA5-102*	5.5.2	198	The water retention pond it is not intended to provide secondary containment for waste.	Please revise to clarify a typographical error: The water retention pond is not intended to provide secondary containment for waste.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA5-103*	5.8.1 5.8.2 5.8.3 5.8.5 5.8.6	206 - 207	**5.8.1 Chemical Deactivation** **5.8.2 Thermal Deactivation** **5.8.3 Amalgamation** **5.8.5 Macro-encapsulation** **5.8.6 Physical Treatment**	DOE/Sandia note the titles of these sections are not consistent with the titles of corresponding sections in Permit Attachment 6; the sections in Permit Attachment 6 include the word "effectiveness" in each title, which is appropriate since the sections discuss effectiveness. Please revise accordingly.
PA5-104*	Attach-ment 5	after 207	Figures and photographs	The figures and photographs do not reflect the most current information provided in the Application. DOE/Sandia will provide updated figures and photographs under separate cover.

*Comment is more administrative in nature

Enclosure N

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 6

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA6-1	Attach-ment 6	209 - 221	Permit Attachment 6	DOE/Sandia note several instances that mention mixed wastes in requirements that are applicable to both hazardous and mixed wastes (e.g., the second paragraph in Section 6.0). Please revise throughout this Permit Attachment. Please see General Comment G-A for additional discussion.
PA6-2	6.1.1.3	210	Vehicle presence within TA-V shall be limited to waste transporters and other job related vehicles.	DOE/Sandia note this requirement is unnecessarily prescriptive. The Application includes descriptions of vehicle traffic as illustrations of the current configuration. These vehicles are not directly related to hazardous or mixed waste management operations at the AHCU. Please revise to read: Vehicle presence within TA-V is generally limited to waste transporters and other job related vehicles.
PA6-3	6.4	211	Containers used for storage of mixed wastes at the AHCU shall be strong, tight containers such as steel drums, steel boxes, wooden crates, plastic containers, casks, and cylinders meeting the requirements of 40 C.F.R. § 262.30.	DOE/Sandia note that containers that meet the requirements of 40 CFR 262.30 are not required (and in some cases are not appropriate) for on-site management of hazardous or mixed wastes, and the specific containers in this list are not necessary for some wastes (e.g., small items or used PPE). DOE/Sandia note that a container is defined in 40 CFR 260.10 as "any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled." Acceptable containers are compatible with the waste, in good condition, and kept closed. Containers at the Permitted Units meet this definition and are managed in compliance with 40 CFR 264 Subparts I and CC. Furthermore, DOE/Sandia note that DOT hazardous materials transportation regulations in 49CFR 171 through 179 are incorporated by reference into 40 CFR 263 as applicable. 40 CFR 263.10 (b) specifies "These regulations do not apply to on-site transportation of hazardous waste by generators or by owners or operators of permitted hazardous waste management facilities." As discussed in General Comment G-C, the language of the Permit must be identical to the language of the regulations. Also, this requirement is not consistent with the container requirements for the other Permitted Units. Accordingly, please revise to read: The Permittees shall use the container types, labeling, and handling practices as described in Permit Attachment 2 (Design and Operation of the Treatment and Storage Units at the Facility).

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA6-4	6.5	211	The floor of the work area shall be coated with an epoxy-based chemical resistant coating that forms a continuous protective barrier over the concrete floor. The floor of the container storage area shall be covered with a similar coating.	Please see the following comment regarding secondary containment. DOE/Sandia use portable spill pallets and pans at the AHCU to fully satisfy the requirements of 40 CFR 264.175(b)(1-4). The floors are painted, but sealing them with a chemical-resistant epoxy or similar coating is not required for compliance with the regulations or for protection of human health or the environment. Please revise to read: The concrete floors of the work area and container storage area are painted and shall be maintained as needed to be free from cracks and gaps.
PA6-5	6.5	211	Containers holding liquid mixed wastes shall be stored on portable spill pallets and pans covered with grating. These are commercially available units consisting of a tub made of a heavy-duty inert material such as polyethylene or polypropylene with a heavy-duty inert plastic grating cover. The pallets come in various sizes and capacities. They are designed for use with 55-gallon drums or other standard containers. The spill pallets and pans shall be designed to be resistant and impervious to corrosives and other liquids. Containers of liquids shall be stored on the grating. Any liquid wastes released from the containers shall drain through the grating into the tub. Containers with liquids will typically have a capacity of 5 to 30 gallons.	The Application includes numerous descriptions of items such as spill pallets and spill pans that illustrate ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. DOE/Sandia note that these items are available from multiple vendors, and they come in sizes, shapes, and materials for various applications, including but not limited to applications where it is necessary for the units to be impervious to corrosives, solvents, and other liquids. Thus, the description represents a typical design rather than a prescriptive specification because the units are selected for the specific application. The prescriptive requirements regarding design and features of spill pallets are unnecessary because the Permittees are required to provide adequate secondary containment as required by 40 CFR 264.175(b)(1-4). Please revise to read: In each waste management area (except where noted), containers holding liquid hazardous or mixed wastes shall be stored on portable spill pallets or pans. These are commercially available units consisting of a tub made of a heavy-duty inert material such as polyethylene or polypropylene with an inert grating cover. The pallets come in various sizes and capacities designed for use with 55-gallon drums or other standard containers and shall provide adequate secondary containment as required by 40 CFR 264.175(b)(1-4). The containers shall be stored in a stable configuration; the weight shall not exceed the grating capacity.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA6-6	6.5.1	212	The storage capacity of the hot cell shall be limited to a maximum of 225 gallons of waste.	This storage capacity is not consistent with Part A of the Application approved by NMED on June 21, 2002 or with Part A or Part B of the current Application, as discussed in General Comment G-F. Please revise to read: The storage capacity of the hot cell shall be limited to a maximum of 900 gallons (or an equivalent volume) of waste.
PA6-7	6.5.2	212	Treatment methods shall be limited to deactivation, stabilization, macroencapsulation, and physical treatment which shall be conducted in containers. Personnel also repackage wastes for shipment to off-site TSDFs. From time to time, a temporary tent-like room may be erected in the work area north of the hot cell and east of the permanent shield wall to accommodate containerized mixed wastes items. If the mixed waste item or container must be handled remotely, the temporary room shall be built directly against the permanent shield wall to allow the use of the manipulators at the shield wall. Each time the temporary room is erected, package-specific considerations will determine details of the design; however, basic construction will consist of polyvinyl chloride or metal framing, clear or translucent plastic roof and walls, and plastic doors. The temporary room shall operate at a slight negative pressure. A 6-ft-wide walk-in fume hood is located in the work area northeast of the Auxiliary Hot Cell. It can accommodate two 55-gallon drums placed side by side. Unit personnel treat and repackage mixed wastes in the fume hood. Treatment shall only be conducted in containers. The fume hood is included in the maximum storage capacity for the overall work area.	The storage capacity and treatment description for the work area is not consistent with Part A of the Application approved by NMED on June 21, 2002 or with Part A or Part B of the current Application, as discussed in General Comment G-F. As noted in Section 6.11.4 of this Permit Attachment and discussed in Comment PA6-22, stabilization and solidification often occur simultaneously and both may be goals of the treatment process; thus, it is appropriate to mention both. DOE/Sandia also note physical treatment is not necessarily limited to items that are small enough to fit in containers and chemical deactivation may not take place in containers; moreover, it is not necessary to specify in this section whether any of the treatment occurs in containers, as that is specified in later sections of this Permit Attachment. Accordingly, please revise to read: Treatment methods shall be limited to deactivation, stabilization and solidification, macroencapsulation, and physical treatment. The storage capacity of the work area shall be limited to 1,100 gallons. Personnel also repackage wastes for shipment to off-site TSDFs. From time to time, a temporary tent-like room may be erected in the work area north of the hot cell and east of the permanent shield wall to accommodate large items and containers of mixed wastes. If the mixed waste item or container must be handled remotely, the temporary room shall be built directly against the permanent shield wall to allow the use of the manipulators at the shield wall. Each time the temporary room is erected, package-specific considerations will determine details of the design; however, basic construction will consist of polyvinyl chloride or metal framing, clear or translucent plastic roof and walls, and plastic doors. The temporary room shall operate at a slight negative pressure. A 6-ft-wide walk-in fume hood is located in the work area northeast of the Auxiliary Hot Cell. It can accommodate two 55-gallon drums placed side by side or individual items. Unit personnel treat and repackage hazardous and mixed wastes in the fume hood. The fume hood is included in the maximum storage capacity for the overall work area.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA6-8	6.5.3	212	The silos are used only for storage of mixed wastes that exhibit high external radiation dose rates that are hazards to personnel. The maximum waste storage capacity of the silos shall be 364 gallons.	The storage capacity of the silos is not consistent with Part A of the Application approved by NMED on June 21, 2002 or with Part A or Part B of the current Application, as discussed in General Comment G-F. Accordingly, please revise to read: The silos can be used for storage of mixed wastes that exhibit high external radiation dose rates that are hazardous to personnel. The maximum waste storage capacity of the silos shall be 1,456 gallons.
PA6-9	6.6	212	Containers of mixed wastes may be stored in the high bay, south and west of the hot cell. The floor of the storage area shall be coated with an epoxy-based chemical resistant coating that forms a continuous protective barrier over the concrete floor.	The storage capacity of the high bay is not consistent with Part A of the Application approved by NMED on June 21, 2002 or with Part A or Part B of the current Application, as discussed in General Comment G-F. Please see Comment PA6-1 and General Comment G-A regarding limitations on management of hazardous and mixed wastes. Please see Comment PA6-5 regarding use of portable spill pallets or pans to fully satisfy the requirements of 40 CFR 264.175(b)(1-4). The floor is painted, but sealing it with a chemical-resistant epoxy is not required for compliance with the regulations or for protection of human health or the environment. Accordingly, please revise to read: Containers of hazardous and mixed wastes may be stored in the high bay, south and west of the hot cell. The maximum waste storage capacity of the storage area shall be limited to 3,520 gallons. The floor of the storage area shall be maintained as needed to be free from cracks and gaps.
PA6-10	6.6.1	212	Containers used for waste storage at the AHCU shall be strong, tight containers such as steel drums, steel boxes, wooden crates, plastic containers, casks, and cylinders meeting the requirements of 40 C.F.R. § 262.30.	DOE/Sandia note that hazardous and mixed wastes are subject to the requirements of this Permit and should be specified in this section of the draft Permit. Additionally, as discussed in Comment PA6-3, containers at the Permitted Units meet the definition in 40 CFR 260.10 and are managed in compliance with 40 CFR 264 Subparts I and CC. Please delete this sentence.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA6-11	6.6.4	213	The fume hood in the work area shall be equipped with a negative pressure ventilation system. In addition, a flexible exhaust hose can be attached to the same system, allowing for localized negative pressure ventilation from the work area. The airflow from the ventilation system shall pass through a two-stage high-efficiency particulate air filter train before being released to the environment through an exhaust stack. The filters shall be designed and operated to remove particulates entrained in the airflow.	DOE/Sandia note the enclosures and exhaust systems are designed and operated to address radiological constituents. In addition, they serve to control particulate hazardous waste constituents. Prescriptive requirements in the draft Permit regarding the enclosures and exhaust systems may limit DOE/Sandia's ability to protect Unit workers from physical or radiological hazards associated with repackaging or treating mixed wastes. Please revise to read: The fume hood in the work area is equipped with a negative pressure ventilation system. In addition, a flexible exhaust hose can be attached to the same system, allowing for localized negative pressure ventilation from the work area. The airflow from the ventilation system passes through a two-stage high-efficiency particulate air filter train before being released to the environment through an exhaust stack. The filters remove particulates entrained in the airflow.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA6-12	6.8	214	Sources of ignition that may be present at the AHCU include welding activities, open flames, hot surfaces, frictional heat, radiant heat, sparks, and engines. The Permittees shall employ among others the following precautions and practices: all containers of mixed wastes shall be kept closed unless waste is being added, removed, inspected, sampled, repackaged, or treated. Additional AHCU-specific features, potential ignition and reaction sources, precautions, and practices shall include, but not be limited to the following. *1 (not included in comment)* 2. Water-reactive wastes shall not be stored at the Unit. They may be managed only temporarily (less than one day) for treatment, packaging, and staging for shipment. If water-reactive wastes are present, they shall be isolated from water and their location shall be identified through the use of signs or labels until their removal from the Unit. *3 (not included in comment)* 4. Wastes may be mixed together on a limited basis during treatment and repackaging operations at the AHCU. Ignitable and reactive wastes shall be treated in containers, if treated, or mixed on a case-by-case basis. The Permittees shall plan each such operation carefully to identify the hazards and potential consequences. The Permittees shall use waste characterization data or published chemical information (e.g., "NIOSH Pocket Guide to Chemical Hazards" [DHHS, 1994], or other chemical or engineering handbook), as appropriate, for each waste in the planning process. The Permittees shall conduct the operations according to the plan in order to control the hazards and prevent uncontrolled reactions. *5 (not included in comment)* 40 C.F.R. §§ 264.17, 264.176, and 264.177; 40 C.F.R. §§ 270.14(b)(9) and 270.15(c) and (d)	DOE/Sandia note these requirements are unnecessarily prescriptive and are not consistent with the information provided in the Application. With respect to the location of ignitable and water-reactive wastes, treatment, repackaging, and staging operations may take more than one day to complete. Ignitable or reactive wastes may be stored in any of the areas as needed to utilize particular features (e.g., remote handling). It is not always feasible to label containers during treatment operations. DOE/Sandia use the most current edition of the NIOSH Pocket Guide to Chemical Hazards; the Permit should reflect that it is updated periodically. Additionally, 40 CFR 270.14(b)(9) addresses contents of permit applications and is not directly relevant to the requirements of 40 CFR 264 that Permittees are required to meet. Please delete the regulatory citation and revise as follows: Sources of ignition that may be present at the AHCU include welding activities, open flames, hot surfaces, frictional heat, radiant heat, sparks, and engines. The Permittees shall employ among others the following precautions and practices: all containers of hazardous and mixed wastes shall be kept closed unless waste is being added, removed, inspected, sampled, repackaged, or treated. Additional AHCU-specific features, potential ignition and reaction sources, precautions, and practices shall include, but not be limited to the following. 2. Water-reactive wastes shall not be stored at the Unit, except on a temporary basis during treatment, packaging, and staging for shipment. If water-reactive wastes are present, they shall be isolated from water and their location shall be identified through the use of signs or labels until their removal from the Unit. 4. Wastes may be mixed together on a limited basis during treatment and repackaging operations at the AHCU. Ignitable and reactive wastes shall be treated in containers or mixed on a case-by-case basis. The Permittees shall plan each such operation carefully to identify the hazards and potential consequences. The Permittees shall use waste characterization data or published chemical information (e.g., "NIOSH Pocket Guide to Chemical Hazards" [DHHS, 1994] as revised and updated, or other chemical or engineering handbook), as appropriate, for each waste in the planning process. The Permittees shall conduct the operations according to the plan in order to control the hazards and prevent uncontrolled reactions.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA6-13	6.9.3	214	Drums and other containers of mixed wastes shall be strapped together on a pallet before being loaded onto vehicles. Containers shall be transported within the Unit only using drum dollies or pallet jacks. [40 C.F.R. § 270.14(b)(8)(i)]	DOE/Sandia note the Application includes descriptions of typical waste handling equipment and operations as illustrations of ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. The equipment and detailed operations are typical rather than prescriptive because they are continually adjusted as needed for the specific hazardous and mixed wastes being handled at any time in the Permitted Units. Including prescriptive handling requirements for strapping containers together is redundant, and the requirement to use specific fastening methods may lead to operations that are less protective of worker safety (e.g., containers that are strapped together may block the forklift driver's view and be more cumbersome than using a special forklift attachment to transport two drums at a time). Please delete the regulatory citation as discussed in Comment PA6-12 and revise to read: Containers of waste shall be handled in a manner to prevent shifting or falling. Containers are typically transported within the Unit using drum dollies or pallet jacks, as appropriate.
PA6-14	6.9.3	215	The Permittees shall perform loading and unloading activities just inside the rollup door on the north side of Building 6597 (See Figure 6-6 in this Permit Attachment).	DOE/Sandia note it may be necessary to use the rollup door on the south side of the high bay if the AHCU is occupied by personnel and the mixed waste presents a hazard to worker safety. This additional loading/ unloading area is within the waste management area identified in the Part A Application approved by NMED on June 21, 2002. Please revise to read: The Permittees shall perform loading and unloading activities just inside the rollup door on the north or south side of Building 6597 (See Figure 6-6 in this Permit Attachment).

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA6-15	6.9.6	216	Backup power to the chain hoist shall be required only during the periods that the bridge crane is being used for an in-air transfer of wastes.	DOE/Sandia note that mitigating the effects of power outages during an in-air transfer of mixed wastes does not always require that the waste be lowered. The capability for lowering the waste is needed only for mixed wastes that exhibit high external radiation dose rates; this will serve to protect Unit workers. Please revise to read: Backup power to the chain hoist shall be required only during the periods that the bridge crane is being used for an in-air transfer of wastes/material that exhibit high external radiation dose rates.
PA6-16	6.10	217	Treatment methods for mixed wastes that will be treated in containers at the AHCU are as follows. *1 (not included in comment)* 2. Stabilization (performed in the work area, including the fume hood); *3–4 (not included in comment)*	DOE/Sandia note stabilization and solidification may both result from a treatment process and should both be mentioned. Please revise as follows: Treatment methods for hazardous and mixed wastes that will be treated in containers at the AHCU are as follows. 2. Stabilization and/or solidification (performed in the work area, including the fume hood);
PA6-17	6.10	217	Because treatment at the AHCU will be conducted in containers, it is subject to the miscellaneous unit and environmental performance standards of 40 C.F.R. Part 264, Subpart X.	This section of the draft Permit is not consistent with the information provided in the Application or with other requirements in the draft Permit. DOE/Sandia note the hot cell is similar to the fume hood: it serves to protect workers and the environment during waste management activities. The hot cell is not a waste management unit itself. None of the equipment or waste management activities at the AHCU is subject to the standards in 40 CFR 264 Subpart X. Please delete this sentence.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA6-18	6.11	217	All of the treatment at the AHCU will be batch treatment performed on single containers of waste (each container is one 55-gallon drum or less, or a single item that may be larger than a drum). Each type of treatment shall be performed on batches of 440 pounds of waste or less, with the exception of physical treatment, which may occasionally involve very large, heavy items. Liquid wastes shall be treated in batches of 55 gallons or less.	DOE/Sandia note it is not necessary to specify the maximum weight if the maximum quantity and the process are specified, as these are sufficient to guide and control operations, and to protect human health and the environment. Additionally, not all treatment occurs in containers. Please revise to read: All of the treatment at the AHCU is batch treatment; it is typically performed on single packages of waste (each package is one 55-gallon drum or less, or a single item that may be larger than a drum). In the case of macroencapsulation, several containers or large items may be treated in a single batch. Treatment shall be conducted in containers unless the physical properties of the waste and the nature of the treatment process require treatment without containers (e.g., chemical deactivation of thermal batteries and some physical treatment). Liquid wastes shall be treated in batches; the Permittees shall ensure containment when liquid wastes are not treated in containers.
PA6-19	6.11.1	218	Hydrides, deuterides, and tritides shall be deactivated by slow addition to an ice water bath. Deactivation of water-reactive metals such as elemental sodium and lithium involves the slow and controlled addition of an appropriate alcohol/water solution. Alcohol/water addition shall be maintained until the water reactive potential of the waste has been eliminated. Deactivation of pyrophoric metal powders and particulates may be achieved by mixing waste in a Portland cement matrix. Water-soluble oxidizers in particulate form shall be slowly dissolved in water to deactivate them as the first step in the treatment process. The resulting solution may undergo further treatment (e.g., neutralization and stabilization). Water-soluble concentrated liquid oxidizers such as hydrogen peroxide shall be diluted with water in a controlled manner to make them safer to handle before deactivation with an appropriate chemical agent such as iron filings.	The Application includes descriptions of treatment operations as illustrations, and this description contains a typographic error. DOE/Sandia tailor the specifics of the treatment processes to address the properties of each waste (e.g., adding reactive waste to an appropriate alcohol/water solution). The activities needed to meet this prescriptive condition may lead to operations that are less protective of worker safety (e.g., requiring use of an alcohol/water solution in all cases). Please revise to read: Hydrides, deuterides, and tritides shall be deactivated by slow addition to an ice water bath. Deactivation of water-reactive metals such as elemental sodium and lithium involves the slow and controlled addition to an appropriate alcohol/water solution. Deactivation of pyrophoric metal powders and particulates may be achieved by mixing waste in a Portland cement matrix. Water-soluble oxidizers in particulate form are typically slowly dissolved in water to deactivate them as the first step in the treatment process. The resulting solution may undergo further treatment (e.g., neutralization and stabilization). Water-soluble concentrated liquid oxidizers such as hydrogen peroxide are typically diluted with water in a controlled manner to make them safer to handle before deactivation with an appropriate chemical agent such as iron filings.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA6-20	6.11.1	218	Hydrides, deuterides, and tritides shall be deactivated by slow addition to an ice water bath. Deactivation of water-reactive metals such as elemental sodium and lithium involves the slow and controlled addition to an appropriate alcohol/water solution. Deactivation of pyrophoric metal powders and particulates may be achieved by mixing waste in a Portland cement matrix. Water-soluble oxidizers in particulate form are typically slowly dissolved in water to deactivate them as the first step in the treatment process. The resulting solution may undergo further treatment (e.g., neutralization and stabilization). Water-soluble concentrated liquid oxidizers such as hydrogen peroxide are typically diluted with water in a controlled manner to make them safer to handle before deactivation with an appropriate chemical agent such as iron filings.	DOE/Sandia note that thermal batteries may be deactivated by introducing an electrical current to individual batteries; the current induces a chemical reaction that deactivates the reactive material contained in the battery and generates heat. This treatment is best described as chemical deactivation of the reactive component of the battery; it should be included in the discussion of chemical deactivation. Please see the preceding comment; the changes discussed therein have been incorporated into the paragraph shown to the left. Please add the following paragraph after it: The reactive material in thermal batteries may be deactivated through introduction of an electrical current that induces a chemical reaction in the material, deactivating it and generating heat. Batteries are treated one at a time in this manner; this process is not conducted in containers due to the need to dissipate the heat generated during the chemical reaction.
PA6-21	6.11.2	219	The container shall also include an outer metal shell to provide additional structural strength, if appropriate.	DOE/Sandia note it is not necessary to specify the design features of the containers. The containers are manufactured by a commercial vendor. They are designed to provide treatment for hazardous and mixed wastes that can be macroencapsulated in accordance with 40 CFR 268.45. Please revise to read: The container may also include an outer metal shell to provide additional structural strength, if appropriate.
PA6-22	6.11.4	220	**6.11.4 Stabilization** The Permittees shall perform stabilization in containers only in the Work Area, (including the fume hood) which is located at the AHCU. Stabilization is the process of binding hazardous waste metals so that the metals become chemically part of the matrix or are physically bound within the matrix. The primary use of stabilization is to immobilize toxicity characteristic metals but many stabilization agents also eliminate free liquids. Typical waste forms often suitable for stabilization include liquids, sludge, soils, and particulate-type wastes.	Both stabilization and solidification may be goals of the treatment process, thus, it is appropriate to mention both. Please revise to read: **6.11.4 Stabilization and Solidification** The Permittees shall perform stabilization in containers only in the Work Area, (including the fume hood) which is located at the AHCU. Stabilization is the process of binding hazardous waste metals so that the metals become chemically part of the matrix or are physically bound within the matrix. The primary use of stabilization is to immobilize toxicity characteristic metals but many stabilization agents also eliminate free liquids. Typical waste forms often suitable for stabilization and /or solidification include liquids, sludge, soils, and particulate-type wastes.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA6-23	6.11.4	220	Waste characteristics that are important to the success of the stabilization process for liquids may include volume percent of water, oil, solvents, or other organics; pH; and hazardous waste constituents. Waste characterization data shall be used to determine whether the waste is amenable to stabilization, any necessary pre-treatment requirements, and the appropriate binding agent. Once the stabilization method is selected, the binding agent shall be identified based on chemical compatibility with the waste form and the hazardous constituents present. Pre-treatment may be required to assure compatibility between the waste, the binding agent, and the container (e.g., neutralization of liquid wastes to an acceptable pH range of 5.0 to 11.0). Once the proper binding agents have been identified, bench-scale testing shall be performed to determine the optimum amounts of each agent.	Please see preceding comment regarding stabilization and solidification. Additionally, DOE/Sandia note the Application includes descriptions of treatment operations as illustrations; the specifics are tailored to address the properties of each waste, and bench-scale testing may not be appropriate in all cases. Please revise to read: Waste characteristics that are important to the success of the stabilization and/or solidification process for liquids may include volume percent of water, oil, solvents, or other organics, pH and hazardous constituents. Waste characterization data shall be used to determine whether waste is amenable to stabilization or solidification, any necessary pretreatment requirements, and the appropriate binding agent(s). Once the stabilization or solidification method is selected, the binding agent is identified based on chemical compatibility with the waste form and hazardous constituents present. Pretreatment may be required to assure compatibility between the waste, the binding agent, and the containers (e.g., neutralization of liquid wastes to an acceptable pH range of 5.0 to 11.0). Once the proper binding agents have been identified, bench-scale testing is performed as needed to determine optimum amounts of each agent.
PA6-24	6.12.1	221	The Permittees shall also verify treatment effectiveness using one or more of the following methods, as appropriate. 1. Visual check for completeness of chemical reaction for solid items of waste that were treated to remove the characteristic of reactivity. *2–6 (not included in comment)*	The list of methods used to verify effectiveness of chemical deactivation is not complete, and the methods for visually checking completeness of chemical reactions for solid items can be further clarified by adding examples. Please revise as follows: The Permittees shall also verify treatment effectiveness using one or more of the following methods, as appropriate. 1. Visual check for completeness of chemical reaction for solid items of waste that were treated to remove the characteristic of reactivity (e.g., color change or structural change). 7. Knowledge of process to determine whether chemical reaction(s) were completed.
PA6-25	6.12.2	221	**6.12.2 Stabilization Effectiveness**	As discussed in Comment PA6-22, stabilization and solidification often occur together and both may be goals of the treatment process. Please revise as follows: **6.12.2 Stabilization and Solidification Effectiveness**

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA6-101*	6.0	209	Figures specific to the AHCU units are provided at the end of this Attachment and include the following. 1. Figures 1-1 and 1-2 of Attachment 1: The location and topography of the AHCU 2. Figure 1-8: Surrounding land use and the wind rose diagrams 3. Figure 6-1: The location of the AHCU at TA-V 4. Figure 6-2: AHCU waste management areas 5. Figure 6-3: Traffic routes and access controls at the AHCU 6. Figure 6-4: Fire hydrant location 7. Figure 6-5: Loading and unloading areas 8. Figure 6-6: Drainage control features (e.g., run-on/run-off, drainage barriers)	Wind roses are shown in Figure 1-2 rather than Figure 1-8 in Permit Attachment 1. Drainage control features are shown in Figure 6-4, fire hydrant locations are shown in Figure 6-5, and loading and unloading areas are shown in Figure 6-6. Please revise accordingly.
PA6-102*	6.9.1 Table 6.1	215	Note: only the footnote shown below is included in this comment **TABLE 6.1** **Fire Suppression System at the Auxiliary Hot Cell Unit** a National Fire Protection Association (NFPA), 2002	This reference has been revised and updated since the Permittees submitted the Application; the Permit should reflect that. Please revise the footnote as follows: a National Fire Protection Association (NFPA), 2002, as revised and updated
PA6-103*	Attach-ment 6	after 221	Figures and photographs	The figures and photographs do not reflect the most current information provided in the Application. DOE/Sandia will provide updated figures and photographs under separate cover.
PA6-104*	Attach-ment 6	209 - 222	Acronym	The following acronym appears in the text of this Permit Attachment but is not defined in the list of acronyms at the beginning of the draft Permit. Please include it in the Acronym List: CABQ City of Albuquerque

*Comment is more administrative in nature

Enclosure 0

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 7

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA7-1	Attach-ment 7	223-230	Permit Attachment 7	DOE/Sandia note several instances that mention mixed wastes in requirements that are applicable to both hazardous and mixed wastes (e.g., the second paragraph in Section 7.0). Please revise throughout this Permit Attachment. Please see General Comment G-A for additional discussion.
PA7-2	7.0	223	The Manzano Storage Bunkers (MSB) comprise five Units, each with approximately 1600 to 2100 square feet of space, and used for storage of mixed wastes in containers.	The information for Type C bunkers (Bunker 37118) in the Application was updated in March 2007 to correct typographical errors; the maximum size is 2,400 square feet. Also, the wastes may include large pieces of equipment and other self-contained items, as discussed in Comment PA2-17. To clarify, please revise to read: The Manzano Storage Bunkers (MSB) comprise five Units, each with approximately 1,600 to 2,400 square feet of space, and used for storage of mixed wastes in containers as specified in Permit Attachment 2.
PA7-3	7.2.1	224	The bunker is covered by at least 2 ft of earthen fill over a 6-in. thick roof of waterproofed concrete. The soil surface above and around each bunker is sloped for water to drain away from the bunker. Access to the waste management area of each bunker is through two sets of double doors that are 9 ft high and 9 ft wide. One set is at the entrance to the access tunnel, and the other set is at the entrance to the main chamber. Based upon the available floor space (2,100 square feet [ft^2]) in Bunker 37034, the maximum storage capacity shall be limited to 6,270 gallons of mixed waste.	The roof is not waterproofed, as the concrete is sufficiently impervious to water and the soil slope serves to direct water away. DOE/Sandia note the storage capacity for Bunker 37034 in the draft Permit is not consistent with the current permitted capacity as specified in Part A of the Application approved by NMED on June 21, 2002. It is also not consistent with Part A or Part B of the current Application, as discussed in General Comment G-F. Please revise to read: The bunker is covered by at least 2 ft of earthen fill over a 6-in. thick concrete roof. The soil surface above and around each bunker is sloped for water to drain away from the bunker. Access to the waste management area of the bunker is through two sets of double doors that are 9 ft high and 9 ft wide. One set is at the entrance to the access tunnel, and the other set is at the entrance to the main chamber. Based upon the available floor space (2,100 square feet [ft^2]) in Bunker 37034, the maximum storage capacity shall be limited to 25,080 gallons.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA7-4	7.2.2	224	Each bunker is covered by at least 2 ft of earthen fill over a 6-in. thick roof of waterproofed concrete. The soil surface over and around each bunker is sloped for water to drain away from the bunker. Based upon the available floor space (approximately 2,100 ft2) in Bunker 37118, it can hold a maximum of 8,800 gallons of mixed waste.	The roof is not waterproofed, as the concrete is sufficiently impervious to water and the soil slope serves to direct water away. The information for Type C bunkers (Bunker 37118) in the Application was updated in March 2007 to correct typographical errors. DOE/Sandia note the storage capacity for Bunker 37118 in the draft Permit is not consistent with the current permitted capacity as specified in Part A of the Application approved by NMED on June 21, 2002 or with Part A or Part B of the current Application, as discussed in General Comment G-F. Please revise to read: Each bunker is covered by at least 2 ft of earthen fill over a 6-in. thick concrete roof. The soil surface over and around each bunker is sloped for water to drain away from the bunker. Based upon the available floor space (approximately 2,400 ft^2) in Bunker 37118, it can hold a maximum of 35,200 gallons.
PA7-5	7.2.3	225	Each bunker is covered by at least 2 ft of earthen fill over a 6-in. thick roof of waterproofed concrete. The soil surface over and around each bunker is sloped so that water drains away from each bunker. Based on the available floor space (1,600 ft2) in each of the Type D bunkers, the maximum storage capacity of each bunker shall be limited to 4,620 gallons of mixed wastes.	The roofs are not waterproofed, as the concrete is sufficiently impervious to water and the soil slope serves to direct water away from each bunker. DOE/Sandia note the storage capacity for Type D bunkers (Bunkers 37045, 37055, and 37057) in the draft Permit is not consistent with the current permitted capacity as specified in Part A of the Application approved by NMED on June 21, 2002 or with Part A or Part B of the current Application, as discussed in General Comment G-F. Please revise to read: Each bunker is covered by at least 2 ft of earthen fill over a 6-in. thick concrete roof. The soil surface over and around each bunker is sloped so that water drains away from each bunker. Based on the available floor space (1,600 ft^2) in each of the Type D bunkers, the maximum storage capacity of each bunker shall be limited to 18,480 gallons.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA7-6	7.3.2	225	Traffic volumes on Wyoming and Eubank Boulevards are generally light to moderate. Traffic volumes on Pennsylvania Street – the two-lane paved road to the Manzano Base (where the MSB is located) -- turns southeastward off Pennsylvania Street at a point just over 5 miles south of the Wyoming Entrance gate.	This description is not applicable to the MSB and does not reflect the information included in the Application. Please revise to read: Traffic volumes on Wyoming and Eubank Boulevards are generally light to moderate. Traffic volumes on Pennsylvania Avenue are generally light. Vehicle types are generally cars, light- and medium-duty trucks, and vans. Flatbed trucks or trailers also use primary traffic routes to transport waste containers.
PA7-7	7.3.3	225	A stop sign shall be located approximately 50 ft west of the Manzano Base entrance gate. Traffic control signals within Manzano Base shall include stop signs, yield signs, and posted speed limits.	DOE/Sandia note the Application includes descriptions of traffic control signs and signals as illustrations of the configuration at the time the Application was submitted. These are not directly related to hazardous or mixed waste management operations at the MSB. Please revise to read: Traffic control signals within Manzano Base include stop signs, yield signs, and posted speed limits as appropriate.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA7-8	7.5	226	In each MSB bunker, containers holding liquid mixed wastes shall be stored on portable spill pallets and pans. These are commercially available units consisting of a tub made of a heavy-duty inert material such as polyethylene or polypropylene with a heavy-duty inert plastic grating cover. The pallets come in various sizes and capacities. They are designed for use with 55-gallon drums or other standard containers, and shall meet the requirements of 40 C.F.R. § 270.15(a-b) and 40 C.F.R. § 264.175(b)(1-3). The pallets and pans shall be designed to be resistant and impervious to corrosives and other liquids. Containers of liquids (typically 5- to 30-gallon capacity) shall be stored on the grating. Any liquids released from the containers drain through the grating into a tub. Any liquids that are spilled shall be immediately cleaned upon detection.	The Application includes numerous descriptions of items such as spill pallets and spill pans that illustrate ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. DOE/Sandia note that these items are available from multiple vendors, and they come in sizes, shapes, and materials for various applications, including but not limited to applications where it is necessary for the units to be impervious to corrosives, solvents, and other liquids. Thus, the description represents a typical design rather than a prescriptive specification because the units are selected for the specific application. The prescriptive requirements regarding design and features of spill pallets are unnecessary because the Permittees are required to provide adequate secondary containment as required by 40 CFR 264.175(b)(1-3). Additionally, DOE/Sandia note that the requirement to immediately clean liquids upon detection is not consistent with the information provided in the Application and may lead to operations that are less protective of worker safety (e.g., unnecessary exposure to chemical or radiological hazards). Please revise to read: In each MSB bunker, containers holding liquid hazardous or mixed wastes shall be stored on portable spill pallets or pans. These are commercially available units consisting of a tub made of a heavy-duty inert material such as polyethylene or polypropylene with an inert grating cover. The pallets come in various sizes and capacities designed for use with 55-gallon drums or other standard containers. The containers shall be stored in a stable configuration; the weight shall not exceed the grating capacity. The Permittees shall take immediate action to evaluate and remove accumulated liquids in the spill pallets upon discovery.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA7-9	7.6	226	Waste handling personnel shall work in pairs and maintain contact with each other. All personnel shall be trained to check that during each visit to the MSB everyone has signed out and exited the bunker before turning off the lights and closing and locking the doors.	DOE/Sandia note 40 CFR 264.34 does not require that personnel have access to other personnel at all times, and as this is discussed in Section 7.6.3.2 of this Permit Attachment, it is not necessary to detail it in this introduction to Section 7.6. Rather, the requirement is for "immediate access to an internal alarm or emergency communications device, either directly or through visual or voice contact with another employee", "whenever hazardous waste is being poured, mixed, spread, or otherwise handled". Working in pairs is an illustration of means of communication that are typically available. DOE/Sandia note that requiring two personnel to be present at all times is not necessary (e.g., during inspections when wastes are not being handled). Specific requirements (such as turning out the lights) that are appropriate for commonly encountered situations are best addressed through the training program in Permit Attachment 14. The training materials are available in the Operating Record for NMED review. Please revise to read: Only personnel trained in accordance with the Training Plan in Permit Attachment 14 shall be allowed to handle waste at the MSB.
PA7-10	7.6.2	227	Ignitable and reactive wastes shall be segregated from other wastes within each bunker and each container shall be labeled. The Permittees shall place a portable sign near the wastes to identify them as ignitable and/or reactive. Although water-reactive wastes will not be routinely stored in the bunkers, if present, they shall be segregated from other wastes and their location identified by the Permittees clearly by posting a sign.	Use of a portable sign is not required to identify the containers of wastes as ignitable and/or reactive in 40 CFR 264.17(a); it is also redundant with the labels on individual containers. Use of signs is included in the Application as an illustration of ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. Please revise to read: Ignitable and reactive wastes shall be segregated from other wastes within each bunker and each container shall be prominently labeled or identified with a portable sign. The Permittees shall protect these wastes from sources of ignition or reaction. Although water-reactive wastes will not be routinely stored in the bunkers, if present, they shall be segregated from other wastes and similarly protected.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA7-11	7.6.3.1	227	The KAFB fire department shall provide tanker trucks for fire-fighting services. Information on other required equipment, including testing and maintenance of the equipment located at each of the MSB bunkers is provided in the Contingency Plan under Permit Attachment 12. [40 C.F.R. § 264.32].	DOE/Sandia note 40 CFR 264.32(d) includes several types of fire-fighting systems. The Application includes descriptions of fire-fighting equipment as illustrations of the emergency response resources currently available and the agreements currently in place. All emergency response resources are more completely described in the Contingency Plan in Permit Attachment 12. Please revise to read: Information about fire-fighting services and other required equipment, including testing and maintenance of the equipment located at each of the MSB bunkers, is provided in the Contingency Plan in Permit Attachment 12. [40 C.F.R. § 264.32]
PA7-12	7.6.3.2	227	In addition to the communications and alarm systems at the MSB (described in Permit Attachment 11), personnel working at the MSB shall carry pagers, two-way radios, or cellular telephones so that they can contact or be contacted by on-site and Facility emergency support personnel at all times. In addition, in order to enhance safety, personnel shall work in pairs and maintain contact when managing wastes. Personnel at the MSB shall maintain contact with the Emergency Coordinator and Radioactive and Mixed Waste Management Unit (RMWMU) personnel through 2-way radios or cellular phones. [40 C.F.R. § 264.34]	DOE/Sandia note 40 CFR 264.34 does not require that personnel have access to other personnel and multiple means of communication at all times. Rather, the requirement is for "immediate access to an internal alarm or emergency communications device, either directly or through visual or voice contact with another employee", "whenever hazardous waste is being poured, mixed, spread, or otherwise handled". Two-way radios, pagers, and cellular telephones are illustrations of means of communication that are typically available. DOE/Sandia note that requiring all personnel to use particular communications equipment at all times is not necessary. Please revise to read: If no communications or alarm system is immediately available, on-site personnel working alone shall carry two-way radios or cellular telephones so that they can contact emergency personnel. Alternatively, waste management personnel shall work in pairs and maintain visual or voice contact, and one member of the pair shall have access to two-way radios, cellular telephones, or the communications and alarm systems described in Permit Attachments 5, 7, and 12 [40 C.F.R. § 264.34].

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA7-13	7.6.4.1	228	Containers shall be strapped together and tied down on a pallet before being moved. Containers may be moved with a forklift from the storage areas through the access tunnels to the loading areas at each bunker. Containers may be moved with a drum dolly or hand truck within each bunker. Personnel shall work in pairs and maintain contact with one another. Because each bunker Unit is not routinely occupied, personnel shall be trained to be particularly aware of weather conditions and other conditions that could adversely affect safe operations, and to exercise caution in operating equipment such as forklifts. [40 C.F.R. § 270.14(b)(8)(i)].	DOE/Sandia note the Application includes descriptions of typical waste handling equipment and operations as illustrations of ways in which DOE/Sandia meet the requirements of 40 CFR 264 and protect human health and the environment. The equipment and detailed operations are typical rather than prescriptive because they are continually adjusted as needed for the specific hazardous and mixed wastes being handled at any time in the Permitted Units. Including prescriptive handling requirements for fastening containers to lifts is redundant, and the requirement to use specific fastening methods or waste handling equipment may lead to operations that are less protective of worker safety (e.g., containers that are strapped together may block the forklift driver's view and be more cumbersome than using a special forklift attachment to transport two drums at a time). Additionally, 40 CFR 270.14(b)(8)(i) addresses contents of permit applications and is not directly relevant to the requirements of 40 CFR 264 that Permittees are required to meet. Please delete the regulatory citation. As discussed in Comment PA7-9, specific requirements (such as awareness of weather conditions) that are appropriate for commonly encountered situations are best addressed through the training program in Permit Attachment 14. The training materials are available in the Operating Record for NMED review. Please revise to read: Vehicles, forklifts, drum dollies, pallet jacks, and other tools used for the transport and management of wastes shall be used as appropriate during loading and unloading operations. Small containers may be loaded or unloaded manually from waste-transport vehicles. A forklift, hydraulic lift, or other mechanical device may be used as needed to load or unload larger containers. In all cases, containers of waste shall be handled in a manner to prevent shifting or falling. Waste-handling equipment shall be maintained and operated in accordance with manufacturers' guidance. Only personnel trained in accordance with the Training Plan in Permit Attachment 14 shall be allowed to handle waste at the MSB.
PA7-14	7.6.4.2	228	Waterproof paint protects the interior roof and sidewalls of each bunker.	The concrete roof and walls are not waterproofed, as the concrete is sufficiently impervious and the soil slope serves to direct water away from each bunker. Please revise to read: The concrete provides a barrier to moisture.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA7-15	7.6.4.3	228	The depth to groundwater at the MSB is estimated by the Permittees to be over 400 feet. The spill containment features located at each MSB bunker shall be designed to prevent contamination of surface water and groundwater. Spills shall to be contained within the bunkers and within secondary containment systems, and shall be cleaned up promptly. Spills occurring outside the buildings shall be contained and cleaned up promptly so as not to contaminate soil, surface water, or groundwater. [40 C.F.R. § 270.14(b)(8)(iii)].	DOE/Sandia note this requirement is not consistent with conditions in the Permit Parts or Attachments applicable to the HWMU, TTU, and AHCU. Additionally, please delete the regulatory citation as discussed in Comment PA7-13 and revise to read: The Permittees shall conduct waste management activities at the MSB in accordance with this Permit.
PA7-16	7.6.4.4	228	Mixed waste management activities at the MSB bunkers shall be suspended in response to equipment failures or power outages. Electrical power is not required for safe operation. Equipment and/or power failures shall not result in a loss of mixed waste containment. [40 C.F.R. § 270.14(b)(8)(iv)].	DOE/Sandia note that storage, which is a waste management activity addressed in this condition, will not be affected by equipment failures or power outages. Additionally, please delete the regulatory citation as discussed in Comment PA7-13 and revise to read: Hazardous and mixed waste management activities at the MSB that are affected by equipment failures or power outages shall be suspended in response to such outages. Electrical power is not required for safe operation. Equipment and/or power failures shall not result in a loss of hazardous or mixed waste containment.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA7-101*	7.0	223	Figure 7-1 of this Permit Attachment shows the general layout of the MSB and its location in TA-V and depicts locations of the waste management areas at the MSB. The area surrounding the MSB is occupied by test areas and controlled operations (Figure 1-2 of Permit Attachment 1).	The MSB are not located in TA-V. Please revise to indicate the correct location: The MSB are located approximately one mile east of the road leading to the entrance of TA-III and TA-V, at the end of Pennsylvania Avenue.
PA7-102*	7.0	223	The Manzano Storage Bunkers (MSB) comprise five Units, each with approximately 1600 to 2100 square feet of space, and used for storage of mixed wastes in containers.	The information for Type C bunkers (Bunker 37118) in the Application was updated in March 2007 to correct typographical errors. Please revise to incorporate the current correct information: The Manzano Storage Bunkers (MSB) comprise five Units, each with approximately 1600 to 2400 square feet of space, and are used for storage of hazardous or mixed wastes in containers.
PA7-103*	7.2.2	224	The main chamber is approximately 80 ft long, 27 ft wide and 12.8 ft high.	The information for Type C bunkers (Bunker 37118) in the Application was updated in March 2007 to correct typographical errors. Please revise to incorporate the current correct information: Please revise to read: The main chamber is approximately 83 ft long, 29 ft wide and 12.8 ft high.
PA7-104*	7.5	226	A detailed description of each bunker can be found in Permit Attachment 7.	Please delete this sentence, as it is unnecessary.
PA7-105*	Attach-ment 7	after 229	Figures and photographs	The figures and photographs do not reflect the most current information provided in the Application. DOE/Sandia will provide updated figures and photographs under separate cover.

*Comment is more administrative in nature

Enclosure P

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 8

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA8-1	Table 8-1	231		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

Table 8-1
Wastes Authorized for the Thermal Treatment Unit

Line Number	EPA Hazardous Waste No.	Process Code
2	D002	X01 Thermal Treatment

DOE/SANDIA COMMENT

DOE/Sandia note some of the liquid SASN waste that is pumped to the TTU potentially exhibits the hazardous waste characteristic of corrosivity; it contains nitric acid, but is not aqueous. It is not known whether this waste is sufficiently corrosive to corrode steel in accordance with the criteria in 40 CFR 261.22(a)(2), because safety considerations (due to the presence of explosives in the waste) preclude the testing needed to make a determination. DOE/Sandia note the destruction of the waste during thermal treatment serves to deactivate it and effectively treat the corrosive characteristic that may be present. A footnote should be added to the table to indicate that the D002 code is potential.

Toluene is not currently used in waste generating activities at the TTU, but may be used in the future; thus it should be included in this table as Line 6.

Please revise the table as follows:

Table 8-1
Wastes Authorized for the Thermal Treatment Unit

Line Number	EPA Hazardous Waste No.	Process Code
2	D002 *	X01 Thermal Treatment
6	F005	X01 Thermal Treatment

* Some of the wastes are potentially corrosive

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA8-2	Table 8-2	232 - 244	**DRAFT PERMIT TEXT** Note: only the rows shown below are included in this comment	

Table 8-2
Wastes authorized for the HWMU, RMWMU, AHCU, and the MSB

Line Number	EPA Hazardous Waste No.	Process Code
374	F003	S01, T04, X01 – Thermal treatment, macroencapsulation, stabilization, physical treatment
376	F005	S01, T04, X01 -- Macro-encapsulation, stabilization, physical treatment
401	D001	S01, T04 – Chemical deactivation, physical treatment
402	D002	S01, T04, X01 – Thermal treatment, thermal deactivation, chemical deactivation, physical treatment
403	D003	S01, T04 - Stabilization, macroencapsulation, physical treatment
404	D004	S01, T04 -- Thermal deactivation, chemical deactivation, stabilization, macroencapsulation, physical treatment
405	D005	S01, T04 – Thermal deactivation, chemical deactivation, stabilization, macroencapsulation, physical treatment
406	D006	S01, T04 - Stabilization, macroencapsulation, physical treatment
407	D007	S01, T04 - Stabilization, macroencapsulation, physical treatment
408	D008	S01, T04 - Stabilization, macroencapsulation, amalgamation, physical treatment
409	D009	S01, T04 - Stabilization, macroencapsulation, physical treatment
410	D010	S01, T04 - Stabilization, macroencapsulation, physical treatment
442	D038	S01, T04 Physical treatment
443	D039	S01, T04 Physical treatment
444	D040	S01, T04 Physical treatment
445	D041	S01, T04 Physical treatment
446	D042	S01, T04 Physical treatment
447	D043	S01, T04 Physical treatment

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA8-2 (cont)				

DOE/SANDIA COMMENT

X01 is used only at the TTU and should be deleted from Table 8-2. Several lines (Lines 401-410) are displaced and the handling methods do not correspond with the wastes. Several lines (Lines 442-446) are repeated at the end of the table. Please revise as follows:

Table 8-2
Wastes authorized for the HWMU, RMWMU, AHCU, and the MSB

Line Number	EPA Hazardous Waste No.	Process Code
374	F003	S01, T04 - Macroencapsulation, stabilization, physical treatment
376	F005	S01, T04 – Macro-encapsulation, stabilization, physical treatment
400	D001	S01, T04, - Thermal deactivation, chemical deactivation, physical treatment
401	D002	S01, T04 – Chemical deactivation, physical treatment
402	D003	S01, T04 - Thermal deactivation, chemical deactivation, physical treatment
403	D004	S01, T04 - Stabilization, macroencapsulation, physical treatment
404	D005	S01, T04 - Thermal deactivation, chemical deactivation, stabilization, macroencapsulation, physical treatment
405	D006	S01, T04 - Stabilization, macroencapsulation, physical treatment
406	D007	S01, T04 - Stabilization, macroencapsulation, physical treatment
407	D008	S01, T04 - Stabilization, macroencapsulation, physical treatment
408	D009	S01, T04 - Stabilization, macroencapsulation, amalgamation, physical treatment
409	D010	S01, T04 - Stabilization, macroencapsulation, physical treatment
410	D011	S01, T04 - Stabilization, macroencapsulation, physical treatment
442	D043	S01, T04 Physical treatment

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA8-3	Table 8-2	232 - 244	**DRAFT PERMIT TEXT** Note: only the rows shown below are included in this comment	

Table 8-2
Wastes authorized for the HWMU, RMWMU, AHCU, and the MSB

Line Number	EPA Hazardous Waste No.	Process Code
221	U102	S01, T04 - Stabilization
225	U107	S01, T04 - Stabilization
372	F001	S01, T04 – Macro-encapsulation, stabilization, physical treatment
373	F002	S01, T04 – Macro-encapsulation, stabilization, physical treatment
374	F003	S01, T04, X01 - Thermal treatment, macroencapsulation, stabilization, physical treatment
375	F004	S01, T04 – Macro-encapsulation, stabilization, physical treatment
376	F005	S01, T04, X01 – Macro-encapsulation, stabilization, physical treatment
403	D003	S01, T04 - Stabilization, macroencapsulation, physical treatment
404	D004	S01, T04 - Thermal deactivation, chemical deactivation, stabilization, macroencapsulation, physical treatment
405	D005	S01, T04 - Thermal deactivation, chemical deactivation, stabilization, macroencapsulation, physical treatment
406	D006	S01, T04 - Stabilization, macroencapsulation, physical treatment
407	D007	S01, T04 - Stabilization, macroencapsulation, physical treatment
408	D008	S01, T04 - Stabilization, macroencapsulation, amalgamation, physical treatment
409	D009	S01, T04 - Stabilization, macroencapsulation, physical treatment
410	D010	S01, T04 - Stabilization, macroencapsulation, physical treatment

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA8-3 (cont)				

DOE/SANDIA COMMENT

Stabilization is listed for many wastes in this Table. DOE/Sandia use it to immobilize toxicity characteristic metals, and note many stabilization agents also eliminate free liquids. Solidification to eliminate free liquids may be an additional treatment goal for the wastes listed and should be included with stabilization throughout this table.

Please note the changes requested in the preceding comment about displaced lines and handling codes are incorporated into Lines 403-410 below. Please revise as follows:

Table 8-2
Wastes authorized for the HWMU, RMWMU, AHCU, and the MSB

Line Number	EPA Hazardous Waste No.	Process Code
221	U102	S01, T04 – Stabilization/solidification
225	U107	S01, T04 – Stabilization/solidification
372	F001	S01, T04 – Macro-encapsulation, stabilization/solidification, physical treatment
373	F002	S01, T04 – Macro-encapsulation, stabilization/solidification, physical treatment
374	F003	S01, T04 - Macroencapsulation, stabilization, physical treatment
376	F005	S01, T04 – Macro-encapsulation, stabilization/solidification, physical treatment
403	D004	S01, T04 – Stabilization/solidification, macroencapsulation, physical treatment
404	D005	S01, T04 - Thermal deactivation, chemical deactivation, stabilization/solidification, macroencapsulation, physical treatment
405	D006	S01, T04 – Stabilization/solidification, macroencapsulation, physical treatment
406	D007	S01, T04 – Stabilization/solidification, macroencapsulation, physical treatment
407	D008	S01, T04 – Stabilization/solidification, macroencapsulation, physical treatment
408	D009	S01, T04 – Stabilization/solidification, macroencapsulation, amalgamation, physical treatment
409	D010	S01, T04 – Stabilization/solidification, macroencapsulation, physical treatment
410	D011	S01, T04 – Stabilization/solidification, macroencapsulation, physical treatment

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA8-4	Table 8-2	232 - 244	**DRAFT PERMIT TEXT** Note: only the rows shown below are included in this comment	

Table 8-2
Wastes authorized for the HWMU, RMWMU, AHCU, and the MSB

Line Number	EPA Hazardous Waste No.	Process Code
417	D018	S01, T04 - Physical treatment
418	D019	S01, T04 - Physical treatment
419	D020	S01, T04 - Physical treatment
420	D021	S01, T04 - Physical treatment
421	D022	S01, T04 - Physical treatment
422	D023	S01, T04 - Physical treatment
423	D024	S01, T04 Physical treatment
424	D025	S01, T04 Physical treatment
425	D026	S01, T04 Physical treatment
426	D027	S01, T04 Physical treatment
427	D028	S01, T04 Physical treatment
428	D029	S01, T04 Physical treatment
429	D030	S01, T04 Physical treatment
430	D031	S01, T04 Physical treatment
431	D032	S01, T04 Physical treatment
432	D033	S01, T04 Physical treatment
433	D034	S01, T04 Physical treatment
434	D035	S01, T04 Physical treatment
435	D036	S01, T04 Physical treatment
436	DO37	S01, T04 Physical treatment
437	D038	S01, T04 Physical treatment
438	D039	S01, T04 Physical treatment
439	D040	S01, T04 Physical treatment
440	D041	S01, T04 Physical treatment
441	D042	S01, T04 Physical treatment
447	D043	S01, T04 Physical treatment

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA8-4 (cont)				

DOE/SANDIA COMMENT

Macroencapsulation should be included as a treatment code for all wastes F001 through F005, and D004 through D011, D018 through D043 for consistency with the treatment capabilities at the RMWMU as described in Permit Attachment 9. Please revise the following rows to add macroencapsulation and read:

Table 8-2
Wastes authorized for the HWMU, RMWMU, AHCU, and the MSB

Line Number	EPA Hazardous Waste No.	Process Code
417	D018	S01, T04 - Physical treatment, macro-encapsulation
418	D019	S01, T04 - Physical treatment, macro-encapsulation
419	D020	S01, T04 - Physical treatment, macro-encapsulation
420	D021	S01, T04 - Physical treatment, macro-encapsulation
421	D022	S01, T04 - Physical treatment, macro-encapsulation
422	D023	S01, T04 - Physical treatment, macro-encapsulation
423	D024	S01, T04 Physical treatment, macro-encapsulation
424	D025	S01, T04 Physical treatment, macro-encapsulation
425	D026	S01, T04 Physical treatment, macro-encapsulation
426	D027	S01, T04 Physical treatment, macro-encapsulation
427	D028	S01, T04 Physical treatment, macro-encapsulation
428	D029	S01, T04 Physical treatment, macro-encapsulation
429	D030	S01, T04 Physical treatment, macro-encapsulation
430	D031	S01, T04 Physical treatment, macro-encapsulation
431	D032	S01, T04 Physical treatment, macro-encapsulation
432	D033	S01, T04 Physical treatment, macro-encapsulation
433	D034	S01, T04 Physical treatment, macro-encapsulation
434	D035	S01, T04 Physical treatment, macro-encapsulation
435	D036	S01, T04 Physical treatment, macro-encapsulation
436	DO37	S01, T04 Physical treatment, macro-encapsulation
437	D038	S01, T04 Physical treatment, macro-encapsulation
438	D039	S01, T04 Physical treatment, macro-encapsulation
439	D040	S01, T04 Physical treatment, macro-encapsulation
440	D041	S01, T04 Physical treatment, macro-encapsulation
441	D042	S01, T04 Physical treatment, macro-encapsulation
442	D043	S01, T04 Physical treatment, macro-encapsulation

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA8-5	Table 8-3	244		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

Table 8-3.
Process Code Listings and Design Capacities at the Hazardous Waste Management Unit

Description	Capacity	Associated Structure/Building
S01 Container Storage		
Container storage area	14,988 gallons	Building 958
Container storage area	1,898 gallons	Building 959
Container storage area	1,250 gallons	Modular Storage Building 958B
Container storage area	1,250 gallons	Modular Storage Building 958C
Total S01	**19,386 gallons**	

DOE/SANDIA COMMENT

Please see General Comment G-F for discussion of reduction in storage and treatment capacity of Permitted Units, including the HWMU. Please revise capacities to be consistent with capacities in Permit NM5890110518-1 and the Application:

Table 8-3.
Process Code Listings and Design Capacities at the Hazardous Waste Management Unit

Description	Capacity	Associated Structure/Building
S01 Container Storage		
Container storage area	59,950 gallons	Building 958
Container storage area	7,590 gallons	Building 959
Container storage area	5,000 gallons	Modular Storage Building 958B
Container storage area	5,000 gallons	Modular Storage Building 958C
Total S01	**77,540 gallons**	

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA8-6	Table 8-5	245	**DRAFT PERMIT TEXT**	

Note: only the rows shown below are included in this comment

Table 8-5
Process Code Listings and Design Capacities at the Radioactive and Mixed Waste Management Unit

Description	Capacity	Associated Structure/Building
S01 Container Storage		
Container storage area	3,355 gallons	Building 6920
Container storage area	1,953 gallons	Building 6921
Container storage area	20,790 gallons	Building 6925
Container storage area	20,790 gallons	Building 6926
Container storage area	275 gallons	Modular Storage Building
Container storage area	275 gallons	Modular Storage Building
Container storage area	0 gallons	Additional Modular Storage Building
Container storage area	0 gallons	Additional Modular Storage Building
Container storage area	4,950 gallons	Asphalt area N, E, and W of Building 6920
Total S01	**52,388 gallons**	

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA8-6 (cont)				

DOE/SANDIA COMMENT

Please see General Comment G-F for discussion of reduction in storage and treatment capacity of Permitted Units, including the RMWMU. Please revise as follows:

- Revise storage capacities to be consistent with capacities in the Application.
- Delete the additional modular storage buildings. They were proposed in the Application as part of the Consolidated Waste Management Facility in November 2004 and were deleted in October 2005.
- Incorporate treatment processes and capacities from the Application.
- Include solidification with stabilization.

Table 8-5
Process Code Listings and Design Capacities at the Radioactive and Mixed Waste Management Unit

Description	Capacity	Associated Structure/Building
S01 Container Storage		
Container storage area	13,420 gallons	Building 6920
Container storage area	7,810 gallons	Building 6921
Container storage area	83,160 gallons	Building 6925
Container storage area	83,160 gallons	Building 6926
Container storage area	1,100 gallons	Modular Storage Building
Container storage area	1,100 gallons	Modular Storage Building
Container storage area	19,800 gallons	Asphalt area N, E, and W of Building 6920
Total S01	**209,550 gallons**	
T04 Other Treatment (in containers)		
Chemical deactivation	65 gallons/day	Buildings 6920, 6921
Macro-encapsulation	840 gallons/day	Buildings 6920., 6921, 6925
Stabilization/ solidification	550 gallons/day	Buildings 6920, 6921
Thermal deactivation	10 pounds/hour	Buildings 6920, 6921
Amalgamation	2 pounds/hour	Buildings 6920, 6921
Total T04	**1,455 gallons/day and 12 pounds /hour**	
T04 Other Treatment (physical treatment)		
Physical treatment	20 pounds/hour	Buildings 6920, 6921
Total T04	**20 pounds/hour**	

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA8-7	Table 8-6	246		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment.

Table 8-6
Process Code Listings and Design Capacities at the Auxiliary Hot Cell Unit

Description	Capacity	Associated Structure/Building
S01 Container Storage		
Container storage area	225 gallons	Building 6597
Storage silos	364 gallons	Building 6597
Hot Cell	0 gallons	Building 6597
Fume Hood	0 gallons (capacity included in work area)	Building 6597
Work Area	0 gallons	Building 6597
Total S01	**589 gallons**	Building 6597
T04 Other Treatment (in containers)		
Stabilization	55 gallons/day	Building 6597

DOE/SANDIA COMMENT

Please see Comment PA8-3 regarding stabilization and solidification. Please see General Comment G-F for discussion of reduction in storage capacity of the Permitted Units, including the AHCU. Please revise as follows to include solidification and to be consistent with capacities in the Application:

Table 8-6
Process Code Listings and Design Capacities at the Auxiliary Hot Cell Unit

Description	Capacity	Associated Structure/Building
S01 Container Storage		
Container storage area	3,520 gallons	Building 6597
Storage silos	1,456 gallons	Building 6597
Hot Cell	900 gallons	Building 6597
Fume Hood	110 gallons (capacity included in work area)	Building 6597
Work Area	2,200 gallons	Building 6597
Total S01	**6,976 gallons**	Building 6597
T04 Other Treatment (in containers)		
Stabilization/ solidification	55 gallons/day	Building 6597

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA8-8	Table 8-7	246		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

Table 8-7
Process Code Listings and Design Capacities at the Manzano Storage Bunkers

Description	Capacity	Associated Structure/Building
Line 1 S01 Container Storage		
Container storage area	6,270 gallons	Type B Bunkers Bunkers 37034
Container storage area	8,800 gallons	Type C Bunkers Bunkers 37118
Container storage area	13,860 gallons	Type D Bunkers Bunkers 37045, 37055, and 37057
Total S01	**28,930 gallons**	

DOE/SANDIA COMMENT

Please see General Comment G-F for discussion of reduction in storage and treatment capacity of Permitted Units, including the MSB. Please revise storage capacities to be consistent with capacities in the Application:

Table 8-7
Process Code Listings and Design Capacities at the Manzano Storage Bunkers

Description	Capacity	Associated Structure/Building
Line 1 S01 Container Storage		
Container storage area	25,080 gallons	Type B Bunker Bunkers 37034
Container storage area	35,200 gallons	Type C Bunker Bunkers 37118
Container storage area	55,440 gallons	Type D Bunkers Bunkers 37045, 37055, and 37057
Total S01	**115,720 gallons**	

Enclosure Q

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 9

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-1	Attach-ment 9	247 - 289	Permit Attachment 9	DOE/Sandia note several instances that mention either hazardous or mixed wastes in requirements that are applicable to both (e.g., the title of Table 9-1). Please revise throughout this Attachment. DOE/Sandia also note numerous parts of this Permit Attachment that address hazardous constituents; these should address hazardous waste constituents instead. Please revise throughout this Attachment. Please see General Comment G-A for additional discussion.
PA9-2	9.1.1	248	1. **Hazardous Waste Management Unit (HWMU)**: Container storage and repackaging of hazardous wastes; 2. **Thermal Treatment Unit (TTU)**: Thermal treatment of a reactive hazardous waste stream by open burning in a miscellaneous unit; 3. **Radioactive and Mixed Waste Management Unit (RMWMU)**: Container storage and repackaging of mixed wastes, and treatment of mixed wastes in containers; 4. **Auxiliary Hot Cell Unit (AHCU)**: Container storage and repackaging of mixed wastes, and treatment of mixed wastes in containers; and 5. **Manzano Storage Bunkers (MSB)**: Container storage of mixed wastes in five bunkers. 6. **Corrective Action Management Unit (CAMU):** post-closure care and permanent containment of hazardous and mixed remediation waste.	As discussed in General Comment G-A, DOE/Sandia do not believe it is necessary or appropriate to specify whether radionuclides are present or absent in RCRA-regulated wastes managed at any of the Units except the TTU. Accordingly, please revise to read: 1. **Hazardous Waste Management Unit (HWMU)**: Container storage and repackaging of hazardous and mixed wastes; 2. **Thermal Treatment Unit (TTU)**: Thermal treatment of a reactive hazardous waste stream by open burning in a miscellaneous unit; 3. **Radioactive and Mixed Waste Management Unit (RMWMU)**: Container storage and repackaging of hazardous and mixed wastes, and treatment of hazardous and mixed wastes in containers; 4. **Auxiliary Hot Cell Unit (AHCU)**: Container storage and repackaging of hazardous and mixed wastes, and treatment of hazardous and mixed wastes in containers; and 5. **Manzano Storage Bunkers (MSB)**: Container storage of hazardous and mixed wastes in five bunkers. 6. **Corrective Action Management Unit (CAMU):** post-closure care and long-term containment of hazardous and mixed remediation waste.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-3	9.1.2	249	Hazardous and mixed wastes are generated at the Facility from design, development, and testing of weapon systems and components; material research; pulsed power research; reactor safety research; support activities; Resource Conservation and Recovery Act (RCRA) Corrective Action activities (through the Permittees Environmental Restoration Project); and decontamination and decommissioning (D&D) activities. The Permittees also accept small volumes of hazardous and mixed wastes from off-site facilities. Some of the hazardous and mixed wastes also meet the definition of low-level or transuranic waste as these terms are defined in DOE Order 435.1-1 (DOE, 1999). Table 9-1 summarizes general information on hazardous waste types generated at the Facility.	This description of operations at SNL/NM is not fully relevant to waste analysis or operations at the Permitted Units. In order to present the information necessary for this Permit Attachment, please revise to read: Hazardous and mixed wastes generated from Facility operations are managed at the Permitted Units. These include a wide variety of wastes generated from research, design, development, and testing activities, laboratory support, Resource Conservation and Recovery Act (RCRA) Corrective Action activities (through the Permittees' Environmental Restoration Project); and decontamination and decommissioning (D&D) activities. The Permittees also accept small volumes of hazardous and mixed wastes from off-site operations and facilities. Some of the mixed wastes also meet the definition of low-level or transuranic waste as these terms are defined in DOE Order 435.1-1 (DOE, 2001, as revised and updated). Table 9-1 summarizes general information on hazardous and mixed waste types managed at the Permitted Units.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-4	Table 9-1	250		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment.

TABLE 9-1
Descriptions of the Types of Hazardous Wastes Stored and/or Treated at the Facility's Permitted Units

Waste Type Description	Principal Waste Generating Activity	Basis for Hazardous Waste Designation	Potential EPA Hazardous Waste Numbers	Potential Hazardous Waste Constituents and/or Characteristics in the Waste
Explosive Waste	Weapon systems and components design, development, fabrication, and testing	Acceptable Knowledge and Sampling and Analysis, as appropriate	D001 D003 D008 D011 F003	Ignitability Reactivity Lead Silver Acetone
Decontamination, Purge, and Treatment Waters	ER Project and D&D activities	Acceptable Knowledge and Sampling and Analysis, as appropriate	D002 D004-D043 F001-F005	Corrosivity Toxicity Spent solvents
Treated Waste and Treatment Residues	Support activities (radiation protection and waste management)	Acceptable Knowledge and Sampling and Analysis, as needed	D001 D002 D003 D004-D043 F001-F005 F039	Ignitability Corrosivity Reactivity Toxicity Spent -solvents Leachate

DOE/SANDIA COMMENT

DOE/Sandia note that explosive and reactive wastes may also exhibit the hazardous waste characteristic of toxicity due to the presence of barium.

Toluene is not currently used in waste-generating activities at the TTU. However, it may be used in the future. The explosive waste treated at the TTU also may potentially exhibit the hazardous waste characteristic of corrosivity as discussed in Comment PA8-1.

Additionally, leachate generated at the CAMU is included with decontamination, purge and treatment waters rather than with treated wastes and treatment residues.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-4 (cont)			Please revise as follows:	

TABLE 9-1
Descriptions of the Types of Hazardous Wastes Stored and/or Treated at the Facility's Permitted Units

Waste Type Description	Principal Waste Generating Activity	Basis for Hazardous Waste Designation	Potential EPA Hazardous Waste Numbers	Potential Hazardous Waste Constituents and/or Characteristics in the Waste
Explosive Waste	Weapon systems and components design, development, fabrication, and testing	Acceptable Knowledge and Sampling and Analysis, as appropriate	D001 D002 D003 D005 D008 D011 F003 F005	Ignitability Corrosivity Reactivity Barium Lead Silver Acetone Toluene
Decontamination, Purge, and Treatment Waters	ER Project and D&D activities	Acceptable Knowledge and Sampling and Analysis, as appropriate	D002 D004-D043 F001-F005 F039	Corrosivity Toxicity Spent solvents Leachate
Treated Waste and Treatment Residues	Support activities (radiation protection and waste management)	Acceptable Knowledge and Sampling and Analysis, as needed	D001 D002 D003 D004-D043 F001-F005	Ignitability Corrosivity Reactivity Toxicity Spent solvents

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-5	9.2.5	254	Batteries consist of unfired waste thermal batteries. Thermal batteries are specialized single-use batteries that contain electrolytes and reactive materials. When a thermal battery is "fired" or used to produce power, the reactive materials undergo chemical reactions that generate heat; the heat activates the electrolytes, and the battery produces power. Spent thermal batteries no longer contain reactive material. Batteries, in solid or liquid waste form, or both, are used in numerous Facility activities, and may exhibit the hazardous waste characteristics of reactivity, corrosivity, or toxicity (due to the presence of metals such as cadmium, mercury, and lead). Information about the battery content, hazards, and EPA Hazardous Waste Numbers is determined using manufacturer's data. For example, unfired thermal batteries contain metals and exhibit the hazardous waste characteristics of reactivity and toxicity. Lithium batteries exhibit the characteristic of reactivity, while mercury batteries, silver batteries, and nickel-cadmium batteries exhibit the characteristic of toxicity.	This does not fully or clearly describe the batteries that are managed at the Permitted Units, particularly with respect to the properties of spent thermal batteries. Please revise to read: Batteries, in solid or liquid waste form, or both, are used in numerous Facility activities, and unused or spent batteries may exhibit the hazardous waste characteristics of reactivity, corrosivity, or toxicity (due to the presence of metals such as cadmium, mercury, and lead). Information about the battery content, hazards, and EPA Hazardous Waste Numbers is determined using manufacturer's data. Unfired and spent thermal batteries are managed at the Permitted Units; thermal batteries are specialized single-use batteries that contain electrolytes and reactive materials. When a thermal battery is "fired" or used to produce power, the reactive materials undergo chemical reactions that generate heat; the heat activates the electrolytes, and the battery produces power. Unfired thermal batteries contain metals and exhibit the hazardous waste characteristics of reactivity and toxicity. Many types of spent thermal batteries no longer contain reactive material; some types require additional deactivation of reactive materials after firing. Lithium batteries may exhibit the characteristic of reactivity, while mercury batteries, silver batteries, and nickel-cadmium batteries may exhibit the characteristic of toxicity.
PA9-6	9.2.8	254	This waste type includes soil from ER Project activities, or other cleanup and excavation operations. At ER Project sites, acceptable knowledge may be used to limit sampling and analysis for the hazardous constituents most likely to be present in the waste, as appropriate.	DOE/Sandia note that availability of historical information and other acceptable knowledge is not limited to ER project sites; it is available for all areas of the Facility. Therefore the use of acceptable knowledge to limit sampling and analysis in characterization should not be limited to ER project sites. Please revise to read: This waste type includes soil from ER Project activities, or other cleanup and excavation operations. Acceptable knowledge may be used to limit sampling and analysis for the hazardous constituents most likely to be present in the waste, as appropriate.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-7	9.2.10	255	This waste type includes decontamination, purge, and treatment water (i.e., wastewater) from ER Project and D&D activities. Decontamination, purge, or treatment waters may be contaminated with or contain listed waste(s) or may exhibit a hazardous waste characteristic (i.e., corrosivity and/or toxicity). At ER Project sites, acceptable knowledge may be used to limit sampling and analysis for the hazardous constituents most likely to be present in the waste, as appropriate.	Please see preceding Comments PA9-4 and PA9-6 regarding inclusion of leachate generated at the CAMU and the availability of historical information and other acceptable knowledge. Please revise to read: This waste type includes decontamination, purge, and treatment water (i.e., wastewater) from ER Project, D&D activities, and waste management. Decontamination, purge, or treatment waters may be listed wastes (e.g., leachate generated at the CAMU), contaminated with or contain listed waste(s), or may exhibit a hazardous waste characteristic (i.e., corrosivity and/or toxicity). Acceptable knowledge may be used to limit sampling and analysis for the hazardous constituents most likely to be present in the waste, as appropriate.
PA9-8	9.3.2	256	Mixed wastes that are treated at the Radioactive and Mixed Waste Management Unit (RMWMU) and Auxiliary Hot Cell Unit (AHCU) may be generated from specific R&D processes and activities. Other wastes may be manufactured items. Consequently, the Permittees characterize mixed wastes treated at the RMWMU and AHCU using process knowledge, which shall be supplemented by sampling and analysis, as appropriate. Process knowledge shall include full knowledge of the item or a full account of the raw materials used in generating the waste. To ensure that proper and accurate waste characterization occurs, the characterization process outlined in Section 9.4 shall be used as well as sampling and analysis, as appropriate. Mixed wastes that are treated at the RMWMU and AHCU include:	DOE/Sandia note that wastes treated at the RMWMU and AHCU include radioactive mixed wastes that are not amenable to sampling and analysis; process knowledge is often available for these wastes, and the Permittees use it in characterizing the waste. The waste characterization process consists of obtaining sufficient information to make a hazardous waste determination, identify waste codes, and establish appropriate management at the Permitted Unit(s). The Permittees will obtain as much information as necessary to meet these objectives in each case. Accordingly, please revise to read: Hazardous and mixed wastes that are treated at the Radioactive and Mixed Waste Management Unit (RMWMU) and Auxiliary Hot Cell Unit (AHCU) include items that are not amenable to sampling and analysis, manufactured items, and wastes generated from specific R&D processes and activities; the Permittees characterize these wastes using process knowledge, which shall be supplemented by sampling and analysis, as appropriate. Process knowledge shall include adequate knowledge of the item or an adequate account of the raw materials used in generating the waste. To ensure that proper and accurate waste characterization occurs, the characterization process outlined in Section 9.4 shall be used as well as sampling and analysis, as appropriate. Hazardous and mixed wastes that are treated at the RMWMU and AHCU include:

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-9	9.3.2	256	Treatment processes and the associated treatment goals at the RMWMU and AHCU are discussed in Permit Attachments 5 and 6, respectively. The processes include: 1. Chemical deactivation to eliminate the hazardous waste characteristics of ignitability, corrosivity, and reactivity; 2. Thermal deactivation to eliminate the hazardous waste characteristic of reactivity in reactive wastes, including explosives other than primary explosives; *3. (not included in comment)* 4. Stabilization to immobilize hazardous waste toxicity characteristic metals or eliminate free liquids, or both; 5. Macro-encapsulation to immobilize hazardous constituents; and *6. (not included in comment)* The mixed wastes to be treated at the RMWMU and AHCU are typically assigned one or more of the following EPA Hazardous Waste Numbers: D001-D011, D018-D043, and F001-F005.	The treatment goals are not entirely accurate. Chemical deactivation is performed to eliminate one or more of the characteristics. DOE/Sandia treat primary and other explosives at the Permitted Units. Additionally, stabilization is not performed to eliminate free liquids in the waste, although such solidification often occurs. Please revise as follows to clarify the nature and goals of the processes: Treatment processes and the associated treatment goals at the RMWMU and AHCU are discussed in Permit Attachments 5 and 6, respectively. The processes include: 1. Chemical deactivation to eliminate the hazardous waste characteristics of ignitability, corrosivity, and/or reactivity; 2. Thermal deactivation to eliminate the hazardous waste characteristic of reactivity in reactive wastes, including explosives; *3. (not included in comment)* 4. Stabilization and/or solidification to immobilize hazardous waste toxicity characteristic metals or eliminate free liquids, or both; 5. Macro-encapsulation to immobilize hazardous waste constituents; and *6. (not included in comment)* The hazardous and mixed wastes to be treated at the RMWMU and AHCU are typically assigned one or more of the following EPA Hazardous Waste Numbers: D001-D011, D018-D043, and F001-F005.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-10	9.3.2.2	257	Mixed wastes are treated by thermal deactivation at the RMWMU to remove the hazardous waste characteristic of reactivity. These wastes generally consist of solid items and are generated primarily from R&D activities and ER Project activities, and consist of unfired thermal batteries and reactive hazardous wastes. The quantity of explosive or reactive waste that is thermally treated at the RMWMU at any one time shall not exceed 25 grams.	As discussed in the Application, the explosive deactivation device used at the RMWMU was designed to contain a detonation of 25 grams TNT-equivalents of explosive wastes; (i.e., the energy that would be released through detonation of 25 grams of TNT). Individual explosive compounds may release more or less energy per gram than TNT; thus the actual quantity of explosive treated varies and may exceed 25 grams. Additionally, the explosive may be a component of a waste item; thus the total quantity of waste may exceed 25 grams. DOE/Sandia also note that thermal batteries may be deactivated by introducing an electrical current to individual batteries; the current induces a chemical reaction that deactivates the reactive material contained in the battery and generates heat. This treatment, which does not take place within the deactivation device, is best described as chemical rather than thermal deactivation of the reactive component of the battery. Accordingly, thermal batteries should also be included in the discussion of chemical deactivation. Please revise to read: Hazardous and mixed wastes are treated by thermal deactivation at the RMWMU to remove the hazardous waste characteristic of reactivity. These wastes generally consist of solid items and are generated primarily from R&D activities and ER Project activities. The quantity of explosive or reactive waste that is thermally deactivated at the RMWMU at any one time shall not exceed the quantity equivalent to 25 grams of TNT.
PA9-11	9.3.2.1 9.3.2.3	257	All descriptions of treatment of mixed waste.	Please revise "mixed wastes" to "hazardous and mixed wastes" in each case. Please see General Comment G-A and Comments PA9-1 and PA9-2 for additional discussion.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-12	9.3.2.4	257	Mixed wastes are treated by stabilization at the RMWMU and AHCU to immobilize hazardous waste toxicity characteristic metals or eliminate free liquids, or both. Mixed wastes that are stabilized at the RMWMU and AHCU generally consist of liquids, soils, particulate-type wastes.	Please see Comment PA9-9 regarding stabilization and solidification. DOE/Sandia note that stabilization is also used to treat items that are smaller than hazardous debris as defined in 40 CFR 268.2(h). Please revise to read: Hazardous and mixed wastes are treated by stabilization and/or solidification at the RMWMU and AHCU to immobilize hazardous waste toxicity characteristic metals or eliminate free liquids, or both. These wastes generally consist of liquids, soils, particulate-type wastes, and manufactured items that are smaller than hazardous debris as defined in 40 CFR 268.2(h).
PA9-13	9.3.2.5	257	Mixed wastes solid items, including debris, are treated by macroencapsulation at the RMWMU and AHCU to immobilize hazardous waste constituents. Debris is generated by R&D, D&D, and ER Project activities.	Please see Comment PA9-1 and General Comment G-A regarding limitations on management of hazardous and mixed wastes. DOE/Sandia note that hazardous or mixed waste debris may be generated as a result of activities other than those listed (e.g., waste management at the Permitted Units). Please revise to read: Hazardous and mixed waste solid items, including debris, are treated by macroencapsulation at the RMWMU and AHCU to immobilize hazardous waste constituents. Debris is generated primarily by R&D, D&D, and ER Project activities.
PA9-14	9.3.2.6	258	Mixed wastes are treated physically at the RMWMU and AHCU to reduce waste volume and change the physical character of the waste to make it more amenable to subsequent treatment or storage, or both. Mixed wastes that are physically treated at the RMWMU and AHCU generally consist of solid items that exhibit the hazardous waste characteristics of ignitability, reactivity, or toxicity and include waste types: Unknown Solids, Debris, and aerosol cans and other pressurized containers in the Commercial Products waste type. Debris is generated primarily by R&D, D&D, and ER Project activities. R & D and other activities generate waste aerosol cans and other pressurized containers of waste.	Please see Comment PA9-1 and General Comment G-A regarding limitations on management of hazardous and mixed wastes. DOE/Sandia note that the solid items may exhibit more than one hazardous waste characteristic. Please revise to read: Hazardous and mixed wastes are treated physically at the RMWMU and AHCU to reduce waste volume and change the physical character of the wastes to make them more amenable to subsequent treatment or storage, or both. Hazardous and mixed wastes that are physically treated at the RMWMU and AHCU generally consist of solid items that exhibit the hazardous waste characteristics of ignitability, reactivity, and/or toxicity and include waste types: Unknown Solids, Debris, and aerosol cans and other pressurized containers in the Commercial Products waste type. Debris is generated primarily by R&D, D&D, and ER Project activities. R & D and other activities generate waste aerosol cans and other pressurized containers of waste.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-15	9.4.1	258	**9.4.1. Overall Waste Characterization** The Permittees shall establish a data quality objectives (DQO) process to ensure that the information used to characterize hazardous and mixed wastes is adequate, proper, and appropriate for that purpose.	DOE/Sandia established a data quality objective (DQO) process which is described in the Site-Wide Waste Analysis Plan in the Application (General Part B, Appendix B, Section B.2.1.1). The process described in the Application is adequate to ensure that the information used to characterize hazardous and mixed wastes is adequate, proper, and appropriate for that purpose. The DOE/Sandia DQOs are not included in the draft Permit, although they are mentioned in several sections of this Permit Attachment. Please revise as follows to incorporate the DQOs presented in the Application: **9.4.1. Overall Waste Characterization** The application of a data quality objective (DQO) process ensures that the type, quantity, and quality of acceptable knowledge or sampling and analysis documentation and data are suitable for accurate waste characterization. DQOs are qualitative and quantitative statements derived from a series of seven planning steps based on the scientific method. DQOs applicable to waste characterization activities at the Facility are summarized below. *Define the Problem.* A solid waste is generated at SNL/NM and will be accepted at a Permitted Unit for storage. RCRA regulations require that hazardous wastes be identified and such wastes be adequately characterized for management at the Unit in accordance with 40 CFR 264.13. *Identify the Questions to be Answered.* Is the solid waste a hazardous or mixed waste? What are the appropriate EPA Hazardous Waste Numbers (waste codes)? Does the waste meet any of the exclusions in 40 CFR 261.4 at the point of generation? Does the waste meet the definition of a listed hazardous waste in 40 CFR 261 Subpart D at the point of generation? Does the waste exhibit any hazardous waste characteristics as defined in 40 CFR 261 Subpart C at the point of generation? Does the hazardous or mixed waste have any properties that require special management? *Specify the Objectives.* The characterization process is designed to provide information needed for the Permittees to: • Determine whether a solid waste is a hazardous waste, • Assign appropriate waste codes, and • Determine management requirements at the Permitted Units.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-16	9.4.2	258	The waste-generation personnel assemble information about the waste and submit it to Permitted Unit personnel using a disposal request (DR) or equivalent form. This initial information shall be supplemented with other information as appropriate until Permitted Unit personnel have sufficient information to accurately and properly characterize the waste. When completed, the DR form shall include information necessary for waste determinations, identifying physical form, accurately assigning EPA Hazardous Waste Numbers, determining treatment requirements, and safely handling, storing, and transporting, or otherwise managing the waste.	Throughout the Application, DOE/Sandia used "DR" as a generic term to represent a disposal request (DR) form or an equivalent electronic or written compilation of information describing the hazardous or mixed waste. The draft Permit does not fully discuss the equivalent forms. With respect to the information that is included in a completed DR, DOE/Sandia note the completed DR must contain the information necessary for DOE/Sandia to perform activities at the Permitted Units under the terms of this Permit. Additional information (e.g., treatment requirements) may be included, but the additional information is not needed to satisfy the requirements of this Permit. Please revise to read: The waste-generation personnel assemble information about the waste and submit it to Permitted Unit personnel using a disposal request (DR) or equivalent electronic or written compilation of information. The initial information from the waste-generation personnel shall be supplemented with other information as appropriate until Permitted Unit personnel have sufficient information to accurately and properly characterize the waste. When completed, the DR shall include information necessary for waste determinations, identifying physical form, accurately assigning EPA Hazardous Waste Numbers, and determining requirements for safely handling, storing, and/or treating the waste at one or more Permitted Units.
PA9-17	9.4.2	258	The Permittees shall, in accordance with this WAP and the requirements of this Permit, determine what, if any, additional characterization is required. The waste-generation personnel assemble information about the waste and submit it to Permitted Unit personnel using a disposal request (DR) or equivalent form.	This should be revised to clearly distinguish the roles of the initial waste generators and the Permitted Unit personnel who determine what, if any, additional characterization is required. Accordingly, please revise to read: Permitted Unit personnel shall, in accordance with this WAP and the requirements of this Permit, determine what, if any, additional characterization is required. The initial waste generator assembles information about the waste and submits it to Permitted Unit personnel using a disposal request (DR) or equivalent form.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-18	9.4.2	259	If the Permittees determine that documentation provided by the generating personnel is incomplete or inadequate for waste characterization, or find or suspect changes in the waste-generating process. They shall work with the generating personnel to obtain the necessary information to properly complete characterization of the waste. Waste information shall be entered into a waste-tracking database during the characterization process.	Please see the preceding comment regarding descriptions of the roles of Permitted Unit personnel. DOE/Sandia note this requirement is not clear as written, and the first two sentences should be combined. As discussed in Comment PA9-16, the DR may be either written or electronic; thus a waste-tracking database may not be necessary. Additionally, tracking and record-keeping are addressed at the end of Section 9.4.2. Accordingly, please delete the last sentence and revise to read: If Permitted Unit personnel determine that documentation provided by the initial generators is incomplete or inadequate for waste characterization, or find or suspect changes in the waste-generating process, they shall work with the initial generators to obtain the necessary information to properly complete characterization of the waste.
PA9-19	9.4.2	259	The Permittees shall evaluate waste with respect to the following: *1–3 (not included in comment)* 4. If it is the same as a previously generated waste that was a hazardous waste and there have been no changes in the process, then it is a hazardous waste. 5. If it is the same as a previously generated waste that was not a hazardous waste and there have been no changes in the process or regulatory status of the waste and the information is correct, then it is not a hazardous waste.	Changes in the waste-generating process or activity are not important unless they affect the waste. Please revise as follows: The Permittees shall evaluate waste with respect to the following: 4. If it is the same as a previously generated waste that was a hazardous waste and there have been no substantive changes in the process, then it is a hazardous waste. 5. If it is the same as a previously generated waste that was not a hazardous waste and there have been no changes in the process that affect the waste or the regulatory status of the waste, then it is not a hazardous waste.
PA9-20	9.4.2	259	Before transporting the waste to the appropriate Permitted Unit, the Permittees shall visually check to verify that the waste matches the information on the DR form.	It is not feasible to check the waste itself, as it is typically inside containers. Permittees check that the container(s) match the information on the DR. Please revise to read: Before transporting the waste to the appropriate Permitted Unit, the Permittees shall visually check to verify that the waste container(s) match the information on the DR.

<table>
<tr><th>NO.</th><th>SECTION</th><th>PAGE</th><th>DRAFT PERMIT TEXT</th><th>DOE/SANDIA COMMENT</th></tr>
<tr><td>PA9-21</td><td>9.4.2</td><td>260</td><td>Personnel working at the Permitted Units are also waste generating personnel. In these cases, the Permittees' shall characterize the waste, prepare a disposal request, and follow the process described above, except that the waste is already present at the Unit.</td><td>DOE/Sandia note that not all personnel working at a Permitted Unit will generate hazardous or mixed wastes. Additionally, as discussed in Comment PA9-16, the DR or compilation of information about the waste may be either written or electronic. Accordingly, please revise to read:

In some cases, Permitted Unit personnel may also generate hazardous or mixed wastes. In these cases, the Permitted Unit personnel shall characterize the waste, compile the information in a DR or equivalent record, and follow the process described above, except that the waste is already present at the Unit.</td></tr>
<tr><td>PA9-22</td><td>Table 9-2</td><td>261 - 264</td><td colspan="2">DRAFT PERMIT TEXT

Note: all rows in the table are included in this comment; one row is shown to illustrate the comment.

TABLE 9-2
General Characterization Methods, Parameters, and Rationale for Types of Wastes Generated at the Facility
<table>
<tr><th>Waste Type Description</th><th>Characterization Method</th><th>Parameter</th><th>Rationale</th></tr>
<tr><td>Explosive Waste</td><td>Acceptable Knowledge and Sampling and Analysis, as appropriate</td><td>Source of waste
Available information about waste composition
Physical characteristics
Visual or Paint Filter Liquids Test
Flash point (for liquids), DOT hazard class (for solids)
Stability, DOT hazard class
Hazardous waste metals
Hazardous waste VOCs
Hazardous waste SVOCs</td><td>Determine whether waste meets listing criteria
Determine waste form
Determine presence of free liquids
Determine ignitability and reactivity characteristics
Determine waste compatibility information
Determine toxicity characteristic</td></tr>
</table>

DOE/SANDIA COMMENT

The row shown above appears as both the first and last rows on page 262. Please delete one.

DOE/Sandia note the rationales in the right column generally correspond to the parameters in the third column, and thus the parameters and rationales should start at the top of each row. For example, in the row shown above, the source of the waste (first parameter) must be known in order to determine whether the waste meets listing criteria (first rationale); thus these should each be listed on the first line to minimize confusion.

Also, the waste characterization process in the Application includes mandatory characterization parameters that constitute minimum acceptable knowledge for each waste. The remaining parameters shown for each waste are selected as needed until adequate information is obtained for managing the waste at one or more Permitted Units. The mandatory parameters and process were shown in Table B-2 in the Application through italics formatting of the first three parameters listed for each waste type, accompanied by an explanatory footnote. In the Permit, DOE/Sandia recommend that it be shown through an explanatory footnote only.</td></tr>
</table>

<table>
<tr><th>NO.</th><th>SECTION</th><th>PAGE</th><th>DRAFT PERMIT TEXT</th><th>DOE/SANDIA COMMENT</th></tr>
<tr><td>PA9-22 (cont)</td><td></td><td></td><td colspan="2">Accordingly, after revising the formatting as shown below, please add the footnote shown below to the end of the table:

TABLE 9-2
General Characterization Methods, Parameters, and Rationale for Types of Wastes Generated at the Facility

<table>
<tr><th>Waste Type Description</th><th>Characterization Method</th><th>Parameter</th><th>Rationale</th></tr>
<tr><td>Explosive Waste</td><td>Acceptable Knowledge and Sampling and Analysis, as appropriate</td><td>Source of waste
Available information about waste composition
Physical characteristics
Visual or Paint Filter Liquids Test
Flash point (for liquids), DOT hazard class (for solids)
Stability, DOT hazard class
Hazardous waste metals
Hazardous waste VOCs
Hazardous waste SVOCs</td><td>Determine whether waste meets listing criteria
Determine waste form
Determine presence of free liquids
Determine ignitability and reactivity characteristics
Determine waste compatibility information
Determine toxicity characteristic</td></tr>
</table>

Note: Parameter selection is based on acceptable knowledge for each waste type. The first three items are mandatory and constitute the minimum acceptable knowledge. The remaining parameters are optional and will be selected for each waste type as necessary, if the results of the first three parameters indicate additional information is needed.</td></tr>
<tr><td>PA9-23</td><td>9.4.4</td><td>265</td><td>Waste generating personnel and Permitted Unit personnel blend wastes on a limited basis. Liquid hazardous wastes and non-hazardous wastes may be blended together in a single container. These blending activities shall be limited to process wastes, such as photographic fixers and photographic developers. For the latter example, the resulting mixture is characteristic for silver (D011) and may be corrosive (D002). Permitted Unit personnel may also combine compatible liquids drained from aerosol cans (commercial chemical products or characteristic liquids) into a single container. The resulting mixture is typically ignitable.</td><td>As noted in General Comment G-G, the Application includes descriptions of typical operations as illustrations of waste management operations. The description of blended photographic wastes in the Application is such an illustration. Mixed or blended wastes from any source are characterized adequately using the process described in the Application, thus no restrictions are needed.

Further, DOE/Sandia note that mixing and blending activities are subject to this Permit only if they are performed at one of the Permitted Units.

Please revise to read:

Waste generating personnel and Permitted Unit personnel blend wastes on a limited basis. Liquid hazardous wastes and non-hazardous wastes may be blended together in a single container. These blending activities are generally limited to wastes of a single type or wastes from a single process (e.g. developing photographs or emptying aerosol cans). For example, photo developing wastes consist of hazardous waste photographic fixers and non-hazardous waste photographic developers; the resulting mixture is characteristic for silver (D011) and may be corrosive (D002). As another example, Permitted Unit personnel may combine compatible liquids drained from aerosol cans (commercial chemical products or characteristic liquids) into a single container. The resulting mixture is typically ignitable.</td></tr>
</table>

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-24	9.4.5.1	266	Reactive hazardous waste to be treated at the TTU shall be characterized through the use of process knowledge and sampling and analysis, as appropriate. With regard to process knowledge: *1–2 (not included in comment)*	Including sampling and analysis in the characterization process for these wastes is not consistent with the characterization requirements outlined in Table 9-3 of the draft Permit or with the Application. DOE/Sandia noted in the Application that personnel safety concerns preclude sampling and analysis of reactive SASN wastes. Therefore, only a portion of the waste would ever be sampled, and only as deemed necessary by the Permittees. Please add Item 3 as indicated. Reactive hazardous waste to be treated at the TTU shall be characterized through the use of process knowledge and sampling and analysis, as appropriate. With regard to process knowledge: *1–2 (not included in comment)* 3. Sampling and analysis, if needed, shall be limited to non-SASN explosive contaminated solids or liquids.
PA9-25	9.4.5.2	266	Wastes to be treated at the RMWMU and AHCU shall be characterized based on acceptable knowledge and supplemented by sampling and analysis, as appropriated, before treatment takes place to meet the DQOs noted above. For wastes that will be treated to meet the treatment standards, characterization shall include analysis of any underlying hazardous constituents (UHCs) that are reasonably expected to be present.	Please see Comment PA9-15 regarding inclusion of DQOs in Section 9.4.1 of Permit Attachment 9. Not all treatment standards include UHCs; therefore UHCs would be included only in characterization if needed to determine whether the treatment standard is achieved. To address this issue and correct a typographical error (the word "appropriated"), please revise to read: Wastes to be treated at the RMWMU and AHCU shall be characterized based on acceptable knowledge and supplemented by sampling and analysis, as appropriate, before treatment takes place to meet the DQOs noted above. For wastes that will be treated to meet the treatment standards, characterization shall include analysis of any underlying hazardous constituents (UHCs) that are reasonably expected to be present if UHCs are part of the treatment standard.
PA9-26	9.4.5.3	266	Treated wastes and treatment residues shall be characterized through knowledge of process and supplemented by sampling and analysis data, as appropriate, using the process described in Section 9.4.1 of this Permit Attachment. In addition to the DQOs listed in Section 9.4.1.1 of this Permit Attachment, treated wastes and treatment residues shall be characterized to determine one or more of the following, as appropriate, for each waste: 1. Whether the waste has been treated effectively to meet LDR requirements; 2. Compliance with applicable treatment standards;	The waste characterization process is described in Section 9.4.2, rather than in Section 9.4.1; please correct the reference. Additionally, the draft Permit does not include Section 9.4.1.1. As discussed in Comment PA9-15, DOE/Sandia included DQOs in the Application, but they are not included in the draft Permit. Please incorporate the DQOs provided in that comment. As noted in the preceding comment, UHCs are not part of every treatment standard; thus they are not always included in characterization. DOE/Sandia noted in the Application that treatment is conducted to accomplish various objectives; these do not always

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-26 (cont)			3. UHCs; *4 (not included in comment)* 5. .Suitability for treatment by one or more methods available on-site to meet treatment standards, and *6 (not included in comment)* These characterization criteria are summarized in Table 9-3. All treated waste and treatment residues shall be characterized by the process described in Section 9.4 of this Permit Attachment. Characterization of treated wastes and treatment residues shall include consideration of both listed and characteristic wastes that were present in the untreated wastes. The Permittees shall also follow the appropriate regulatory requirements for characterizing wastes that are listed solely because they exhibit one or more of the characteristics of ignitability, reactivity, or corrosivity. [40 C.F.R. § 268.40(c) and 40 C.F.R. Part 261, Subpart C].	include complete treatment or treatment to meet the standards. The list of items should be clarified to indicate "and/or" to be consistent with "one or more" indicated before the list. The paragraph following the list contains a redundant reference to Section 9.4 and requirements for compliance with regulatory requirements and treatment standards for characteristic wastes that are closely related to Item 2 and would be clearer if combined with Item 2. Please revise as follows: Treated wastes and treatment residues shall be characterized through knowledge of process and supplemented by sampling and analysis data, as appropriate, using the process described in Section 9.4.2 of this Permit Attachment. In addition to the DQOs listed in Section 9.4.1.1 of this Permit Attachment, treated wastes and treatment residues shall be characterized to determine one or more of the following, as appropriate, for each waste: 1. Whether the waste characteristic of interest has been treated effectively to meet LDR requirements; 2. Compliance with applicable treatment standards if compliance is a treatment goal (including standards applicable to wastes that are listed solely because they exhibit one or more of the characteristics of ignitability, reactivity, or corrosivity) [40 C.F.R. § 268.40(c) and 40 C.F.R. Part 261, Subpart C]; 3. UHCs that are part of the treatment standard, if compliance is a treatment goal; *4 (not included in comment)* 5. Suitability for treatment by one or more methods available on-site to meet treatment standards, and / or *6 (not included in comment)* These characterization criteria are summarized in Table 9-3. Characterization of treated wastes and treatment residues shall include consideration of both listed and characteristic wastes that were present in the untreated wastes.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-27	9.4.5.4	267	The reactive and ignitable characteristics of the treatment residue at the TTU shall be assessed by visually observing the treatment residue in the burn pan for the presence of any unreacted SASN and PETN.	As discussed in Comment PA4-11, TTU personnel operate the burners for at least 30 minutes after the last visual or audible evidence of waste treatment to ensure that all the explosives are deactivated and the ignitable liquids are combusted. Personnel visually assess the residue when it is removed from the pan. PETN is rarely used and would not typically be present in the residue. Please revise to read: The Permittees shall use visual and audible evidence to determine if treatment has been completed, as discussed in Permit Attachment 4, and shall operate the burners for at least 30 minutes after the last visual or audible evidence of waste treatment to ensure that all the explosives are deactivated and the ignitable liquids are combusted. Operating personnel shall visually observe the residue as it is removed from the burn pan to check for the presence of unreacted SASN (and PETN, as applicable).
PA9-28	9.4.5.4	267	Because the TTU is located outside, the steel-lined concrete pad periodically collects water from precipitation and the water drains into a catch tank. Unless waste spills or untreated waste ("kick out") contaminates the steel-lined concrete pad, the water collected in the catch tank consists of precipitation. If water collected in the catch tank is determined to be contaminated with hazardous waste constituents, arrangements shall be made for disposal into the City of Albuquerque wastewater system with a one-time notice placed in the Facility files in accordance with 40 C.F.R. § 268.7(a)(7) provided the waste can be legally discharged to the wastewater system. If the wastewater cannot be discharged into the City of Albuquerque wastewater system, it shall be managed at the HWMU.	Please see General Comment G-B and Comment PA4-20. As generators of the water in the catch tank, DOE/Sandia are responsible for compliance with the requirements of 40 CFR 261 and 262. The management of the collected water does not affect TTU operations, and therefore the management requirements should not be specified in this Permit. Please revise to read: Because the TTU is located outside, some residual soil is present on the steel-lined concrete pad, the pad periodically collects water from precipitation, and the water drains through a filter into a catch tank. If operating personnel wash the pad, the wash water collects in the tank. Untreated waste "kick out" is occasionally ejected from the burn pan during treatment and may be present on the pad. The residual soil and kickout (if present) are collected in the filter when the water drains into the catch tank. The filter and accumulated water in the catch tank shall be characterized using the process described in Section 9.4.2 of this Permit Attachment and shall be managed appropriately.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-29	9.4.5.5	267 - 268	1. Reactive metals, metal-containing particulates, and oxidizers treated by chemical deactivation at the RMWMU and AHCU are deactivated using water, a water/alcohol solution, other organic liquid, or Portland cement. Alcohol and other organic liquids may exhibit the characteristic of ignitability, and can typically be characterized using knowledge of the treatment process. The Permittees may use acceptable knowledge of process, as appropriate, to determine whether treated waste or treatment residues exhibit the hazardous waste characteristics of reactivity or ignitability, and the flash point test, as appropriate, for determination of ignitability. The treated wastes and treatment residues shall be analyzed for UHCs expected to be present in the untreated waste if they will not undergo further treatment on-site. 2. *(not included in comment)* 3. Reactive wastes treated by chemical deactivation at the RMWMU and AHCU and their treatment residues, if any, shall be characterized for the presence of sulfides and cyanides if their presence caused the waste to be reactive. The treated wastes and treatment residues shall be analyzed for UHCs if they will not undergo further treatment on-site. 4. Reactive batteries and other reactive/explosive items treated by thermal deactivation at the RMWMU and their treatment residues, if any, shall be characterized for reactivity through knowledge of the treatment process and operations, as appropriate. The wastes may also exhibit the hazardous waste characteristic of toxicity. The treated wastes and treatment residues shall be characterized for UHCs through process knowledge and sampling and analysis, as appropriate, if they will not undergo further treatment on-site. Characterization for UHCs shall be performed at least once for each waste stream if the wastes are further treated by macroencapsulation either on-site or off-site. 5. *(not included in comment)* 6. Aqueous liquids treated by stabilization at the RMWMU and AHCU (including liquids that have previously been neutralized) shall be checked for the presence of free liquids. The treated wastes shall be analyzed for the UHCs reasonably expected to be present in the untreated waste if they will not undergo further treatment on-site. 7. Oils and organic liquids exhibiting the hazardous waste characteristics of toxicity that are treated by stabilization at the	DOE/Sandia note that underlying hazardous constituents (UHCs) are defined in 40 CFR 268.2(i) as "any constituent listed in §268.48, Table UTS – Universal Treatment Standards, except fluoride, selenium, sulfides, vanadium, and zinc, <u>which can reasonably be expected to be present at the point of generation</u> of the hazardous waste at a concentration above the constituent-specific UTS treatment standards." (emphasis added). Thus characterization of treated wastes is limited to UHCs that are reasonably expected to be present. Thermal batteries may be chemically deactivated as discussed in Comment PA9-10; the effectiveness of the treatment can be determined visually or through knowledge of process (item 4 in this list). Macroencapsulation is a treatment technology specified in 40 CFR 268.42 Table 1; compliance is achieved through the specified treatment method and no further analysis is needed. Indeed, analysis would be counterproductive, as it would involve breaching the encapsulating material to obtain a sample (item 4 in this list). As noted in Comment PA9-9, liquid wastes are solidified and stabilized as needed (items 6 and 7 in this list). Wastes subject to physical treatment may exhibit multiple characteristics and contain more than one listed waste or both; item 10 indicates such wastes have only one characteristic. The final requirement in this section is redundant, as UHCs are addressed as appropriate in each numbered item. Please revise to read. 1. Reactive metals, pyrophoric metal-containing particulates, and oxidizers treated by chemical deactivation at the RMWMU and AHCU are deactivated using water, a water/alcohol solution, other organic liquid, or Portland cement. Alcohol and other organic liquids may exhibit the characteristic of ignitability, and can typically be characterized using knowledge of the treatment process. The Permittees may use acceptable knowledge of process, as appropriate, to determine whether treated waste or treatment residues exhibit the hazardous waste characteristics of reactivity or ignitability, and the flash point test, as appropriate, for determination of ignitability. The treated wastes and treatment residues shall be analyzed for UHCs reasonably expected to be present in the untreated waste if they will not undergo further treatment on-site. 3. Reactive wastes treated by chemical deactivation at the RMWMU

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-29 (cont)			RMWMU and AHCU shall be characterized through process knowledge and sampling and analysis, as appropriate. The treated wastes shall be analyzed for toxicity characteristic constituents and the UHCs reasonably expected to be present in the untreated waste if they will not undergo further treatment on-site. 8. Soils and particulates exhibiting one or more of the hazardous waste characteristics of ignitability, reactivity, and toxicity are treated by deactivation and stabilization at the RMWMU and AHCU, and may contain UHCs. Once the treated wastes no longer exhibit the characteristics of ignitability and reactivity, the treated wastes shall be characterized for toxicity through sampling and analysis, as appropriate. The treated wastes shall be analyzed for UHCs if they will not undergo further treatment on-site 9. Wastes exhibiting the characteristic of toxicity or containing or contaminated with spent solvents and that are treated by macroencapsulation at the RMWMU and AHCU shall be visually examined and characterized analytically at least once to determine whether treatment met the requirements of the technologies specified in 40 C.F.R. §§ 268.40-45. Knowledge of the treatment process as discussed in Permit Attachments 4, 5, and 6 may also be used to determine treatment effectiveness. 10. Wastes treated by physical treatment include components containing listed wastes or exhibiting the characteristics of ignitability, reactivity, corrosivity, or toxicity. After items are successfully detached and separated from larger items, all of the items shall be characterized as described in Section 9.4.2. *11. (not included in comment)* 12. Liquids and pressurized containers treated by physical treatment at the RMWMU shall be characterized separately following treatment. If the containers are empty as defined in 40 C.F.R. § 261.7, the containers are not hazardous waste. The collected liquids shall be characterized in the same manner as any other waste. If the liquid wastes will not undergo further treatment on-site, they shall be characterized to determine compliance with treatment standards applicable to all components, including UHCs in characteristic wastes. Treated wastes and treatment residues shall be analyzed for UHCs, as appropriate, once all further on-site treatment has been completed.	and AHCU and their treatment residues, if any, shall be characterized for the presence of sulfides and cyanides if their presence caused the waste to be reactive. The treated wastes and treatment residues shall be analyzed for UHCs reasonably expected to be present in the untreated waste if they will not undergo further treatment on-site and the information is required for off-site management. 4. Reactive batteries and other reactive/explosive items treated by thermal or chemical deactivation at the RMWMU and their treatment residues, if any, shall be characterized for reactivity through knowledge of the treatment process and operations or through visual evidence, as appropriate. The wastes may also exhibit the hazardous waste characteristic of toxicity. The treated wastes and treatment residues shall be characterized for UHCs reasonably expected to be present in the untreated waste through process knowledge and/or sampling and analysis, as appropriate, if they will not undergo further treatment on-site and the information is required for off-site management. 6. Aqueous liquids treated by stabilization/solidification at the RMWMU and AHCU (including liquids that have previously been neutralized) shall be checked for the presence of free liquids. The treated wastes shall be analyzed for the UHCs reasonably expected to be present in the untreated waste if they will not undergo further treatment on-site. 7. Oils and organic liquids exhibiting the hazardous waste characteristics of toxicity that are treated by stabilization/solidification at the RMWMU and AHCU shall be characterized through process knowledge and sampling and analysis, as appropriate. The treated wastes shall be analyzed for toxicity characteristic constituents and the UHCs reasonably expected to be present in the untreated waste if they will not undergo further treatment on-site. 8. Soils and particulates exhibiting one or more of the hazardous waste characteristics of ignitability, reactivity, and toxicity are treated by deactivation and stabilization at the RMWMU and AHCU, and may contain UHCs. Once the treated wastes no longer exhibit the characteristics of ignitability and reactivity, the treated wastes shall be characterized for toxicity through sampling and analysis, as appropriate. The treated wastes shall be analyzed for UHCs reasonably expected to be present in the untreated waste if

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-29 (cont)				they will not undergo further treatment on-site. 9. Wastes exhibiting the characteristic of toxicity or containing or contaminated with spent solvents and that are treated by macroencapsulation at the RMWMU and AHCU shall be visually examined to determine whether treatment met the requirements of the technologies specified in 40 C.F.R. §§ 268.40-45. 10. Wastes treated by physical treatment include components containing listed wastes and/or exhibiting one or more characteristics of ignitability, reactivity, corrosivity, or toxicity. After components are successfully separated from larger items, all of the items shall be characterized as described in Section 9.4.2. 12. Liquids and pressurized containers treated by physical treatment at the RMWMU shall be characterized separately following treatment. If the containers are empty as defined in 40 C.F.R. § 261.7, the containers are not hazardous waste. The collected liquids shall be characterized in the same manner as any other waste. If the liquid wastes will not undergo further treatment on-site, they shall be characterized as described in Section 9.4.4 as needed for appropriate off-site management.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-30	Table 9-3	270		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment.

TABLE 9-3
Additional Parameters, Characterization Methods, and Rationale for Wastes Treated at the Facility's Permitted Units

Waste Type Description	Characterization Method	Parameter[a]	Rationale
Explosive waste to be treated by open burning	Knowledge of Process at the TTU, otherwise knowledge of process and sampling and analysis, as appropriate	All characterization information previously obtained Knowledge of treatment process	Verify that waste has same characteristics and constituents as previous wastes treated at TTU Determine treatment standards Identify UHCs reasonably expected to be present in characteristic waste
Wastes that have been treated through thermal deactivation	Acceptable Knowledge and Sampling and Analysis, as appropriate	All characterization information previously obtained for untreated waste Physical characteristics Knowledge of treatment process DOT hazard class Stability, DOT hazard class	Determine waste form Determine ignitability and reactivity characteristics Determine waste compatibility information Determine whether waste meets treatment standards, including standards for UHCs
Waste to be treated through stabilization	Acceptable Knowledge and Sampling and Analysis, as appropriate	All characterization information previously obtained Knowledge of treatment process UHCs	Verify that waste is suitable for treatment by planned process Determine treatment standards Identify UHCs expected to be present in characteristic waste
Wastes that have been treated through stabilization	Acceptable Knowledge and Sampling and Analysis, as appropriate	All characterization information previously obtained for untreated waste Physical characteristics Knowledge of treatment process Visual or Paint Filter Liquids Test Flash point (for liquids), DOT hazard class (for solids) Stability, DOT hazard class UHCs	Determine whether waste meets listing criteria Determine waste form Determine presence of free liquids Determine ignitability and reactivity characteristics Determine waste compatibility information Determine whether waste meets treatment standards, including standards for UHCs
Waste that have been treated through macroencapsulation	Knowledge of Process	All characterization information previously obtained for untreated waste Physical characteristics, UHCs Knowledge of treatment process	Determine waste form Determine whether waste meets treatment standards

[a] Parameters listed are in addition to those shown in Table 9-2. Parameters shown in italics are mandatory; the others are selected based on obtaining additional information necessary for treatment or for characterizing the treated waste

DOE/SANDIA COMMENT

DOE/Sandia note several items in the Table that are unclear. Explosive waste is treated by open burning only at the TTU; no sampling and analysis is needed for characterization of these wastes. UHCs are not included in the parameters for wastes that have been macroencapsulated.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-30 (cont)			DOE/Sandia note that the waste characterization process in the Application includes mandatory characterization parameters that constitute minimum acceptable knowledge for each waste. The remaining parameters are selected as needed. This was shown in Table B-3 in the Application through italics formatting and an explanatory footnote. The footnote is included in the draft Permit but the items in the table are no longer in italics. Additionally, UHCs in every case are limited to those that are reasonably expected to be present in the untreated waste. Please revise the footnote as noted to address the mandatory characterization parameters in all rows of the table, and revise the indicated rows of the table to read:	

TABLE 9-3
Additional Parameters, Characterization Methods, and Rationale for Wastes Treated at the Facility's Permitted Units

Waste Type Description	Characterization Method	Parameter	Rationale
Explosive waste to be treated by open burning	Knowledge of Process	All characterization information previously obtained Knowledge of treatment process	Verify that waste has same characteristics and constituents as previous wastes treated at TTU Determine treatment standards
Wastes that have been treated through thermal deactivation	Acceptable Knowledge and Sampling and Analysis, as appropriate	All characterization information previously obtained for untreated waste Physical characteristics Knowledge of treatment process DOT hazard class Stability, DOT hazard class UHCs	Determine waste form Determine ignitability and reactivity characteristics Determine waste compatibility information Determine whether waste meets treatment standards, including standards for UHCs
Waste to be treated through stabilization / solidification	Acceptable Knowledge and Sampling and Analysis, as appropriate	All characterization information previously obtained Knowledge of treatment process UHCs	Verify that waste is suitable for treatment by planned process Determine treatment standards Identify UHCs expected to be present in characteristic waste
Wastes that have been treated through stabilization / solidification	Acceptable Knowledge and Sampling and Analysis, as appropriate	All characterization information previously obtained for untreated waste Physical characteristics Knowledge of treatment process Visual or Paint Filter Liquids Test Flash point (for liquids), DOT hazard class (for solids) Stability, DOT hazard class UHCs	Determine whether waste meets listing criteria Determine waste form Determine presence of free liquids Determine ignitability and reactivity characteristics Determine waste compatibility information Determine whether waste meets treatment standards, including standards for UHCs
Waste that have been treated through macroencapsulation	Knowledge of Process	All characterization information previously obtained for untreated waste Physical characteristics, Knowledge of treatment process	Determine waste form Determine whether waste meets treatment standards

Note Parameters listed are in addition to those shown in Table 9-2. Parameter selection is based on acceptable knowledge for each waste. Parameters up to and including "knowledge of the treatment process" are mandatory; the others are selected based on obtaining additional information necessary for treatment or for characterizing the treated waste. UHCs are always limited to those constituents that are reasonably expected to be present in the untreated waste.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-31	9.5	273	Personnel involved in verification activities shall be trained and qualified for the activities they perform. 40 C.F.R. §§ 264.13(a)(3)(i) and 64.13(b)(4) and 40 C.F.R. § 268.7(b).	DOE/Sandia note this requirement applies only to personnel at the Permitted Units, and one of the regulatory citations is unclear. Please revise to read: Permitted Unit personnel involved in verification activities shall be trained and qualified for the activities they perform. 40 C.F.R. §§ 264.13(a)(3)(i) and 264.13(b)(4) and 40 C.F.R. § 268.7(b).
PA9-32	9.5	273	The Permittees shall review air emissions data and status at least once every 12 months for hazardous and mixed wastes subject to 40 C.F.R. Part 264, Subpart CC.	As discussed in General Comment G-I, the air emissions standards in 40 CFR 264 Subpart CC apply to individual containers rather than to entire container storage units, and containers of mixed wastes are not subject to the standards. Please revise to read: The Permittees shall review air emissions data and status at least once every 12 months for containers of hazardous wastes subject to 40 C.F.R. Part 264, Subpart CC.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-33	9.5.2	274	In addition to the verification activities described in Section 9.5.1 above for non-routine wastes, the Permittees shall re-evaluate characterization information for routinely generated hazardous waste streams for any of the following reasons (routinely generated waste streams are those that are generated at least once per month in quantities of 30 gallons or greater): *1–5 (not included in comment)* 6. When regulatory requirements change and additional information is required for proper management of the waste. In addition to the re-evaluations performed for one or more of the reasons listed above, the Permittees shall annually re-evaluate waste streams for ten percent by volume of the total routinely generated hazardous and mixed wastes streams at the Facility that meet all of the following conditions: *1 (not included in comment)* 2. The waste is part of a waste stream as defined in Section 9.1.2; and *3 (not included in comment)* In each case, the Permittees shall evaluate a single sample randomly selected from the waste stream, and the re-evaluation will be limited to such information necessary for the proper management of the waste.	DOE/Sandia note characterization of wastes in this Permit Attachment is limited to the information needed for proper management of the wastes <u>at the Permitted Units</u>. Additionally, waste streams are defined in Section 9.5.2. Please revise as follows: In addition to the verification activities described in Section 9.5.1 above for non-routine wastes, the Permittees shall re-evaluate characterization information for routinely generated hazardous waste streams for any of the following reasons (routinely generated waste streams are those that are generated at least once per month in quantities of 30 gallons or greater): *1–5 (not included in comment)* 6. When regulatory requirements change and additional information is required for proper management of the waste at one or more Permitted Units at the Facility. In addition to the re-evaluations performed for one or more of the reasons listed above, the Permittees shall annually re-evaluate waste streams for ten percent by volume of the total routinely generated hazardous and mixed wastes streams at the Facility that meet all of the following conditions: *1 (not included in comment)* 2. The waste is part of a waste stream as defined in Section 9.5.2; and *3 (not included in comment)* In each case, the Permittees shall evaluate a single sample randomly selected from the waste stream, and the re-evaluation will be limited to such information necessary for the proper management of the waste at one or more of the Permitted Units at the Facility.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-34	9.6.1	275	According to the EPA guidance, acceptable knowledge is defined to include process knowledge, supplemental waste analysis data, and facility records of analysis (EPA, 1994). Process knowledge is described as data developed under 40 C.F.R. Part 264 and existing published or documented data on a specific hazardous waste or a waste generated from similar processes.	Please delete "(EPA, 1994)" unless a list of references is included in the final Permit. DOE/Sandia note that waste characterization for the Permitted Units is performed in accordance with 40 CFR 264.13. Per 40 CFR 264.13(a)(2), "analysis may include data developed under part 261 of this chapter, and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes". Thus a reference to 40 CFR 264.13 is more appropriate than a general reference to 40 CFR Part 264. Accordingly, please revise to read: According to the EPA guidance, acceptable knowledge is defined to include process knowledge, supplemental waste analysis data, and facility records of analysis. Process knowledge is described as data developed under 40 C.F.R. Part 264.13 and existing published or documented data on a specific hazardous waste or a waste generated from similar processes.
PA9-35	9.6.2	276	Documentation of process knowledge for each hazardous waste or waste stream shall be maintained in the Operating Record of the Unit with other waste characterization information.	In the case of extensive process information, the Permittees may choose to keep it in another location at the Facility, with a reference in the Unit Operating Record. Please revise to read: Process knowledge documentation for each RCRA-regulated waste or waste stream is kept in the operating record of the Unit with other waste characterization information, or in a reference file that includes the documents or identifies them and their locations.
PA9-36	9.6.2	276	Examples of documentation that can be used to substantiate process knowledge include the following: *1–11 (not included in comment)* 12. Analytical data from studies of common industry processes that are the same as to Facility processes; *13–15 (not included in comment)*	Due to the nature of wastes (e.g., wastes from D&D operations or mixed wastes from research and testing), DOE/Sandia use information from similar processes and additional methods for documenting process knowledge as discussed in the Application. Please revise the list of documentation examples as shown: 12. Analytical data from studies of common industry processes that are similar to or the same as Facility processes; 16. Information from personnel (documented interviews) 17. Sampling and analysis data from comparable wastes or waste streams 18. Analysis of a surrogate waste or waste stream

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-37	9.7	276	Sampling and analysis shall be performed to provide supplemental information when a waste lacks sufficient information to adequately and properly characterize the waste based on acceptable knowledge.	This statement requires clarity that these sampling and analysis requirements apply only to wastes and activities subject to this Permit. Please revise to read: Sampling and analysis shall be performed to provide supplemental information when acceptable knowledge does not provide sufficient information to adequately and properly characterize a hazardous or mixed waste as needed for the activities conducted under this Permit.
PA9-38	9.7.2	277	Pursuant to 40 C.F.R. 264.13(b)(1), Table 9-4 identifies the applicable analytical testing requirements and specific test methods for parameters of interest, including underlying hazardous constituents should any be present.	As noted in previous comments, UHCs are limited to those reasonably expected to be present in the untreated waste. Please revise to read: Pursuant to 40 C.F.R. 264.13(b)(1), Table 9-4 identifies the applicable analytical testing requirements and specific test methods for parameters of interest, including underlying hazardous constituents that are reasonably expected to be present in the untreated waste.
PA9-39	9.7.3	277	Some wastes separate into distinct layers with time, and representative samples must include samples from each layer.	This implies that a representative sample includes distinct samples from each layer, rather than an aliquot or portion from each layer. Please revise to read: Some wastes separate into distinct layers with time, and representative samples must include portions from each layer.
PA9-40	9.7.3	277	At a minimum, the sampling shall be repeated if the waste-generating process changes, or if inspection of the waste reveals it has changed.	As discussed in Comment PA9-19, changes in the waste-generating process or activity are not important unless they affect the waste and the information is needed for conducting waste management activities under this Permit. If the waste to be managed at one of the Permitted Units has been identified as clearly hazardous or mixed (e.g., a listed waste or a characteristic waste with toxicity contaminant concentrations well above the regulatory limits), the existing determination is adequate unless the changes were substantive. Please revise to read: At a minimum, the sampling shall be repeated if the waste-generating process changes in a substantive way, or if inspection of the waste reveals it has changed such that the previous determination is no longer applicable.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-41	Table 9-4	278		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment.

TABLE 9-4
Summary of Analytical Characterization Methods Used for Hazardous Wastes

Parameter	Method Numbers[b]	Rationale
Spent nonhalogenated solvents	EPA Methods SW-846 (1311, 8260B, 8275A)[f] or equivalent methods[e] Methods included in 20 NMAC 4.1.600/40 C.F.R. §§ 265.1084(a)(2), (a)(3), and (a)(4)	Determine total and/or TCLP and SVOC/VOC concentration in samples of solids or liquids
Underlying hazardous constituents[a] that are metals:	EPA Methods SW-846[f]:	
Same metals listed above (except selenium)	same methods for metals listed above	
Antimony	(1311, 6010B, 7040, 7041)[e]	Determine whether treated wastes meet treatment standards
Beryllium	(1311, 6010B, 7090, 7091)[e]	
Cyanides (total)	(1311, 9010B, 9012A)[e]	
Cyanides (amendable)	(1311, 9010B, 9012A)[e]	
Nickel	(1311, 6010B, 7520, 7521)[e]	
Thallium	(1311, 6010B, 7840, 7841)[e] or equivalent methods[e]	

b The Permittees shall use the most current methods for analysis.

DOE/SANDIA COMMENT

For consistency, the reference to the New Mexico Administrative Code in the first row shown should be deleted. The analytical references to cyanides should be revised to total and amenable (rather than amendable). Also, DOE/Sandia note method numbers listed in this table may change in future updates and revisions to SW-846 and the ASTM standards referenced in the table.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-41 (cont)			Please revise the footnote to reflect this:	

TABLE 9-4
Summary of Analytical Characterization Methods Used for Hazardous Wastes

Parameter	Method Numbers[b]	Rationale
Spent nonhalogenated solvents	EPA Methods SW-846 (1311, 8260B, 8275A)[f] or equivalent methods[e] Methods included in 40 C.F.R. §§ 265.1084(a)(2), (a)(3), and (a)(4)	Determine total and/or TCLP and SVOC/VOC concentration in samples of solids or liquids
Underlying hazardous constituents[a] that are metals:	EPA Methods SW-846[f]:	
Same metals listed above (except selenium)	same methods for metals listed above	
Antimony	(1311, 6010B, 7040, 7041)[e]	Determine whether treated wastes meet treatment standards
Beryllium	(1311, 6010B, 7090, 7091)[e]	
Cyanides (total)	(1311, 9010B, 9012A)[e]	
Cyanides (amenable)	(1311, 9010B, 9012A)[e]	
Nickel	(1311, 6010B, 7520, 7521)[e]	
Thallium	(1311, 6010B, 7840, 7841)[e] or equivalent methods[e]	

b The Permittees shall use the most current methods for analysis. Method numbers shown in this table are subject to change through future updates and may differ from those shown here

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-42	9.7.3	279	The following sampling strategies shall be used for waste sampling at the Permittees' hazardous waste management units regulated under this Permit, unless an alternative sampling strategy is determined to be more appropriate for a specific waste item based on specific historical, process, or waste information, and is approved by the Department. *1. (not included in comment)* 2. If the sampling or analysis of the waste would pose a serious threat to human health, the Permittees may forego sampling and analysis if approved in advance, in writing by the Department; *3. (not included in comment)* 4. For solid items whose surface is determined to be contaminated with hazardous and mixed wastes, such as contaminated equipment, surface wipe samples shall be taken; *5. (not included in comment)* 6. For the same kind of liquid waste in multiple containers, one sample shall be taken from each container or for each 55 gallons of waste, whichever is larger; 7. For the same kind of solid items in multiple containers, one sample shall be taken from each container or each cubic yard of waste, whichever is larger (unless otherwise approved in advance, in writing by the Department); and *8. (not included in comment)*	The draft Permit requires that DOE/Sandia comply with the requirements of SW-846 with respect to sampling and analysis conducted under this Permit Attachment. Therefore, if DOE/Sandia find that a particular hazardous or mixed waste is not amenable to the sampling strategies listed in this section of the WAP, any alternate strategy that meets the requirements of Chapter 9 in SW-846 would be appropriate and would meet the requirements of the Permit. Prior NMED approval of the specific strategy should not be required unless the sampling strategy does not meet the requirements of SW-846. As described in General Comment G-G, DOE/Sandia are concerned about applying prescriptive requirements such as prior NMED approval for alternative sampling strategies to the variety of hazardous and mixed wastes managed at the Permitted Units. For example, NMED approval of alternative sampling and analysis plans as described in this draft Permit Condition would necessitate a review before approval; this could prevent timely acquisition of information (e.g., waste characteristics and properties) that is necessary to manage the wastes appropriately at the Permitted Units. Furthermore, DOE/Sandia note sampling information will be retained in the Operating Record and will therefore be available for NMED review. This section does not clearly acknowledge that sampling is not always needed as discussed in the rest of the WAP. DOE/Sandia also note concerns with the detailed information in the detailed sampling elements, and one additional item is needed. Please revise as follows: When sampling is required, the following strategies shall be used at the Permitted Units, unless an alternative sampling strategy that meets the requirements of SW-846 is determined to be more appropriate for a specific waste item based on specific historical, process, or waste information: *1. (not included in comment)* 2. If the sampling or analysis of the waste would pose a serious threat to human health, the Permittees shall evaluate additional sources of acceptable knowledge or make a conservative hazardous waste determination; *3. (not included in comment)* 4. For solid items whose surface is suspected to be contaminated with hazardous and mixed wastes, such as contaminated equipment,

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-42 (cont)				various sampling methods can be employed (e.g., surface swipes, crushing, grinding, and shredding) depending on the physical form of the waste and the suspected contaminants; 5. *(not included in comment)* 6. For the same kind of liquid waste in multiple containers, the sampling strategy shall be determined in accordance with SW-846, Chapter 9; 7. For the same kind of solid items in multiple containers, the sampling strategy shall be determined in accordance with SW-846, Chapter 9; 8. *(not included in comment)* 9. For solid items that may exhibit hazardous waste characteristics, a sample shall be taken and analyzed from the waste or from a nonwaste item similar to the waste item.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-43	9.8	283	Hazardous and mixed wastes from off-site sources may be accepted at the Facility. These wastes and sources include: 1. Hazardous and mixed wastes generated by Facility employees (or contractors in the service of the Permittees) outside the Facility boundary may be accepted for storage, treatment, or both if the wastes are properly and adequately characterized and transported in compliance with all regulatory requirements. 2. Wastes or waste treatment residues associated with off-site treatment of Facility wastes or waste streams managed or treated by off-site facilities may be returned to the Facility for storage, treatment, or both if all such wastes are properly and adequately characterized and transported in compliance with all regulatory requirements. 3. Wastes received from other (non-Facility) off-site DOE facilities for storage, treatment, and/or transport to other off-site facilities, only if all such wastes are properly and adequately characterized and transported in compliance with all regulatory requirements, and only if such wastes are not being shipped to the Facility for the purpose of avoiding compliance with the requirements of 40 C.F.R. Part 268.	DOE/Sandia note "proper and adequate" characterization is limited to that needed for management at one or more SNL Permitted Units in accordance with this Permit. Complete characterization may not be required. DOE/Sandia may use the capabilities at one or more Permitted Units (e.g. remote handling capabilities at the AHCU) to handle hazardous or mixed wastes, obtain additional information, use that information to select further management steps, and prepare the waste as needed. Please revise to read: Hazardous and mixed wastes from off-site sources may be accepted at the Facility. These wastes and sources include: 1. Hazardous and mixed wastes generated by Facility employees (or contractors in the service of the Permittees) outside the Facility boundary may be accepted for storage, treatment, or both if the wastes are characterized and transported in compliance with applicable regulatory requirements. 2. Wastes or waste treatment residues associated with off-site treatment of Facility wastes or waste streams managed or treated by off-site facilities may be returned to the Facility for storage, treatment, or both if all such wastes are characterized and transported in compliance with applicable regulatory requirements. 3. Wastes received from other (non-Facility) off-site DOE facilities for storage, treatment, and/or transport to other off-site facilities, only if all such wastes are characterized and transported in compliance with applicable regulatory requirements, and only if such wastes are not being shipped to the Facility for the purpose of avoiding compliance with the requirements of 40 C.F.R. Part 268.
PA9-44	9.8	284	Prior to waste shipment to the Facility, the Permittees shall obtain a waste transfer request and characterization data from an off-site generator. The Permittees shall review the request and characterization data from the off-site generator for completeness and conformance with the waste characterization DQOs and process described in Section 9.4 of this Permit Attachment.	This requirement should clarify that these activities are performed by Permitted Unit personnel. Please see Comment PA9-15 regarding the DQOs in Section 9.4.1.1 of the draft Permit. Please revise to read: Prior to waste shipment to the Facility, Permitted Unit personnel shall obtain a waste transfer request and characterization data from an off-site generator. The Permittees shall review the request and characterization data from the off-site generator for completeness and conformance with the waste characterization DQOs and process described in Section 9.4.1.1 of this Permit Attachment.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-45	9.8.3	285	The Permittees shall conduct fingerprint analyses for waste received from off-site in one-time quantities larger than 30 gallons to verify the waste characterization information provided by the generator.	As discussed in General Comment G-G, the Application includes descriptions of typical operations as illustrations of ways in which DOE/Sandia meet applicable regulatory and Permit requirements; use of fingerprint analyses is such an operation. Fingerprint analyses may not be appropriate for all wastes received from off-site sources (e.g., heterogeneous waste form, wastes with radiological concerns). Please revise to read: The Permittees shall conduct fingerprint analyses, if applicable for the waste, for waste received from off-site facilities in one-time quantities larger than 30 gallons to verify the waste characterization information provided by the generator.
PA9-46	9.9.4	287	Hazardous wastes generated through treatment at the Permitted Units (e.g., treated waste, treatment residue) shall be characterized as required by the off-site TSDF receiving the waste to determine whether it meets the applicable LDR treatment and in accordance with the requirements of this Permit. Waste that must meet concentration-based treatment standards prior to shipment off-site for disposal shall be evaluated by the Permittees to determine if applicable constituent concentration levels have been attained, as described in Section 9.9. If a waste must be treated by one or more specified treatment methods (e.g., macroencapsulation) prior to land disposal, analytical testing to certify LDR compliance for the waste before treatment may not be necessary, as described in Section 9.9.2. If acceptable knowledge or use of a specified treatment technology is not appropriate for determining LDR compliance status, the treated waste or treatment residue shall be sampled and analyzed to determine if it meets LDR treatment standards. The analysis shall determine the total concentration of hazardous waste constituents in the waste, or the concentrations of hazardous waste constituents in an extract of the waste obtained using Test Method 1311 in SW-846, as appropriate. Analytical results obtained in compliance with LDR requirements shall be retained within the Unit Operating Record. Characterization of treatment waste and treatment residues for LDR compliance will include hazardous waste constituents that were introduced as part of the treatment process, as discussed in Section 9.9.4. For wastes generated through treatment at one of the Permitted Units, the Permittees shall comply with the applicable requirements of 40 C.F.R. § 268.7(b), § 268.40, and § 268.49. Hazardous and mixed wastes treatment residues and treated wastes that are determined	DOE/Sandia note these requirements are quite prescriptive and somewhat confusing. Also they do not address some scenarios likely to arise during the term of the Permit: • Characterizing treated wastes and treatment residues as required by off-site TSDFs is a duty of the Permittees. The Application included a description to illustrate how the Permittees comply with the 40 CFR 268 requirements applicable to treatment facilities. • The requirements of this Permit do not apply to the process of characterizing wastes as required by the off-site TSDF(s) receiving them unless this process is directly related to management of the wastes at the Permitted Unit. • Requiring the Permittees to obtain approval from the TSDF before shipment is not related to operation of the Permitted Units, and should not be included in this Permit. • Meeting treatment standards in 40 CFR 268 is not always a goal of treatment at the Permitted Units; thus comprehensive determinations of compliance with the standards are not always appropriate, as discussed in Comment PP2-19. • DOE/Sandia request that this Permit condition be limited to requiring compliance with 40 CFR 268 as applicable to treatment facilities that generate residues. The regulatory requirements are complex, and the documentation is extensive. All the documentation will be maintained in the Operating Record, and will be available for NMED inspection and review. • NMED will be better able to achieve control of a complex process through mandating compliance with the regulations, thus

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-46 (cont)			through characterization to meet the applicable treatment standards will be sent to a permitted TSDF for disposal without further treatment. Wastes that have been generated through treatment using technologies specified in 40 C.F.R. § 268.42 and § 268.44 shall also be sent to a permitted TSDF for disposal without further treatment. Treatment residues that do not meet all of the applicable treatment standards shall be sent to a permitted TSDF for further treatment prior to land disposal. Whenever the Permittees send waste to an off-site TSDF for treatment or disposal as described above, it shall be in accordance with that facility's waste acceptance criteria. For treated wastes and treatment residues, the Permittees shall review the LDRs as they relate to the further treatment or disposal of the treated waste or treatment residues at the TSDF that intends to accept the waste. Part of this review includes evaluating the waste for UHCs and Universal Treatment Standards, and documenting the results of the evaluation as part of the certification process. UHCs must be declared if reasonably expected to be present in D001 through D043 wastes. The Permittees shall complete an appropriate LDR notification form (including signed certification) that accompanies the Uniform Hazardous Waste Manifest as part of the shipping documentation to the TSDF. Records shall be maintained at the Facility as discussed in Permit Attachment 5. The Permittees shall obtain approval from the TSDF and meet TSDF-specific waste analysis requirements (including LDR requirements) prior to shipment.	accommodating any potential future changes and avoiding inconsistencies that may be discovered in application of the Permit conditions. For example, requirements applicable to treated characteristic wastes are not included in the list of notification requirements in the draft Permit. • Treatment technologies specified in 40 CFR 268.42 and 45 are applicable to treatment operations at the Permitted Units; 40 CFR 268.44 addresses variances from the treatment standards. • DOE/Sandia note it is difficult to tell whether the requirements in this section apply to the waste before or after treatment, and constituents introduced as part of treatment are discussed in Section 9.4.5.3 of the Permit Attachment. • Recordkeeping is addressed in Permit Attachment 13 rather than Permit Attachment 5. Please revise to read: Hazardous and mixed waste generated through treatment at the Permitted Units (e.g., treated waste, treatment residue) shall be characterized as required by the off-site TSDF receiving the waste to determine whether it meets the applicable LDR treatment standards if meeting the standards was a treatment goal. Waste that must meet concentration-based treatment standards prior to shipment off-site for disposal shall be evaluated by the Permittees to determine if applicable constituent concentration levels have been attained, as described in Section 9.9. If a waste must be treated by one or more specified treatment methods (e.g., macroencapsulation) prior to land disposal, analytical testing to certify LDR compliance for the waste before treatment is not necessary, as described in Section 9.9.2. If acceptable knowledge or use of a specified treatment technology is not appropriate for determining LDR compliance status, the treated waste or treatment residue shall be sampled and analyzed to determine if it meets LDR treatment standards if meeting the standards was a treatment goal. The analysis shall determine the total concentration of hazardous waste constituents in the waste, or the concentrations of hazardous waste constituents in an extract of the waste obtained using Test Method 1311 in SW-846, as appropriate. Analytical results obtained in compliance with LDR requirements shall be retained within the Unit Operating Record. Characterization of treated waste and treatment residues for LDR compliance will include hazardous waste constituents that were introduced as part of the treatment process, as

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-46 (cont)				discussed in Section 9.4.5.3. For wastes generated through treatment at one of the Permitted Units, the Permittees shall comply with the applicable requirements of 40 C.F.R. § 268.7(b), §268.9(b) and (d), § 268.40, and § 268.49. Hazardous and mixed waste treatment residues and treated wastes that are determined through characterization to meet the applicable treatment standards will be sent to a permitted TSDF for disposal without further treatment. Wastes that have been generated through treatment using technologies specified in 40 C.F.R. § 268.42 and § 268.45 shall also be sent to a permitted TSDF for disposal without further treatment. Treatment residues that do not meet all of the applicable treatment standards shall be sent to a permitted TSDF for further treatment prior to land disposal. Whenever the Permittees send waste to an off-site TSDF for treatment or disposal as described above, it shall be in accordance with that facility's waste acceptance criteria. For treated wastes and treatment residues, the Permittees shall review the LDRs as they relate to the further treatment or disposal of the treated waste or treatment residues at the TSDF that intends to accept the waste. Part of this review includes evaluating the waste for UHCs and Universal Treatment Standards, and documenting the results of the evaluation as part of the certification process. UHCs must be declared if reasonably expected to be present in D001 through D043 wastes. The Permittees shall complete an appropriate LDR notification form (including signed certification) that accompanies the Uniform Hazardous Waste Manifest as part of the shipping documentation to the TSDF. Records shall be maintained at the Facility as discussed in Permit Attachment 13.
PA9-47	9.11	288	Once the Permittees have adequate and proper characterization for a hazardous and or mixed waste, the information shall be entered into a waste-tracking database.	Please see Comment PA9-16 regarding DR and waste-tracking database. DOE/Sandia maintain both written and electronic information in Facility and Unit Operating Records as appropriate for each Permitted Unit. 40 CFR 264 does not include requirements to maintain data in electronic form.. Also, please see Comment PA9-35 regarding the location of process knowledge documentation; this is kept in the Operating Record or in a reference file. Please revise to read: Once the Permittees have adequate and proper characterization for a hazardous and or mixed waste, the information shall be maintained in the Operating Record or in a reference files that includes the documents or identifies them and their locations.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-101*	9.0	248	Section 9.11 Records: Section 9.11 includes a discussion of records that shall be maintained for waste characterization and for analytical data.	Section 9.11 does not explicitly address analytical data records. Please revise to read: Section 9.11 Records: Section 9.11 includes a discussion of records that shall be maintained for waste characterization.
PA9-102*	9.1.2	249	Also, for the purposes of this WAP, a waste stream is defined as waste that is routinely generated as part of a well-defined waste-generating process and is distinguishable from other waste by some unique combination of one or more of the following: *1 (not included in comment)* 2. EPA Hazardous Waste Numbers; Permitted Unit-specific handling requirements; *3 (not included in comment)* 4. LDR status; waste compatibility issues; or *5 (not included in comment)*	DOE/Sandia note there are seven individual items in the list. In order to clearly express the definition of a waste stream, each item must be listed individually. Please revise as follows: Also, for the purposes of this WAP, a waste stream is defined as waste that is routinely generated as part of a well-defined waste-generating process and is distinguishable from other waste by some unique combination of one or more of the following: *1 (not included in comment)* 2. EPA Hazardous Waste Numbers; *3 (not included in comment)* 4. LDR status; *5 (not included in comment)* 6. Permitted Unit-specific handling requirements; or 7. Waste compatibility issues.
PA9-103*	9.2.11	255	Treated waste and treatment residues, which form secondary waste types (i.e., solids, liquids, or contained gases) generated by treatment operations at Permitted Units.	This should clearly state that these wastes are generated at the Permitted Units. Please revise to add "are" before "generated by."
PA9-104*	9.2.12	255	Containment system liquids may be contaminated with or contain hazardous and mixed waste(s) or constituents or exhibit a hazardous waste characteristic (i.e., reactivity, corrosivity, ignitability, or toxicity), depending on the source of the accumulated liquid.	DOE/Sandia note this description is not accurate. Containment system liquids are not necessarily hazardous waste if they contain constituents of characteristic hazardous or mixed wastes. Also, the liquids may be contaminated with listed hazardous wastes. Please revise to read: Containment system liquids may be contaminated with or contain listed hazardous and mixed waste(s) or exhibit one or more hazardous waste characteristics (i.e., reactivity, corrosivity, ignitability, or toxicity), depending on the source of the accumulated liquid.

*Comment is more administrative in nature

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-105*	9.4.2	259	The Permittees shall consider each waste individually. Each waste is one of the general types described in Section 9.3 of this Permit Attachment. The Permittees shall use waste type identification in part to determine whether and what kind of additional information is needed to adequately and properly characterize waste. Types of additional information are discussed in Section 9.3 of this Permit Attachment.	Please see Comment PA9-17 regarding descriptions of the roles of Permitted Unit personnel. DOE/Sandia note wastes treated at the RMWMU and AHCU are described in Section 9.3; general waste types are described in Section 9.2. Additional information is discussed in Section 9.6 rather than Section 9.3. Please revise to read: The Permittees shall consider each waste individually. Each waste is one of the general types described in Section 9.2 of this Permit Attachment. Permitted Unit personnel shall use waste type identification in part to determine whether and what kind of additional information is needed to adequately and properly characterize waste. Types of additional information are discussed in Section 9.6 of this Permit Attachment.
PA9-106*	9.4.3	261	If a positive identification is made, a disposal request shall be prepared and the waste shall be characterized as described above in Section 9.4.1.2 of this Attachment.	There is no Section 9.4.1.2 in Attachment 9 of the draft Permit, please revise the reference to Section 9.4.2.
PA9-107*	9.4.4	265	The Permittees shall consider the additional information when they characterize the waste using the process described in Section 9.5 and shall assign the applicable EPA Hazardous Waste Numbers.	Waste characterization is addressed in Section 9.4.2 instead of Section 9.5, please revise accordingly.
PA9-108*	9.5.1	273	Wastes shall be selected for further evaluation as part of the verification program using one or more of the following criteria: *1–3 (not included in comment)* 4. Incomplete or inconsistent documentation; and *5 (not included in comment)* Operations at the Facility generate a wide variety of routine and non-routine waste streams.. Re-evaluating the characterization of waste streams is addressed in Section 9.5. Section 9.5 also addresses non-routine wastes thus; it includes a condition that the waste not be part of a waste stream.	The list of items should be clarified to indicate "and/or" to be consistent with "one or more" indicated before the list. Also, the requirements for re-evaluating waste characterization are more accurately located in Section 9.5.2, and the last sentence is confusing due to incorrect punctuation. Please revise as follows: Wastes shall be selected for further evaluation as part of the verification program using one or more of the following criteria: *1–3 (not included in comment)* 4. Incomplete or inconsistent documentation; and/or *5 (not included in comment)* Operations at the Facility generate a wide variety of routine and non-routine waste streams. Re-evaluating the characterization of waste streams is addressed in Section 9.5.2. Section 9.5.2 also addresses non-routine wastes; thus, it includes a condition that the waste not be part of a waste stream.

*Comment is more administrative in nature

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA9-109*	9.5.2	274	Laboratory analyses, if needed, will be conducted at the Facility or an approved laboratory using appropriate methods (see Section 9.7.3).	DOE/Sandia note Section 9.7.3 addresses waste sampling rather than analytical methods; analytical methods are discussed in Section 9.7. Please revise accordingly.
PA9-110*	9.6.1	275	Documentation of acceptable knowledge shall be maintained in the Unit-specific Operating Record. [40 C.F.R. §§ 264.13(a)(2) and (b)(5), 264.73(b)(3) and 40 C.F.R. § 270.14(b)(2)].	DOE/Sandia note that 40 C.F.R. §§ 264.13(a)(2) and (b)(5) are waste analysis plan requirements that do not address operating record requirements, and 40 C.F.R. § 270.14(b)(2) addresses information to be included in permit applications. Accordingly, please revise to read: Documentation of acceptable knowledge shall be maintained in the Unit-specific Operating Record. [40 C.F.R..73(b)(3)]
PA9-111*	9.9.1	285	The Permittees shall consult waste characterization data and/or published chemical information (e.g., "NIOSH Pocket Guide to Chemical Hazards" [DHHS, 1994] or other chemical or engineering handbooks) for each waste in a planned treatment or repackaging operation involving ignitable, reactive, and incompatible wastes.	This reference has been revised and updated since the Permittees submitted the Application, and consulting such a reference for every waste is not required in other parts of the draft Permit (e.g., Permit Attachment 5). Please revise to read: The Permittees shall consult waste characterization data and/or published chemical information (e.g., "NIOSH Pocket Guide to Chemical Hazards" [DHHS, 1994] as revised and updated, or other chemical or engineering handbook) as appropriate for each waste in a planned treatment or repackaging operation involving ignitable, reactive, and incompatible wastes.

*Comment is more administrative in nature

Enclosure R

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 10

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA10-1	10.1	290	Entrance is possible only though five gates, staffed by armed military police or contractors, and upon recognition of identification stickers or passes issued to each vehicle. Visitors must have a base sponsor and sign an entry log prior to entering KAFB. The gates are shown in Permit Attachment 1, Figure 1-4 as "Guarded Gates". [40 C.F.R. § 264.14(b)(2)(i) and (ii)].	Traffic patterns and KAFB access procedures have changed, and the draft Permit should reflect the most current information. DOE/Sandia note the regulatory requirements in 40 CFR 264.14(b)(2)(i) and (ii) are fully met by the gates or doors at each Permitted Unit, not by the gates to KAFB; thus the regulatory reference should be deleted. Please revise to read: Entrance is through five general-purpose gates and several special-purpose gates, staffed by armed military police or contractors, and requires appropriate identification issued by KAFB or by the Facility. Visitors must have a KAFB or Facility sponsor and appropriate identification to enter KAFB and the Facility. The gates to KAFB and the Facility are shown on Figure 1-3 in Permit Attachment 1.
PA10-2	10.3.1	291	All buildings shall also be kept locked during non-operational hours.	If the gates in the HWMU fence are locked, it is not necessary for the doors to also be locked in order to provide an adequate barrier to entry. Please delete this sentence.
PA10-3	10.3.1	291	Signs at the HWMU shall instruct personnel and visitors to report to the Office Trailer for site-entry privileges and safety instructions. HWMU personnel shall have Facility-issued badges. Visitors shall be escorted at all times while on site. [40 C.F.R. §§ 264.14(b)(2)(i) and (ii)].	DOE/Sandia note that non-Unit personnel are often present in the Unit to perform various activities (e.g., routine or non-routine maintenance, testing fire suppression systems). Although these individuals are not Unit personnel, it is not necessary that they be escorted at all times, as they are authorized to be present at the Unit. These individuals may receive a safety briefing or be escorted if necessary for their duties, as discussed in Comment PA14-2. Please revise to read: Signs at the HWMU shall instruct personnel and visitors to report to the Office Trailer for site-entry privileges and safety instructions. HWMU personnel shall have Facility-issued badges. [40 C.F.R. §§ 264.14(b)(2)(i) and (ii)].
PA10-4	10.4.1	291	TTU personnel shall have Facility-issued badges. Visitors shall contact TTU personnel for access and shall be escorted at all times. TTU personnel and visitors enter the Building 6715 Complex through the east gate. During treatment events, all TTU gates shall be locked.	Please see Comment PA10-3 regarding non-Unit personnel who are authorized to be at the Unit. As noted in Comment PA4-23, the TTU gates must be open during manual waste transfer operations. Please revise to read: TTU personnel shall have Facility-issued badges. Visitors shall contact TTU personnel for access. Personnel and visitors enter the Building 6715 compound through the east gate. Access gates through the fence surrounding the Building 6715 compound shall be closed and locked during TTU waste transfer operations and treatment events.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA10-5	10.4.1	291	The Building 6715 doors shall be kept locked during non-operational hours, restricting access to the TTU controls which are inside the building.	Locking either the gates or the doors is sufficient to restrict access to the TTU controls. Please revise to read: The Building 6715 doors or the Building 6715 compound gates shall be kept locked during non-operational hours, restricting access to the TTU controls which are inside the building.
PA10-6	10.5.1	292	During work hours, RMWMU employees enter the area through the locked personnel doors by entering the appropriate code into a keypad on the RMWMU fence near each personnel door. Emergency and service vehicles may enter the RMWMU through the electronically controlled main vehicle gate if RMWMU personnel enter the appropriate code into a keypad inside the office trailer or on the keypads located near the personnel doors on the RMWMU fence. Signs shall be posted to instruct personnel and visitors to report to the office trailer for site-entry privileges and safety instructions. RMWMU personnel shall have Facility-issued badges. Visitors shall be escorted at all times. [40 C.F.R. § 264.14(b)(2)(i) and (ii)]	Keeping the gates closed and locked fully satisfies the regulatory requirement to provide an adequate barrier to entry into the RMWMU, and this section as written is not consistent with the requirements for the other SNL Permitted Units. Please see Comment PA10-3 regarding non-Unit personnel who are authorized to be present. Please revise to read: Signs shall be posted to instruct personnel and visitors to report to the office trailer for site-entry privileges and safety instructions. RMWMU personnel shall have Facility-issued badges. [40 C.F.R. § 264.14(b)(2)(i) and (ii)]
PA10-7	10.6.1	293	During non-operational hours, the doors to Building 6597 shall be kept closed and locked, and security personnel shall periodically monitor the gates. Unit personnel shall have Facility-issued badges. Visitors shall be escorted at all times. [40 C.F.R. § 264.14(b)(2)(i) and (ii)].	If the doors are locked and monitored, it is not necessary to monitor the gates, as the doors provide an adequate barrier to entry into the AHCU. Please see Comment PA10-3 regarding non-Unit personnel who are authorized to be at the Unit. Please revise to read: During non-operational hours, the doors to Building 6597 shall be kept closed and locked, and security personnel shall periodically monitor the doors. Unit personnel shall have Facility-issued badges. [40 C.F.R. § 264.14(b)(2)(i) and (ii)].
PA10-8	10.7.1	293	Unit personnel shall have Facility-issued badges. Visitors shall be escorted at all times.	Please see Comment PA10-3 regarding non-Unit personnel who are authorized to be at the bunkers. Please revise to read: Unit personnel shall have Facility-issued badges.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA10-9	10.8	293	The Corrective Action Management Unit (CAMU) is located inside of TA V (Figures 1-2 of Permit Attachment 1 and 16-1 of Permit Attachment 16). The following sections describe the security provisions that the Permittees shall employ to prevent unknowing or unauthorized entry of persons, livestock, and wildlife onto the CAMU disposal cell.	The location and description of the CAMU containment cell are not correct. Please revise to read: The Corrective Action Management Unit (CAMU) is located inside of TA III (Figures 1-2 of Permit Attachment 1 and 16-1 of Permit Attachment 16). The following sections describe the security provisions that the Permittees shall employ to prevent unknowing or unauthorized entry of persons, livestock, and wildlife onto the CAMU containment cell.

Enclosure S

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 11

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA11-1	11.0	295	In accordance with the requirements of 40 C.F.R. §§ 264.15, 264.174, and 264.602 the Permitted Units shall be inspected for malfunctions and deterioration, operator errors, and discharges that may be causing, or may lead to, a release of hazardous or mixed waste or hazardous constituents to the environment or a threat to human health.	DOE/Sandia note 40 CFR 264.15(a)(1) specifies releases of hazardous waste constituents rather than hazardous constituents. As discussed in General Comment G-C, the Permit language must be identical to the regulations. Accordingly, please revise to read: In accordance with the requirements of 40 C.F.R. §§ 264.15, 264.174, and 264.602 the Permitted Units shall be inspected for malfunctions and deterioration, operator errors, and discharges that may be causing, or may lead to, a release of hazardous or mixed waste or hazardous waste constituents to the environment or a threat to human health.
PA11-2	11.1	295	Current calendar year inspection records and this inspection plan shall be maintained at each Permitted Unit. Previous calendar years' inspection records shall be maintained at each Permitted Unit and at the Permittees' Records Center.	Retaining inspection records for previous years in multiple locations is not required by 40 CFR 264.15(d). Additionally, recordkeeping is addressed in Permit Attachment 13. Please revise to read: Current calendar year inspection records shall be maintained at each Permitted Unit. Previous calendar years' inspection records shall be maintained at each Permitted Unit or at the Permittees' Records Center. Previous calendar years' inspection records for the MSB shall be maintained at the RMWMU or the Permittees' Record Center.
PA11-3	11.2	296	If any defects, deterioration, damage, release of hazardous or mixed waste or constituents, or potential hazards are discovered during an inspection, the Permittees shall take corrective action upon discovery to ensure that the problem does not lead to an environmental or human health hazard or noncompliance with this Permit.	DOE/Sandia note that corrective actions can be started upon discovery, but they may not be completed for some time, depending on the nature of the action. Please revise to read: If any defects, deterioration, damage, release of hazardous or mixed waste or constituents, or potential hazards are discovered during an inspection, the Permittees shall begin taking corrective action upon discovery to ensure that the problem does not lead to an environmental or human health hazard or noncompliance with this Permit.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA11-4	11.3	296	Should the U.S. Department of Defense, which operates Kirtland Air Force Base (KAFB), for security or other reasons, deny access to Facility personnel performing periodic Unit inspections, the Permittees shall contact the Department immediately to inform the Department of the situation.	DOE/Sandia question both the manner and need for immediacy of contact with the Department in the event access is denied for inspections. In order to clarify, please revise to read: Should the U.S. Department of Defense, which operates Kirtland Air Force Base (KAFB), for security or other reasons, deny access to Facility personnel performing periodic Unit inspections, the Permittees shall conduct the inspections as soon as possible when access is granted. If access is denied for more than 7 days, the Permittees shall call the Hazardous Waste Bureau to submit an oral report. Otherwise, the Permittees shall note the delay in inspections and report the inspection delay in accordance with the noncompliance reporting process in Permit Part 1, Section 1.23.
PA11-5	11.3	297	The Permittees shall also test each system monthly, quarterly and annually in accordance with the requirements of NFPA 25 "*Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*" (NFPA, 2002). Monthly tests shall include visual checks of valves and pressure gauges. Quarterly tests shall include checks of water flow, switches, and alarms. Annual activities shall include valve inspection and maintenance.	DOE/Sandia note the requirements for inspection and testing of the fire protection systems are fully specified through reference to the NFPA requirements. Please revise to read: The Permittees shall also test fire suppression equipment at intervals based on NFPA 25 "*Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*" (NFPA 2002, as updated and revised).
PA11-6	11.3.4	297	The Permittees do not manage hazardous wastes with organic concentrations ≥10 ppm by weight using process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, air or steam stripping operations. Any equipment used in such service shall be used for less than 300 hours per calendar year. Any equipment used in such service shall be used for less than 300 hours per calendar year.	There appears to be a sentence missing. DOE/Sandia do use equipment identified in 40 CFR Subpart BB. Please revise to read: The Permittees do not manage hazardous or mixed wastes with organic concentrations ≥10 ppm by weight using process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, air or steam stripping operations. The Permittees do not routinely manage hazardous or mixed wastes with organic concentrations ≥ 10% in pumps or other process equipment regulated in 40 CFR 264 Subpart BB. Any equipment used in such service shall be used for less than 300 hours per calendar year.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA11-7	11.3.5	298	In accordance with 40 C.F.R. § 264.1086, containers in which hazardous or mixed waste is stored shall be visually inspected either at the time of pickup from a generator site or within 24 hours of acceptance at a Unit. A visual inspection shall be done to ensure that there are no cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position, in accordance with Container Level 1 air emission standards. At each Permitted Unit where such containers will be stored, the Permittees shall take the following steps. *1 (not included in comment)* 2. Take remedial actions if required. The Permittees shall begin taking corrective action immediately upon discovery of a defect in the container, cover, or closure device. Repairs shall be completed as soon as possible. If the repairs are not completed in 1 calendar day, the waste shall be transferred to a container in good condition. *3 (not included in comment)*	DOE/Sandia note the inspection requirements do not apply to containers that meet the requirements of 40 CFR 264.1080(b)(2) or 40 CFR 264.1082(c). Additionally, all repairs will be completed as soon as possible, while taking worker safety into account, and accordingly, may take longer than one day due to hazards presented by the waste or complexity of the container. Please revise as follows: In accordance with 40 C.F.R. § 264.1086, containers in which hazardous or mixed waste is stored shall be visually inspected either at the time of pickup from a generator site or within 24 hours of acceptance at a Unit. Containers that meet the requirements of 40 CFR 264.1080(b)(2) or 40 CFR 264.1082(c) are not subject to this inspection requirement. A visual inspection shall be done to ensure that there are no cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position, in accordance with Container Level 1 air emission standards. At each Permitted Unit where such containers will be stored, the Permittees shall take the following steps. 2. Take remedial actions if required. The Permittees shall begin taking corrective action immediately upon discovery of a defect in the container, cover, or closure device. Repairs shall be completed as soon as possible.
PA11-8	11.5	301	The TTU inspection plan and inspection records for the current and previous calendar years shall be maintained at Building 6715.	Please see Comment PA11-2 for discussion of records. Please revise to read: The TTU inspection plan and inspection records for the current calendar year shall be maintained at Building 6715. Inspection records for previous calendar years shall be maintained at Building 6715 or at the Permittees' Records Center.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA11-9	Table 11-1	302 - 303		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 11-1
Inspection Schedule for the Hazardous Waste Management Unit

INSPECTED ITEM	INSPECTION CRITERIA	INSPECTION FREQUENCY
SAFETY AND EMERGENCY EQUIPMENT **See Table 11-2 "Emergency Equipment and Locations" in this Attachment for additional information**		
Fire alarm(s)	Present and operational	Monthly
OPERATING AND STRUCTURAL EQUIPMENT **Buildings 958, 959, 958B, and 958C**		
Secondary containment	Free of liquids, good condition (i.e., no cracks, excessive wear)	Daily.
Loading and unloading areas	Good condition, safe working surface, no cracks, no spills	Daily when wastes are handled, otherwise weekly
Storm water retention pond	Sampled for presence of released/spilled hazardous waste constituents if there is evidence of or chance that such constituents entered the pond	Every event
CONTAINERS		
Location	Correct aisle space, correct stacking (2 maximum)	Weekly

DOE/SANDIA COMMENT

DOE/Sandia note the following:

- Safety and emergency equipment is listed in Table 12-5 in Permit Attachment 12.
- Operational testing of fire alarms is addressed with the other fire suppression system elements in Section 11.3; it is not necessary here.
- Daily inspection of secondary containment is limited to those storage, loading, and unloading areas where containers were actively handled, as discussed in Section 11.3.1.
- The storm water retention pond does not provide secondary containment. Spills and other releases of hazardous or mixed wastes or hazardous waste constituents to the pond are addressed in the Contingency Plan in Permit Attachment 12.
- The pond and discharges from it are subject to National Pollutant Discharge Elimination System (NPDES) requirements established under the Clean Water Act. Therefore, as discussed in General Comment G-B, it is not necessary to include requirements for routine operations of the catchment pond in this Permit.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA11-9 (cont)				

- As discussed in Comments PP3-4 and PA3-20, containers are stacked in a stable manner; no additional specifications are necessary in this table.

Please revise as follows:

TABLE 11-1
Inspection Schedule for the Hazardous Waste Management Unit

INSPECTED ITEM	INSPECTION CRITERIA	INSPECTION FREQUENCY
SAFETY AND EMERGENCY EQUIPMENT **See Table 12-5 "Emergency Equipment and Locations" in Permit Attachment 12 for additional information**		
Fire alarm(s)	Present	Monthly
OPERATING AND STRUCTURAL EQUIPMENT **Buildings 958, 959, 958B, and 958C**		
Secondary containment	Free of liquids, good condition (i.e., no cracks, excessive wear)	Daily. when and where hazardous or mixed wastes are handled, otherwise weekly
Loading and unloading areas	Good condition, safe working surface, no cracks, no spills	Daily when and where hazardous or mixed wastes are handled, otherwise weekly
Storm water retention pond	Sampled for presence of released/spilled hazardous waste constituents if there is evidence that such constituents entered the pond, or a spill occurred in outdoor areas that drain to the pond	Within 5 days of a spill or release requiring implementation of the Contingency Plan or other reporting to the NMED Secretary
CONTAINERS		
Location	Correct aisle space, correct stacking	Weekly

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA11-10	Table 11-2	304 – 305		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 11-2
Inspection Schedule for the Thermal Treatment Unit

INSPECTED ITEM	INSPECTION CRITERIA	INSPECTION FREQUENCY
SAFETY AND EMERGENCY EQUIPMENT **See Table 3 "Emergency Equipment" in this Section for additional information**		
Fire alarm(s)	Present and operational	Monthly

DOE/SANDIA COMMENT

DOE/Sandia note the following:

- Operational testing of fire alarms is addressed with the other fire suppression system elements in Section 11.3; it is not necessary here.
- Safety and emergency equipment is listed in Table 12-7 in Permit Attachment 12.

Please revise as follows:

TABLE 11-2
Inspection Schedule for the Thermal Treatment Unit

INSPECTED ITEM	INSPECTION CRITERIA	INSPECTION FREQUENCY
SAFETY AND EMERGENCY EQUIPMENT **See Table 12-7 "Emergency Equipment" in Permit Attachment 12 for additional information**		
Fire alarm(s)	Present	Monthly

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA11-11	Table 11-3	306 - 307		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 11-3
Inspection Schedule for the RMWMU

INSPECTED ITEM	INSPECTION CRITERIA	INSPECTION FREQUENCY
SAFETY AND EMERGENCY EQUIPMENT **See Table 11-2 "Safety and Emergency Equipment" in this Attachment for additional information**		
Fire alarm(s)	Present and operational	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Loading and unloading areas	Good condition, safe working surface, no cracks, no spills	Daily when wastes are handled, otherwise weekly
Treatment equipment	Good condition (i.e., no releases or deterioration); fume hood, drum, and room ventilation flows within established parameters	Monthly
Storm water retention pond	Sampled for presence of released/spilled Hazardous waste constituents if there is evidence of or chance that such constituents entered the pond	Every event.
CONTAINERS		
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition (i.e., no cracks, excessive wear)	Daily.
Location	Correct aisle space, correct stacking (3 maximum)	Weekly.

DOE/SANDIA COMMENT

DOE/Sandia note the following:

- Safety and emergency equipment is listed in Table 12-9 in Permit Attachment 12.
- Operational testing of fire alarms is addressed with the other fire suppression system elements in Section 11.3; it is not necessary here.
- Daily inspection of secondary containment is limited to those storage, loading, and unloading areas where containers were actively handled, as discussed in Section 11.3.1.
- Inspection of treatment equipment is limited to the treatment equipment, and does not include ancillary items such as ventilation systems.
- Treatment equipment that is used infrequently (e.g., the thermal deactivation unit at the RMWMU) may be dismantled and put into storage. Inspections during the storage period will be limited to the presence of the equipment. The equipment will undergo a pre-use inspection before use.
- The storm water retention pond does not provide secondary containment. Spills and other releases of hazardous or mixed wastes or hazardous waste constituents to the pond are addressed in the Contingency Plan in Permit Attachment 12.

<table>
<tr><th>NO.</th><th>SECTION</th><th>PAGE</th><th>DRAFT PERMIT TEXT</th><th>DOE/SANDIA COMMENT</th></tr>
<tr><td>PA11-11 (cont)</td><td></td><td></td><td colspan="2">

- The pond and discharges from it are subject to National Pollutant Discharge Elimination System (NPDES) requirements established under the Clean Water Act. Therefore, as discussed in General Comment G-B, it is not necessary to include requirements for routine operations of the catchment pond in this Permit.
- As discussed in Comment PP3-4, containers are stacked in a stable manner; no additional specifications are necessary in this table.

Please revise as follows:

TABLE 11-3
Inspection Schedule for the RMWMU

<table>
<tr><th>INSPECTED ITEM</th><th>INSPECTION CRITERIA</th><th>INSPECTION FREQUENCY</th></tr>
<tr><td colspan="3">SAFETY AND EMERGENCY EQUIPMENT
See Table 12-9 “Safety and Emergency Equipment” in Permit Attachment 12 for additional information</td></tr>
<tr><td>Fire alarm(s)</td><td>Present</td><td>Monthly</td></tr>
<tr><td colspan="3">OPERATING AND STRUCTURAL EQUIPMENT</td></tr>
<tr><td>Loading and unloading areas</td><td>Good condition, safe working surface, no cracks, no spills</td><td>Daily when and where hazardous or mixed wastes are actively handled or managed, otherwise monthly.</td></tr>
<tr><td>Treatment equipment</td><td>Good condition (i.e., no releases or deterioration); or present if in storage</td><td>Daily when used for hazardous or mixed waste treatment, monthly otherwise</td></tr>
<tr><td>Storm water retention pond</td><td>Sampled for presence of released/spilled hazardous waste constituents if there is evidence that such constituents entered the pond, or a spill occurred in outdoor areas that drain to the pond</td><td>Within 5 days of a spill or release requiring implementation of the Contingency Plan or other reporting to the NMED Secretary</td></tr>
<tr><td colspan="3">CONTAINERS</td></tr>
<tr><td>Secondary Containment (liquid waste)</td><td>Adequate volume, free of liquids, good condition (i.e., no cracks, excessive wear)</td><td>Daily when and where hazardous or mixed wastes are actively handled or managed, otherwise weekly.</td></tr>
<tr><td>Location</td><td>Correct aisle space, correct stacking</td><td>Weekly.</td></tr>
</table>

</td></tr>
<tr><td>PA11-12</td><td>11.7</td><td>308</td><td>If the Permittees do not observe any indications of damage to or release from the waste containers as they are removed from the silos that will be considered sufficient to determine that there has not been a release of waste or hazardous constituents.</td><td>Please see Comment PA11-1 and General Comment G-C regarding consistency between the Permit language and regulations, and revise to read:

If the Permittees do not observe any indications of damage to or release from the waste containers as they are removed from the silos that will be considered sufficient to determine that there has not been a release of hazardous or mixed waste or hazardous waste constituents.</td></tr>
</table>

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA11-13	11.7	308	The inspection plan and inspection records for the current calendar year shall be maintained at Building 6597 and at the TA-V Electronic Facility Documentation System. Inspection records for the previous calendar years shall be maintained in the department offices of AHCU personnel and the Permittees' Records Center.	Please see Comment PA11-2 for discussion of records. Please revise to read: The inspection plan and inspection records for the current calendar year shall be maintained at Building 6597 and/or in an electronic documentation system accessible at the Unit. Inspection records for the previous calendar years shall be maintained in the department offices of AHCU personnel or the Permittees' Records Center.
PA11-14	Table 11-4	309 - 310	**DRAFT PERMIT TEXT** Note: only the rows shown below are included in this comment	

TABLE 11-4
Inspection Schedule for the Auxiliary Hot Cell Unit

INSPECTED ITEM	INSPECTION CRITERIA	INSPECTION FREQUENCY
SAFETY AND EMERGENCY EQUIPMENT **See Table 11-2 "Safety and Emergency Equipment" in this Attachment for additional information**		
Fire alarm(s)	Present and operational	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Loading and unloading areas	Good condition, safe working surface, no cracks, no spills	Daily when wastes are handled, otherwise weekly.
Treatment equipment	Good condition (i.e., no releases or deterioration); fume hood, drum, and room ventilation flows within established parameters	Monthly
CONTAINERS		
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition (i.e., no cracks, excessive wear)	Daily
Location	Correct aisle space, correct stacking (3 maximum)	Weekly

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA11-14 (cont)			**DOE/SANDIA COMMENT** DOE/Sandia note the following: • Safety and emergency equipment is listed in Table 12-11 in Permit Attachment 12. • Operational testing of fire alarms is addressed with the other fire suppression system elements in Section 11.3; it is not necessary here. • Daily inspection of secondary containment is limited to those storage, loading, and unloading areas where containers were actively handled, as discussed in Section 11.3.1. • Inspection of treatment equipment is limited to the treatment equipment, and does not include ancillary items such as ventilation systems. • Treatment equipment that is used infrequently (e.g., the thermal deactivation unit at the RMWMU) may be dismantled and put into storage. Inspections during the storage period will be limited to the presence of the equipment. The equipment will undergo a pre-use inspection before use. • As discussed in Comment PP3-4, containers are stacked in a stable manner; no additional specifications are necessary in this table. Please revise as follows:	
PA11-15	11.8	310	Inspection records for the current calendar year shall be maintained at each bunker. Inspection records for previous calendar years shall be maintained at the RMWMU and the Permittees' Records Center.	Please see Comment PA11-2 for discussion of records. Please revise to read: Inspection records for the current calendar year shall be maintained at each bunker. Inspection records for previous calendar years shall be maintained at the RMWMU or the Permittees' Records Center.

TABLE 11-4
Inspection Schedule for the Auxiliary Hot Cell Unit

INSPECTED ITEM	INSPECTION CRITERIA	INSPECTION FREQUENCY
SAFETY AND EMERGENCY EQUIPMENT **See Table 12-11 "Safety and Emergency Equipment" in Permit Attachment 12 for additional information**		
Fire alarm(s)	Present	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Loading and unloading areas	Good condition, safe working surface, no cracks, no spills	Daily when and where hazardous or mixed wastes are actively handled or managed. Monthly otherwise.
Treatment equipment	Good condition (i.e., no releases or deterioration);	Daily when used for hazardous or mixed waste treatment, monthly otherwise
CONTAINERS		
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition (i.e., no cracks, excessive wear)	Daily when and where hazardous or mixed wastes are actively handled or managed. Weekly otherwise
Location	Correct aisle space, correct stacking	Weekly

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA11-16	Table 11-5	311 – 312		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 11-5
Inspection Schedule for the Manzano Storage Bunkers

INSPECTED ITEM	INSPECTION CRITERIA	INSPECTION FREQUENCY
SAFETY AND EMERGENCY EQUIPMENT **See Table 11-2 "Safety and Emergency Equipment" in this Attachment for additional information**		
Portable eye wash	Operational, accessible, in good condition	Monthly
Smoke alarm	Present and operational	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Loading and unloading areas	Good condition, safe working surface, no spills	Daily when wastes are handled, otherwise weekly.
CONTAINERS		
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition (i.e., no cracks, excessive wear)	Daily.
Location	Correct aisle space, correct stacking (2 maximum)	Weekly

DOE/SANDIA COMMENT

DOE/Sandia note the following:

- Safety and emergency equipment is listed in Table 12-13 in Permit Attachment 12.
- Portable eye wash units are single-use items; it is not possible to inspect them for operability without operating them and rendering them inoperable.
- Operational testing of smoke alarms is addressed with the other fire suppression system elements in Section 11.3; it is not necessary here.
- Daily inspection of secondary containment is limited to those storage, loading, and unloading areas where containers were actively handled, as discussed in Section 11.3.1.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA11-16 (cont)				

- As discussed in Comment PP3-4, containers are stacked in a stable manner; no additional specifications are necessary in this table.

Please revise as follows:

TABLE 11-5
Inspection Schedule for the Manzano Storage Bunkers

INSPECTED ITEM	INSPECTION CRITERIA	INSPECTION FREQUENCY
SAFETY AND EMERGENCY EQUIPMENT **See Table 12-13 "Safety and Emergency Equipment" in Permit Attachment 12 for additional information**		
Portable eye wash	Accessible, in good condition	Monthly
Smoke alarm	Present	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Loading and unloading areas	Good condition, safe working surface, no spills	Daily when and where hazardous or mixed wastes are actively handled or managed. Monthly otherwise.
CONTAINERS		
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition (i.e., no cracks, excessive wear)	Daily when and where hazardous or mixed wastes are actively handled or managed. Weekly otherwise.
Location	Correct aisle space, correct stacking	Weekly

Enclosure T

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 12

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-1	12.3	313	Facility security personnel shall inspect each Unit periodically during non-operating hours. If an emergency is discovered during these inspections, the Facility Emergency Operations Center (EOC) and the Unit-specific Emergency Coordinator (EC) shall be notified immediately.	DOE/Sandia note that Facility security personnel do not perform inspections in accordance with the requirements of Permit Attachment 11 and 40 CFR 264.15. The monitoring provided by security personnel is described in Permit Attachment 10. Facility security personnel shall monitor each Unit periodically during non-operating hours. If an emergency is discovered during this monitoring, the Facility Emergency Operations Center (EOC) and the Unit-specific Emergency Coordinator (EC) shall be notified immediately.
PA12-2	12.5	315	Resources shall be available at each Permitted Unit, at the Facility, within KAFB, and in Albuquerque as described in this section.	This requirement is not consistent with the rest of Permit Attachment 12 (e.g., Section 12.5.4) or with the requirements of 40 CFR 264 Subpart D. DOE/Sandia have established and/or attempted to establish agreements for emergency response resources from other parties, but the other parties are not bound by the conditions of this draft Permit, and DOE/Sandia cannot require them to provide resources as directed by the draft Permit. Please revise to read: Resources shall be available at each Permitted Unit and at the Facility, as described in this Section. This Section also details that the Permittees shall attempt to establish mutual aid agreements and/or memoranda of understanding for additional response capabilities within KAFB and in Albuquerque.
PA12-3	12.5.1	315	The ECs shall also be available during non-routine hazardous and mixed waste management operations that may be conducted outside normal operating hours.	DOE/Sandia note that either the EC or an alternate EC can perform this duty. Please revise to read: The ECs or alternate ECs shall also be available during non-routine hazardous and mixed waste management operations that may be conducted outside normal operating hours.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-4	12.5.2	316	The Facility ERO consists of two response groups that respond to an emergency situation: (1) a field response group led by an IC under the Incident Command System (ICS) and (2) the EOC. The ICS also includes Facility security, the KAFB Fire Department, and Facility personnel with relevant technical skills. An IC shall be on site at the Facility at all times (24 hours per day, 7 days per week). Facility security and the KAFB Fire Department personnel shall also be available at all times. Facility technical personnel shall be available on-site at the Facility from 8:00 am to 4:30 pm Monday through Friday and shall be on call the rest of the time. The Facility EOC staff shall include an Emergency Director and personnel who are responsible for the management decisions and notifications to outside parties that are required during an emergency response. EOC personnel shall be available on-site at the Facility from 8:00 am to 4:30 pm, Monday through Friday, and shall be on call the rest of the time. In the field, the IC shall maintain overall management and control of response operations at the emergency site. The IC shall work in a unified command with the KAFB Fire Department and in concert with safety personnel, the EC, Unit-specific personnel, and other emergency responders to develop and execute response plans, including on-site protective actions and recommendations for off-site protective actions. The ICS system shall be implemented at the time an emergency occurs and shall be expanded to control the emergency as needed, and shall remain in effect until the need for emergency management no longer exists.	DOE/Sandia note the detailed requirements describing the emergency response personnel and process are redundant to the main description. Additionally, as noted in Comment PA12-2, some of the resources are obtained from other parties who are not bound by the conditions of this draft Permit. Please revise to read: The Facility ERO consists of two groups that respond to an emergency situation: (1) a field response group led by an IC under the Incident Command System (ICS) and (2) the EOC. The ICS includes resources as needed: Facility security, the KAFB Fire Department if needed, and Facility or Permitted Unit personnel with relevant technical skills. Facility personnel shall be available as needed. The Permittees shall arrange for additional resources within KAFB and Albuquerque as described in Section 12.5.4 of this Permit. The Facility EOC staff includes personnel who are responsible for the management decisions and notifications to outside parties that are required during an emergency response. EOC and Facility technical personnel are typically available on-site at the Facility from 8:00 am to 4:30 pm, Monday through Friday (except during holidays) and are on call the rest of the time. Permitted Unit personnel are available as shown in Table 12-1. At the emergency site, Permitted Unit personnel shall assist the IC as needed. The IC works with safety personnel, the EC, Unit-specific personnel, and other emergency responders (including responders from KAFB and Albuquerque as needed) to develop and execute response plans, including on-site protective actions and recommendations for off-site protective actions. The ICS is implemented at the time an emergency occurs and is expanded to control the emergency as needed, and remains in effect until the need for emergency management no longer exists.
PA12-5	12.5.3	316	The EC shall remain at the Unit and assists in emergency response as directed by the IC.	Please revise to be consistent with Section 12.5.2: The EC shall remain at the Unit as necessary and assist in emergency response as directed by the IC.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-6	12.7	317	If the EC determines that an emergency situation exists at the Unit, the EC shall immediately notify the EOC and activate this Contingency Plan. The methods for contacting emergency response representatives are listed in Table 12-4. For any incident that the EC determines is not an emergency situation, but may lead to a release of hazardous or mixed waste or hazardous constituents that may pose a threat to human health or the environment (for example, a malfunction, deterioration, operator error, or discharges), the EC shall immediately activate this Contingency Plan in response.	DOE/Sandia note that implementation of the Contingency Plan applies only to emergencies affecting Permitted Units, as noted in Comment PP2-32. Additionally, emergencies involve releases of hazardous waste constituents rather than hazardous constituents in accordance with 40 CFR 264.51. However, emergencies include both existing and imminent situations that threaten human health or the environment. Accordingly, please revise to read: If the EC determines that an emergency situation exists or is imminent at the Unit, the EC shall immediately notify the EOC and activate this Contingency Plan. The methods for contacting emergency response representatives are listed in Table 12-4.
PA12-7	12.8.1	319	The following steps shall be implemented as needed in the event of an emergency involving an imminent or existing fire. *1. (not included in comment)* 2. The EC (or Unit personnel) shall immediately notify the Facility ERO and KAFB Fire Department by activating a manual pull alarm or by dialing the EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and Facility ERO shall also be notified by activation of an automatic fire alarm. *3–8 (not included in comment)* 9. The EC shall remain near the site, but at a safe distance, so he can advise personnel responding to the fire of the known hazards. 10. Upon arrival at a fire, the KAFB Fire Department officer-in-charge shall be in command of fire fighting. He shall accept and evaluate the advice of Facility Unit and emergency response personnel, but he retains the responsibility of selecting the fire-fighting methods and tactics. *11–14(not included in comment)* 15. If possible and safe, responding personnel shall take measures to contain potentially hazardous run-off and keep it away from storm drains or sewers. If possible, personnel shall build dikes around storm drains. *16. (not included in comment)*	DOE/Sandia note some of the individual requirements in this list need additional clarification. In particular, notification associated with activation of the automatic fire alarms is a feature rather than an action (i.e., the manual pull alarms and telephones provide adequate capabilities for summoning emergency assistance in accordance with 40 CFR 264.32(b)). Additionally, some of the listed resources are provided by other parties who are not subject to the conditions of this draft Permit. Please revise as follows: The following steps shall be implemented as needed in the event of an emergency involving an imminent or existing fire. 2. The EC (or Unit personnel) shall immediately notify the Facility ERO and KAFB Fire Department by activating a manual pull alarm or by dialing the EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and Facility ERO are also notified by activation of automatic fire alarms at the Units. 9. The EC shall take actions as directed by the IC. Unless directed otherwise, the EC shall remain near the Unit, but at a safe distance, so he can advise personnel responding to the fire of the known hazards. 10. Upon arrival at a fire, the KAFB Fire Department officer-in-charge is in command of fire fighting. DOE/Sandia emergency response and Facility Unit personnel shall advise and assist the KAFB Fire Department, but the officer-in-charge retains the responsibility of selecting the fire-fighting methods and tactics. 15. If possible and safe, responding personnel shall take measures to contain potentially hazardous run-off and keep it away from storm drains or sewers such as building dikes around storm drains.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-8	12.8.2	320	The following steps shall be implemented as needed in the event of an emergency involving an imminent or existing explosion. *1. (not included in comment)* 2. The EC (or Unit personnel) shall immediately notify the Facility ERO and KAFB Fire Department by activating a manual pull alarm or by dialing the EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and the ERO shall also be notified by activation of an automatic fire alarm. *3. (not included in comment)* 4. Upon arrival at the site, the KAFB Fire Department officer-in-charge shall be in command of fire fighting. He or she will accept and evaluate the advice of Facility personnel and emergency response organization members, but retains the responsibility of selecting the fire-fighting methods and tactics. *5–6 (not included in comment)* 7. Affected surfaces shall be cleaned using cleaners appropriate to the wastes involved. 8. If possible, responding personnel shall take measures to contain potentially hazardous runoff and keep it away from storm drains or sewers, such as building dikes around storm drains. *9–10 (not included in comment)*	As noted in the preceding comment, some of the individual requirements in this list need additional clarification. Please revise as follows: The following steps shall be implemented as needed in the event of an emergency involving an imminent or existing explosion. 2. The EC (or Unit personnel) shall immediately notify the Facility ERO and KAFB Fire Department by activating a manual pull alarm or by dialing the EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and Facility ERO are also notified by activation of an automatic fire alarm. 4. Upon arrival at a fire, the KAFB Fire Department officer-in-charge is in command of fire fighting. DOE/Sandia emergency response and Facility Unit personnel shall advise and assist the KAFB Fire Department, but the officer-in-charge retains the responsibility of selecting the fire-fighting methods and tactics. 7. If needed, affected surfaces shall be cleaned using cleaners appropriate to the wastes involved. 8. If possible and safe, responding personnel shall take measures to contain potentially hazardous run-off and keep it away from storm drains or sewers such as building dikes around storm drains.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-9	12.8.3	321	The following steps shall be implemented by the EC and Unit personnel in the event of an emergency involving an imminent or existing release of hazardous or mixed waste or hazardous constituents: *1. (not included in comment)* 2. The EC (or Unit personnel) shall immediately notify the ERO and KAFB Fire Department by activating a manual pull alarm or by dialing the EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and ERO shall also be notified by activation of an automatic fire alarm. *3–9 (not included in comment)* 10. No waste that may be incompatible with released waste shall be treated, stored, or disposed of until the cleanup procedures are completed. 11. After collection of a released waste, the release site shall be sampled and evaluated. If contamination is found to exist, contaminated media and waste shall be collected, drummed (if appropriate), and removed from the site for disposal at a permitted disposal facility. Depending on the specific conditions, however, the Permittees may choose to implement an alternative decontamination method such as surface cleaning or in-situ neutralization or stabilization. Any such alternative shall be approved by the Department prior to implementation.	As noted in the preceding comments, some of the individual requirements in this list need additional clarification. DOE/Sandia note the requirement for NMED approval prior to implementing decontamination activities may delay resumption of waste management activities at the Unit, affecting the Permittees' ability to comply with the requirements of 40 CFR 268.50. Please revise as follows: The following steps shall be implemented by the EC and Unit personnel in the event of an emergency involving an imminent or existing release of hazardous or mixed waste or hazardous waste constituents: 2. The EC (or Unit personnel) shall immediately notify the Facility ERO and KAFB Fire Department by activating a manual pull alarm or by dialing the EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and Facility ERO are also notified by activation of an automatic fire alarm." 10. No waste that may be incompatible with released waste shall be treated, stored, or disposed of in the vicinity of the release location until the released waste is cleaned up or stabilized. 11. After collection of a released waste, the release site shall be sampled and evaluated. If contamination is found to exist, contaminated media and waste shall be collected, drummed (if appropriate), and removed from the site for disposal at a permitted disposal facility. Depending on the specific conditions, however, the Permittees may choose to implement an alternative decontamination method such as surface cleaning or in-situ neutralization or stabilization. Contaminated environmental media shall be remediated to achieve clean closure as defined in Section 2.20.1 of Permit Part 2 during Unit closure or be subject to corrective action as required under Part 6 of this Permit.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-10	12.9	322	During an emergency that threatens the health or safety of personnel within a Permitted Unit, the following steps shall be taken to facilitate safe coordinated evacuation: *1–4 (not included in comment)* 5. Notify the Facility ERO by activating a manual pull alarm or by dialing the EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and the ERO shall also be notified by activation of an automatic fire alarm. *6–13 (not included in comment)*	Please see preceding comments regarding clarification of individual requirements. Please revise as follows: During an emergency that threatens the health or safety of personnel within a Permitted Unit, the following steps shall be taken to facilitate safe coordinated evacuation: 5. Notify the Facility ERO and KAFB Fire Department by activating a manual pull alarm or by dialing the EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and Facility ERO are also notified by activation of an automatic fire alarm.
PA12-11	12.10	323	The Permittees shall immediately notify State and Local agencies if State or Local response resources are needed, if human health or the environment is threatened, or if areas outside the SNL Facility may require protective action. The Permittees shall verbally inform the City of Albuquerque, KAFB command, and Isleta Pueblo immediately, in the event that residents of Albuquerque, workers at KAFB, or Isleta Pueblo could be affected.	DOE/Sandia note that it is most appropriate to inform those in the areas that could be affected by the incident; thus notifications should be directed to those parties. Please revise to read: The Permittees shall immediately notify State and Local agencies if State or Local response resources are needed, if human health or the environment outside the SNL Facility is threatened, or if areas outside the SNL Facility may require protective action. The Permittees shall immediately verbally inform the City of Albuquerque, KAFB command, and Isleta Pueblo respectively, in the event that residents of Albuquerque, workers at KAFB, or Isleta Pueblo could be affected.
PA12-12	12.11	323	Immediately after an emergency or incident, the EC and the IC, when present shall: *1– 4 (not included in comment)*	Various DOE and Sandia personnel will perform the tasks in the list. The requirement applies to DOE/Sandia as the Permittees. Therefore, please revise to read: Immediately after an emergency or incident, the Permittees shall:
PA12-13	12.13	324	The Unit is used to repackage and store hazardous wastes. The hazardous waste management areas at the HWMU include Building 958, Building 959, and two modular storage buildings.	As discussed in General Comment G-A, DOE/Sandia believe the draft Permit is to reflect management of hazardous waste and mixed waste at each Permitted Unit, rather than limiting any Unit to only hazardous or mixed waste management. Please revise to read: The Unit is used to repackage and store hazardous and mixed wastes. The waste management areas at the HWMU include Building 958, Building 959, and two modular storage buildings.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-14	Table 12-6	326		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 12-6
Hazardous Waste Management Unit Emergency Coordinator List
(One or more of these personnel shall be available during operating hours [8:00 am to 4:30 pm, Monday through Friday]).

HWMU Emergency Coordinator		Office Phone	Home Phone
Primary	Lorenz Spangler Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 284-1181 (office) (505) 264-2106 (cellular) (505) 530-2022 (pager)	(505) 898-5225
First Alternate	Brett Cummins Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 844-1346(office) (505) 238-3662(cellular) (505) 540-5362 (pager)	(505) 275-1131

DOE/SANDIA COMMENT

DOE/Sandia have revised the list of personnel serving as emergency coordinators; this revised list includes personnel who are not yet emergency coordinators. Please revise as follows:

TABLE 12-6
Hazardous Waste Management Unit Emergency Coordinator List
(One or more of these personnel shall be available during operating hours [8:00 am to 4:30 pm, Monday through Friday]).

HWMU Emergency Coordinator		Office Phone	Home Phone
Primary	Robert Rivera Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 284-6982 (office) (505) 980-9151 (cellular) (505) 540-9286 (pager)	(505) 980-9151
First Alternate	Lorenz Spangler Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 284-1181 (office) (505) 264-2106 (cellular) (505) 530-2022 (pager)	(505) 898-5225
Third Alternate	Ken Tetreault Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 844-1346 (office) (505) 270-4089 (cellular) (505) 530-1071 (pager)	(505) 822-6336

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-15	Table 12-8	328	Note: only the rows shown below are included in this comment **TABLE 12-8** **Thermal Treatment Unit Emergency Coordinator List** (One or more of these personnel shall be available during operating hours [7:00 am to 5:00 pm on days when activities are conducted in Building 6715])	Building 6715 is occupied as needed. Personnel are present whenever TTU operations are actually occurring, including extended operations if needed to complete treatment as described in Comment PA4-15. Please revise as follows: **TABLE 12-8** **Thermal Treatment Unit Emergency Coordinator List** (One or more of these personnel shall be available in Building 6715 during TTU operations)
PA12-16	12.15	328	It is used for treatment and storage of mixed wastes. The hazardous waste management areas at the RMWMU include Buildings 6920, 6921, 6925, and 6926; two modular storage buildings; and the outdoor waste storage area (i.e., paved areas within the RMWMU fence and north, east, and west of Building 6920).	As discussed in General Comment G-A, and Comment PA12-13, DOE/Sandia believe the draft Permit is to reflect management of hazardous waste and mixed waste at each Permitted Unit, rather than limiting any Unit to only hazardous or mixed waste management. Please revise accordingly.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-17	Table 12-9	329 - 333		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 12-9
Radioactive and Mixed Waste Management Unit Emergency Response Equipment

Category	Description/Capabilities	Location
Building 6920		
Internal Communication and Alarm System	Voice command Portable 2-way radio	Operating personnel carry radios
Building 6921		
Internal Communication and Alarm System	Voice command Portable 2-way radio	Operating personnel carry radios
Building 6925		
Internal Communication and Alarm System	Voice command Portable 2-way radio	Operating personnel carry radios
Building 6926		
Internal Communication and Alarm System	Voice command Portable 2-way radio	Operating personnel carry radios
Modular Storage Buildings		
Internal Communication and Alarm System	Voice command Portable 2-way radio	Operating personnel carry radios

DOE/SANDIA COMMENT

DOE/Sandia note 40 CFR 264.34 does not require that personnel have access to other personnel and multiple means of communication at all times. Rather, the requirement is for "immediate access to an internal alarm or emergency communications device, either directly or through visual or voice contact with another employee", "whenever hazardous waste is being poured, mixed, spread, or otherwise handled". Two-way radios, pagers, cellular telephones, and working in pairs are illustrations of means of communication that are typically available. Please see Comment PA2-8 for further discussion.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-17 (cont)			Please revise as follows:	

TABLE 12-9
Radioactive and Mixed Waste Management Unit Emergency Response Equipment

Category	Description/Capabilities	Location
Building 6920		
Internal Communication and Alarm System	Voice command Portable 2-way radio	Operating personnel maintain contact capability
Building 6921		
Internal Communication and Alarm System	Voice command Portable 2-way radio	Operating personnel maintain contact capability
Building 6925		
Internal Communication and Alarm System	Voice command Portable 2-way radio	Operating personnel maintain contact capability
Building 6926		
Internal Communication and Alarm System	Voice command Portable 2-way radio	Operating personnel maintain contact capability
Modular Storage Buildings		
Internal Communication and Alarm System	Voice command Portable 2-way radio	Operating personnel maintain contact capability

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-18	Table 12-10	333		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 12-10
RMWMU Emergency Coordinator List
(One or more of these personnel shall be available during operating hours [7:00 am to 5:30 pm, Monday through Thursday])

RMWMU Emergency Coordinator		Office Phone	Home Phone
Second Alternate	Phil Zelle Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2486 (office) (505) 540-7437 (pager)	(505) 292-5097

DOE/SANDIA COMMENT

DOE/Sandia have revised the list of personnel serving as emergency coordinators, and some personnel contact information has also been revised. Please revise as follows:

TABLE 12-10
RMWMU Emergency Coordinator List
(One or more of these personnel shall be available during operating hours [7:00 am to 5:30 pm, Monday through Thursday])

RMWMU Emergency Coordinator		Office Phone	Home Phone
Second Alternate	Phil Zelle Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2486 (office) (505) 540-7437 (pager)	(505) 615-7445
Fourth Alternate	Jesse Farr Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 284-3041 (office) (505) 540-9422 (pager)	(505) 379-8913

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-19	12.16	334	The Auxiliary Hot Cell Unit (AHCU) is located in the northeast (high bay) part of Building 6597 in TA-V at the Facility and is used to repackage, store, and treat mixed wastes. Building 6597 is a concrete masonry building; the high bay area of the building has a roof height of 35 feet. The AHCU comprises four waste management areas: *1–3 (not included in comment)* 4. Containers of hazardous waste may also be stored in the high bay south and west of the hot cell.	As discussed in General Comment G-A, and Comment PA12-13, DOE/Sandia believe the draft Permit is to reflect management of hazardous waste and mixed waste at each Permitted Unit, rather than limiting any Unit to only hazardous or mixed waste management. Accordingly, please revise as follows: The Auxiliary Hot Cell Unit (AHCU) is located in the northeast (high bay) part of Building 6597 in TA-V at the Facility and is used to repackage, store, and treat hazardous and mixed wastes. Building 6597 is a concrete masonry building; the high bay area of the building has a roof height of 35 feet. The AHCU comprises four waste management areas: 4. Containers of hazardous and mixed waste may also be stored in the high bay south and west of the hot cell.
PA12-20	12.16	334	Facility security officers shall provide unimpeded access to the AHCU for authorized personnel as directed by the IC. Security officers shall also provide additional emergency assistance as required by the IC. Personnel who are authorized to enter TA-V in case of emergencies shall be members of the Facility Emergency Response Organization, including medical personnel, the KAFB Fire Department, and KAFB security police.	Specifying the actions to be taken by DOE/Sandia security personnel beyond the requirement for unimpeded access is confusing and may delay emergency response. Please revise to read: Facility security officers shall provide unimpeded access to the AHCU for authorized personnel as directed by the IC.
PA12-21	12.17	336	The ECs shall be informed of planned work activities at the beginning of each workday. This includes activities at Permitted Units that will not be not routinely staffed (e.g., MSB).	Formally informing the ECs at the beginning of each workday is not required by 40 CR CFR 264 Subpart D, nor is such notification needed for effective emergency response. Accordingly, please revise to read: The ECs are typically informed of planned work activities at the beginning of each workday. This includes activities at Permitted Units that are not routinely staffed (e.g., MSB).
PA12-22	12.17	336	Mixed wastes listed in Permit Attachment 5 may be stored at the MSB.	Hazardous and mixed wastes are listed in Permit Attachment 8. Please see General Comment G-A regarding restrictions on management of hazardous and mixed wastes at each Permitted Unit and revise accordingly to list both types of waste and the correct Permit Attachment.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-23	Table 12-13	336		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 12-13
Manzano Storage Bunkers Emergency Equipment

Category	Description/Capability	Location
Spill Control and Decontamination Equipment	Spill cleanup items (mops, brooms, and/or shovels)	In equipment storage at the existing RMWMU
	Recovery drums and containers	In equipment storage at the existing RMWMU
Internal Communication and Alarm System	Voice command Portable 2-way radio	Operating personnel carry radios.
External Communication System	Mobile Telephone or Portable Radio	Taken to bunkers by personnel

DOE/SANDIA COMMENT

DOE/Sandia note 40 CFR 264.34 does not require that personnel have access to other personnel and multiple means of communication at all times. Rather, the requirement is for "immediate access to an internal alarm or emergency communications device, either directly or through visual or voice contact with another employee", "whenever hazardous waste is being poured, mixed, spread, or otherwise handled." Two-way radios, pagers, cellular telephones, and working in pairs are illustrations of means of communication that are typically available. Please see Comment PA2-8 for further discussion. Please revise as follows:

TABLE 12-13
Manzano Storage Bunkers Emergency Equipment

Category	Description/Capability	Location
Spill Control and Decontamination Equipment	Spill cleanup items (mops, brooms, and/or shovels)	In equipment storage at the RMWMU
	Recovery drums and containers	In equipment storage at the RMWMU
Internal Communication and Alarm System	Voice command Portable 2-way radio	Operating personnel maintain contact capability.
External Communication System	Mobile Telephone or Portable 2-way radio	Taken to bunkers by personnel as needed

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-24	Table 12-14	337		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 12-14
MSB Emergency Coordinator List
(One or more of these personnel shall be available during operating hours [7:00 am to 5:30 pm, Monday through Thursday])

MSB Emergency Coordinator		Office Phone	Home Phone
Second Alternate	Phil Zelle Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2486 (office) (505) 540-7437 (pager)	(505) 292-5097

DOE/SANDIA COMMENT

The Unit operating hours are not specified, DOE/Sandia have revised the list of personnel serving as emergency coordinators, and some personnel contact information has also been revised. Please revise as follows:

TABLE 12-14
MSB Emergency Coordinator List
(One or more of these personnel shall be available at the RMWMU and can be contacted during operating hours [7:00 am to 5:30 pm, Monday through Thursday])

MSB Emergency Coordinator		Office Phone	Home Phone
Second Alternate	Phil Zelle Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2486 (office) (505) 540-7437 (pager)	(505) 615-7445
Fourth Alternate	Jesse Farr Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 284-3041 (office) (505) 540-9422 (pager)	(505) 379-8913

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-101*	12.0	313	In accordance with 40 C.F.R. § 264.56, incorporated here by reference, a description of the site-specific contingency plan for each Permitted Unit is presented after that of the Facility Contingency Plan, starting with Condition 12.13 of this Permit Attachment. The contingency plan for the Corrective Action Management Unit (CAMU) is located in Appendix 8 of Permit Attachment 16.	The Contingency Plan in Permit Attachment 12 is applicable to all Permitted Units, including the CAMU. Permit Attachment 16 contains the site-specific information for the CAMU, analogous to the information in Sections 12.13 through 12.17 for the other Permitted Units. The site-specific information is not equivalent to a site-specific plan; the Contingency Plan for each Permitted Unit consists of the site-wide plan combined with the site-specific information. Please revise to read: In accordance with 40 C.F.R. § 264.56, incorporated here by reference, a description of the site-specific contingency information for each Permitted Unit is presented after that of the Facility Contingency Plan, starting with Condition 12.13 of this Permit Attachment. The site-specific contingency information for the Corrective Action Management Unit (CAMU) is located in Appendix 8 of Permit Attachment 16.
PA12-102*	12.1	313	The Permitted Units covered by this Contingency Plan are listed in Table 12-1 of this Permit Attachment. Descriptions of Permitted Units are found in Permit Attachments 3 through 7.	Please see Comment PA12-101 regarding the information for the CAMU. Please revise to read: The Permitted Units covered by this Contingency Plan are listed in Table 12-1 of this Permit Attachment. Descriptions of Permitted Units are found in Permit Attachments 3 through 7 and 16.

*Comment is more administrative in nature

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA12-103*	Table 12-1	314		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 12-1
HAZARDOUS AND MIXED WASTE MANAGEMENT UNITS
(Permitted Units)

UNIT NAME	ACRONYM	LOCATION, SIZE	TYPES OF OPERATIONS	OPERATING HOURS	STAFF
Thermal Treatment Unit	TTU	Northern part of TA-III, south of Building 6715. 196 square feet	Treatment	M-F 7:00 am -5:00 pm	Staffed only during operations at Unit
Manzano Storage Bunkers	MSB	In Manzano Area on KAFB. 0.4 acres occupied by 5 bunkers (approximately 1600 to 2100 square feet in each bunker)	Storage	M-Th 7:00 am –5:30 pm	Staffed only during operations at Unit

DOE/SANDIA COMMENT

DOE/Sandia note the following items are inconsistent with information in other Sections of the draft Permit regarding the maximum area of the MSB and operating hours of the TTU. Please revise as follows:

TABLE 12-1
HAZARDOUS AND MIXED WASTE MANAGEMENT UNITS
(Permitted Units)

UNIT NAME	ACRO-NYM	LOCATION, SIZE	TYPES OF OPER-ATIONS	OPERATING HOURS	STAFF
Thermal Treatment Unit	TTU	Northern part of TA-III, south of Building 6715. 196 square feet	Treatment	M-F 7:00 am -7:00 pm	Staffed only during operations at Unit
Manzano Storage Bunkers	MSB	In Manzano Area on KAFB. 0.4 acres occupied by 5 bunkers (approximately 1600 to 2400 square feet in each bunker)	Storage	M-Th 7:00 am –5:30 pm	Staffed only during operations at Unit

*Comment is more administrative in nature

<table>
<tr><th>NO.</th><th>SECTION</th><th>PAGE</th><th>DRAFT PERMIT TEXT</th><th>DOE/SANDIA COMMENT</th></tr>
<tr><td>PA12-104*</td><td>Table 12-5</td><td>324-326</td><td colspan="2">
DRAFT PERMIT TEXT
Note: only the rows shown below are included in this comment
TABLE 12-5
Hazardous Waste Management Unit Emergency Equipment
<table>
<tr><th>Category</th><th>Description/Capabilities</th><th>Location</th></tr>
<tr><td colspan="3">Building 958</td></tr>
<tr><td>Fire Suppression</td><td>Water supplied by fire hydrants</td><td>One hydrant, location shown in Figure 3-1 of Permit Attachment 3</td></tr>
<tr><td colspan="3">Building 959</td></tr>
<tr><td>Fire Suppression</td><td>Water supplied by fire hydrants</td><td>One hydrant, location shown in Figure 3-1 of Permit Attachment 3</td></tr>
</table>
DOE/SANDIA COMMENT
The fire hydrant is shown in Figure 12-2 rather than Figure 3-1. Please revise as follows:
TABLE 12-5
Hazardous Waste Management Unit Emergency Equipment
<table>
<tr><th>Category</th><th>Description/ Capabilities</th><th>Location</th></tr>
<tr><td colspan="3">Building 958</td></tr>
<tr><td>Fire Suppression</td><td>Water supplied by fire hydrants</td><td>One hydrant, location shown in Figure 12-2 of Permit Attachment 12</td></tr>
<tr><td colspan="3">Building 959</td></tr>
<tr><td>Fire Suppression</td><td>Water supplied by fire hydrants</td><td>One hydrant, location shown in Figure 12-2 of Permit Attachment 12</td></tr>
</table>
</td></tr>
<tr><td>PA12-105*</td><td>12.15</td><td>328</td><td>Figure 12-4 and Figure 1-5 of Permit Attachment 1 presents the evacuation route for the RMWMU, Figure 12-5 of this Permit Attachment presents emergency response and access information, Table 12-9 of this Permit Attachment lists the emergency equipment that shall be available at the RMWMU, and Table 12-10 of this Permit Attachment lists the ECs.</td><td>Figure 1-5 of Permit Attachment 1 does not present evacuation routes, please delete “and Figure 1-5”.</td></tr>
<tr><td>PA12-107*</td><td>Attach-ment 12</td><td>after 337</td><td>Figures</td><td>The figures do not reflect the most current information provided in the Application. DOE/Sandia will provide updated figures under separate cover.</td></tr>
</table>

*Comment is more administrative in nature

Enclosure U

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 13

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA13-1	13.1	338	The Permittees shall maintain the following Unit-specific records at each Permitted Unit (other than the CAMU). 1. A current copy of this Permit including the Waste Analysis Plan (Attachment 9), Inspection Plan (Attachment 11), Training Plan (Attachment 14), Contingency Plan (Attachment 12), Closure Plan (Attachment 15), and treatment plans (where applicable);	DOE/Sandia note operations at the MSB are limited to storage of closed containers. Records that are not relevant to MSB operations are maintained at the RMWMU, as described in the Application. The Inspection Plan and Contingency Plan are relevant to MSB operations; these are maintained at each MSB. Please revise to read: The Permittees shall maintain the following Unit-specific records at each Permitted Unit (other than the CAMU and MSB). 1. A current copy of this Permit including the Waste Analysis Plan (Attachment 9), Inspection Plan (Attachment 11), Training Plan (Attachment 14), Contingency Plan (Attachment 12), Closure Plan (Attachment 15), and treatment plans (where applicable). A current copy of the Contingency Plan (Attachment 12), Inspection Plan (Attachment 11), and inspection records for the current year shall be maintained at each MSB, all other MSB records shall be maintained at the RMWMU;
PA13-2	13.1	338	Note: only the listed items shown below are included in this comment The Permittees shall maintain the following Unit-specific records at each Permitted Unit (other than the CAMU). 2. A written or electronic Unit-specific Operating Record in which the following information is recorded as it becomes available and shall be maintained until the closure of the Facility. k. Notices to off-site generators	Item 2k does not apply to the DOE/Sandia operations that are covered by this Permit. Please delete this item.
PA13-3	13.1	339	The following records shall be maintained in the Facility Operating Record at the Facility Records Center located in Building 869.	The exact physical location of the Records Center is subject to change and does not affect DOE/Sandia's ability to meet the requirements of 40 CFR 264.73. Please revise to read: The following records shall be maintained in the Facility Operating Record at the Permittees' Records Center.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA13-4	13.5	341	**13.5 LAND DISPOSAL RESTRICTIONS** For each off-site shipment of hazardous waste, the Permittees shall prepare a Land Disposal Restrictions (LDR) notification form in accordance with 40 C.F.R. § 268.7(a)(1). The notification form shall contain documented treatment standards as required by 40 C.F.R. § 268.40 for the specific hazardous wastes in the off-site shipment. A copy of the LDR notification form shall be sent to the designated off-site treatment, storage, or disposal facility (TSDF) that shall receive the wastes and a copy shall be maintained at the Permitted Units for at least five years. If the hazardous waste already meets applicable LDR treatment standards, the Permittees shall prepare and provide to the receiving TSDF an LDR notice and certification, as required by 40 C.F.R. § 268.7(a)(2), in addition to the following information. 1. Reports and details of incidents requiring the implementation of the Contingency Plan, as required by 40 C.F.R. § 264.56(j). 2. Records and results of Permitted Units inspections including: a. Date and time of inspection; b. Name of the inspector; c. Notation of the observations made; and d. Date, nature, and results of any repairs or other remedial action. 3. The Permittees shall maintain these records for a minimum of three years. 4. Monitoring, testing, or analytical data for any applicable requirements under 40 C.F.R. Part 264. 5. Documentation of corrective action taken under 40 C.F.R. Part 264, Subpart F. 6. Annual Waste Minimization Certification. 7. Records of the quantities and date of placement for each shipment of hazardous or mixed waste placed in land disposal units under an extension to the effective date of any land disposal restriction granted pursuant 40 C.F.R. § 268.5. 8. Personnel Training Records documenting personnel training as described in Permit Attachment 14.	The first two paragraphs in this section discuss requirements that are applicable to generators of hazardous wastes; such activities are not subject to this draft Permit, as discussed in General Comment G-B. Certain requirements for generators are applicable to wastes that have been treated at the Permitted Units; those requirements are included in Item 2.j in Section 13.1. Thus it is unnecessary to repeat them in this section. Each of the 8 listed items in this section is redundant, as each item is addressed in other sections of this Permit Attachment. Please delete this entire section.

Enclosure V

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 14

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA14-1	14.0	343	In accordance with 40 C.F.R. § 270.14(b)(12) and 40 C.F.R. § 264.16, this Permit Attachment (14) describes personnel training requirements for employees and any contractors who have responsibility for the day-to-day management of all the Permitted Units based at the Facility, as required in 40 C.F.R. § 264.16 and 40 C.F.R. § 270.14(b)(12).	DOE/Sandia note 40 CFR 270.14 addresses contents of permit applications but is not specific to the requirements of 40 CFR 264.16 that the Permittees are required to meet in operating the Permitted Units. Please delete the references to 40 CFR 270.14.
PA14-2	14.2	343	This program shall provide employees with training relevant to their positions and specific to the safe performance of assigned tasks. Personnel who are directly involved in hazardous and mixed waste handling shall be informed of the potential hazards associated with waste management activities, procedures for safe handling of wastes, and emergency procedures. Individuals in supervisory or decision-making positions shall receive a comprehensive overview of all aspects of waste management. Personnel with specific or short-term assignments, such as visitors or temporary contractors not directly involved in waste management, may only receive training on the Contingency Plan and emergency response procedures. Hands-on hazardous waste management personnel shall receive training commensurate with their assigned duties.	DOE/Sandia find this description to be somewhat confusing due to repetition and inclusion of some requirements that are not consistent with waste management duties. In particular, it is not necessary for supervisory personnel to receive an overview that covers all aspects of waste management, only that the training be commensurate with their duties, consistent with the training for other personnel. Short-term personnel include non-Unit personnel who are often present in the Permitted Units to perform various activities (e.g., routine or non-routine maintenance, testing fire suppression systems). Although these individuals are not Unit personnel, it is not necessary that they be extensively trained or escorted at all times, as they are authorized to be present at the Units. If necessary for their duties (e.g., activities in close proximity to hazardous or mixed wastes), these individuals may receive a site-specific safety briefing regarding the Permitted Unit and their responsibilities in the event of an emergency. Alternatively, these personnel may be escorted at all times (if necessary for their duties) in lieu of a briefing. Please revise to read: This program shall provide employees with training relevant to their positions, commensurate with their duties, and specific to the safe performance of assigned tasks. Personnel who are directly involved in hazardous and mixed waste handling shall be informed regarding the potential hazards associated with waste management activities, procedures for safe handling of wastes, and emergency procedures. Individuals in supervisory or decision-making positions shall receive information on the aspects of waste management relevant to the Permitted Unit. Personnel with specific or short-term assignments, such as visitors, non-Unit personnel who are present to perform various activities (e.g., routine or non-routine maintenance, testing fire suppression systems), or temporary contractors not directly involved in waste management, may receive a site-specific safety briefing with emergency response information if necessary for their duties. These personnel may be escorted by Unit personnel in lieu of a briefing.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA14-3	14.2	343	The training program shall include a combination of classroom instruction, reviews of written documents, and on-the-job training exercises.	DOE/Sandia note that not all these elements are appropriate for all training that is relevant to the positions and responsibilities of the personnel being trained. Accordingly, please revise to read: The training program shall include a combination of classroom instruction, reviews of written documents, and on-the-job training exercises as appropriate for the position.
PA14-4	Table 14-1	345	**TABLE 14-1** **Hazardous Waste Management Unit Personnel Training Content**	DOE/Sandia note the title of this table incorporates the name of one of the specific Permitted Units. Thus, it appears the material in the table is applicable only to personnel at the HWMU, rather than to personnel at all Units who are performing hazardous or mixed waste management duties. Please revise the title to "Permitted Unit Personnel Training Content" or a similar title to clarify the applicability of the requirements.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA14-5	Table 14-1	345 346	Note: only the items shown below are included in this comment **TABLE 14-1** **Hazardous Waste Management Unit Personnel Training Content** **A. <u>RCRA Regulation Training</u>** ***Duration:*** Variable (4 hours or more) **C. <u>Technical Work Documents and Refresher</u>** ***Duration:*** Variable (1 hour or more) ***Frequency:*** Initial/Periodic Refresher ***Method:*** Document review, on-the-job training Minimum Content: This training is function-specific and may be divided into sections or modules. Each employee must participate in the sections that apply to his or her specific job function.	The duration and scope of each course are variable because they are related to the level of detail provided and the items covered; these in turn are related to the responsibilities of the personnel being trained and the topic of the training. Comprehensive and detailed training in regulations and technical work documents is not required or appropriate for all personnel (e.g., the Training Director and Emergency Coordinator do not necessarily require training in technical work documents). Training in technical work documents generally does not include on-the-job training; it may include periodic refreshers or review each time the document is revised. With respect to these classes, please revise as follows: **A. <u>RCRA Regulation Training</u>** ***Duration:*** Variable (1-4 hours) **C. <u>Technical Work Documents and Refresher</u>** ***Duration:*** Variable, depending on the complexity of the technical work document ***Frequency:*** Initial and with each revision, or Initial with periodic refresher ***Method:*** Document review Minimum Content: This training is function-specific and may be divided into sections or modules. Each employee must participate only in the sections that apply to his or her specific job function.

<table>
<tr><th>NO.</th><th>SECTION</th><th>PAGE</th><th>DRAFT PERMIT TEXT</th><th>DOE/SANDIA COMMENT</th></tr>
<tr><td>PA14-6</td><td>Table 14-2</td><td>347</td><td>Note: only the rows and columns shown below are included in this comment

TABLE 14-2
Training for Each Job Title at the HWMU
<table><tr><th rowspan="2">Required Training</th><th colspan="2">JOB TITLES</th></tr><tr><th>Training Director</th><th>Emergency Coordinator</th></tr><tr><td>Technical Work Documents</td><td>X</td><td>X</td></tr></table></td><td>Please see Comment PA14-4. Please revise the title to “Training for Each Job Title at the Permitted Units” or a similar title to clarify the applicability of the requirements.

Please see Comment PA14-5 regarding applicability of training for technical work documents for the Training Director and Emergency Coordinator. The situation-specific applicability of the training is best addressed through notes and a footnote. Please revise as follows:

TABLE 14-2
Training for Each Job Title at the HWMU
<table><tr><th rowspan="2">Required Training</th><th colspan="2">JOB TITLES</th></tr><tr><th>Training Director</th><th>Emergency Coordinator</th></tr><tr><td>Technical Work Documents</td><td>X[a]</td><td>X[a]</td></tr></table>a As applicable for individual technical work documents</td></tr>
<tr><td>PA14-7</td><td>14.5</td><td>349</td><td>Permitted Unit employees shall participate in Unit-specific emergency response training to assure effective response to emergencies or incidents. Emergency response training consists of classroom instruction, document reviews, and on-the-job exercises. The content shall be reviewed at least annually and revised as necessary to incorporate changes in regulatory compliance requirements. Topics covered shall include at a minimum:

1 Emergency and incident notification procedures;

2 Response to emergencies or incidents, including fires, explosions, and releases of hazardous and mixed wastes;

3–6 (not included in comment)

7 Post-emergency and post-incident reports and actions;

8 (not included in comment)</td><td>DOE/Sandia note that implementation of the Contingency Plan is not required or appropriate for incidents that are not emergencies, thus the training should not address incidents. Further, the on-the-job exercises are more accurately described as classroom exercises. Please revise as follows:

Permitted Unit employees shall participate in Unit-specific emergency response training to assure effective response to emergencies. Emergency response training consists of classroom instruction, document reviews, and classroom exercises. The content shall be reviewed at least annually and revised as necessary to incorporate changes in regulatory compliance requirements. Topics covered shall include at a minimum:

1 Emergency notification procedures;

2 Response to emergencies, including fires, explosions, and releases of hazardous and mixed wastes;

7 Post-emergency reports and actions;</td></tr>
</table>

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA14-8	14.6	349	For current employees, current-year training records shall be kept at the Unit to which employees are or were assigned until closure of the Unit and training records for previous years shall be maintained at the Facility Records Center, currently located in Building 869. For former employees, training records shall be maintained at the Facility Records Center for a minimum of three years from the date the employee last worked at a Permitted Unit.	Please see Comments PA13-1 and PA13-3 regarding the location of training records and the location of the Records Center, respectively. Please revise to read: For current employees, current-year training records shall be kept at the Permitted Unit to which employees are assigned. Training records for previous years shall be maintained at the Unit or at the Facility Records Center until closure of the Unit. For former employees, training records shall be maintained at the Unit or at the Facility Records Center for a minimum of three years from the date the employee last worked at a Permitted Unit. For MSB personnel, all training records to be maintained at the Unit shall be maintained at the RMWMU.
PA14-9	Table 14-4	350	Note: only the items shown below are included in this comment **Table 14-4** **Job Title, Description, and Qualifications:** **RCRA Training Director** **Skill, Education, and Other Qualifications:** At a minimum, the qualification for the Training Director is: • Bachelor's degree from an accredited post-secondary institution; or, • *(not included in comment)*	DOE/Sandia note an Associate's degree from an accredited post-secondary institution is adequate qualification for this position. Please revise as follows: At a minimum, the qualification for the Training Director is: • Associate's or Bachelor's degree from an accredited post-secondary institution; or,
PA14-10	Table 14-5	351	Note: only the items shown below are included in this comment **Table 14-5** **Job Title, Description, and Qualifications:** **RCRA Project Leader** **Skill, Education, and Other Qualifications:** At a minimum, the qualification for a RCRA Project Leader is: • Bachelor's degree from an accredited post-secondary institution; or, • *(not included in comment)*	Please see Comment PA14-9 regarding qualifications. Please revise as follows: At a minimum, the qualification for a RCRA Project Leader is: • Associate's or Bachelor's degree from an accredited post-secondary institution; or,

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA14-11	Table 14-6	352	Note: only the items shown below are included in this comment **Table 14-6** **Job Title, Description, and Qualifications:** **Job Title: Emergency Coordinator** **Job Description:** An Emergency Coordinator evaluates, coordinates, and implements emergency actions in accordance with the Contingency Plan during an emergency or incident (as defined in the Contingency Plan, Permit Attachment 7). As defined in the Contingency Plan, Emergency Coordinator duties during and after an emergency or incident include, but are not limited to:	Please see Comment PA14-7 regarding implementation of the Contingency Plan. Additionally, not all duties in the list are needed or appropriate for every emergency or every Permitted Unit. Please revise as follows: An Emergency Coordinator evaluates, coordinates, and implements emergency actions in accordance with the Contingency Plan during an emergency (as defined in the Contingency Plan, Permit Attachment 12). As defined in the Contingency Plan, Emergency Coordinator duties during and after an emergency include, but are not limited to, the following as needed:
PA14-12	Table 14-7	353	Note: only the items shown below are included in this comment **Table 14-7** **Job Title, Description, and Qualifications:** **Chemist** **Job Description:** A Chemist conducts supporting characterization of hazardous and mixed waste managed at the Facility. Duties include, but are not limited to: • *(5 items not included in comment)* **Skill, Education, and Other Qualifications:** At a minimum, the qualification for a Chemist is: • Bachelor's degree in chemistry, and • *(not included in comment)*	As noted in Comment PA14-11, not all duties in the list are needed or appropriate for every Permitted Unit. Additionally, a degree in chemistry is not needed; an associate's degree is adequate qualification for this position. Please revise as follows: A Chemist conducts supporting characterization of hazardous and mixed waste managed at the Facility. Duties include, but are not limited to, the following as needed: • *(5 items not included in comment)* **Skill, Education, and Other Qualifications:** At a minimum, the qualification for a Chemist is: • Associate's or Bachelor's degree, and

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA14-13	Table 14-8	354	Note: only the items shown below are included in this comment **Table 14-8** **Job Title, Description, and Qualifications:** **Field Technician** **Job Description:** A Waste Handler conducts hazardous and mixed waste handling, segregating, and storing operations at a Permitted Unit. Waste Handler duties include, but are not limited to:	Please see Comment PA14-11 regarding the applicability of all duties at every Permitted Unit. Please revise as follows: A Waste Handler conducts hazardous and mixed waste handling, segregating, and storing operations at a Permitted Unit. Waste Handler duties include, but are not limited to, the following as needed:
PA14-14	Table 14-9	355	Note: only the items shown below are included in this comment **Table 14-9** **Job Title, Description, and Qualifications:** **Special Projects Staff** **Job Description:** A Special Projects Staff member performs duties associated with non-routine and special projects at a Permitted Unit. Special Projects Staff member duties include, but are not limited to:	Please see Comment PA14-11 regarding the applicability of all duties at every Permitted Unit. Please revise as follows: A Special Projects Staff member performs duties associated with non-routine and special projects at a Permitted Unit. Special Projects Staff member duties include, but are not limited to, the following as needed:
PA14-15	Table 14-10	356	Note: only the items shown below are included in this comment **Table 14-10** **Job Title, Description, and Qualifications:** **Inspector** **Job Description:** An Inspector conducts inspections of both hazardous or mixed waste and a Permitted Unit. Inspector duties include, but are not limited to:	Please see Comment PA14-11 regarding the applicability of all duties at every Permitted Unit. Please revise as follows: An Inspector conducts inspections of both hazardous or mixed waste at a Permitted Unit. Inspector duties include, but are not limited to, the following as needed:

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA14-16	Table 14-11	357	Note: only the items shown below are included in this comment **Table 14-11** **Job Title, Description, and Qualifications:** **Transportation Manager** **Job Description:** A Transportation Manager coordinates the shipment of hazardous or mixed waste from a Permitted Unit. Transportation Manager duties include, but are not limited to:	Please see Comment PA14-11 regarding the applicability of all duties at every Permitted Unit. Please revise as follows: A Transportation Manager coordinates the shipment of hazardous or mixed waste from a Permitted Unit. Transportation Manager duties include, but are not limited to, the following as needed:
PA14-17	Table 14-12	358	Note: only the items shown below are included in this comment **Table 14-12** **Job Title, Description, and Qualifications:** **Unit Operations Support Staff** **Job Description:** A Unit Operations Support Staff member has unescorted access to the Permitted Units but performs no activities that require contact with hazardous or mixed waste or waste containers. Unit Operations Support Staff include, but are not limited to: • Administrative personnel; • Information systems (database) personnel; • Radiation support personnel; and • Generator interface personnel.	Please see Comment PA14-11 regarding the applicability of all duties at every Permitted Unit. Additionally, the duties of radiation support personnel do include contact with the wastes and containers; this should be noted. Please revise as follows: Unit Operations Support Staff include, but are not limited to, the following as needed: • Administrative personnel; • Information systems (database) personnel; • Generator interface personnel; and • Radiation support personnel. Note that the duties of radiation support personnel involve collecting radiological data; this requires contact with hazardous and mixed wastes and waste containers but is not consistent with the duties of field technician in Table 14-8.

Enclosure W

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 15

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-1	Attach-ment 15	359 - 396	Permit Attachment 15	DOE/Sandia note several instances in this Permit Attachment that mention either hazardous or mixed wastes in requirements that are applicable to both (e.g., the maximum volume of waste in storage at the HWMU in Section 15.13.2). Please see General Comment G-A for additional discussion and revise throughout this Attachment.
PA15-2	15.0	359	Partial closure will be deemed complete when all equipment and structures have been decontaminated; the Unit has met the performance criteria for "clean closure"; and a closure certification has been submitted to and approved by the New Mexico Environment Department (the Department).	DOE/Sandia note some equipment and structures will be removed, and others will not require decontamination. Please revise to read: Partial closure will be deemed complete when all equipment and structures have been removed or decontaminated; the Unit has met the performance criteria for "clean closure"; and a closure certification has been submitted to and approved by the New Mexico Environment Department (the Department).
PA15-3	15.2	360	The Permittees shall also meet the following performance standards for each Permitted Unit that is closed. *1–3 (not included in comment)* 4. For any Permitted Unit for which closure is based upon a risk assessment result, the level of risk shall meet that for unrestricted residential use and shall be subject to approval by the Department. Media contaminated with hazardous wastes or hazardous constituents shall be subject to the corrective action requirements of Part 6 of this Permit.	DOE/Sandia note media contaminated with hazardous wastes or hazardous waste constituents will be decontaminated or removed to achieve clean closure; thus, it may not be subject to corrective action. Additionally, it is not necessary to specify the acceptable risk, as the risk assessment will be subject to NMED approval. Please revise as follows: The Permittees shall also meet the following performance standards for each Permitted Unit that is closed. 4. For any Permitted Unit for which closure is based upon a risk assessment result, the level of risk shall be subject to approval by the Department. Media contaminated with hazardous wastes or hazardous constituents may be subject to the corrective action requirements of Part 6 of this Permit where applicable.

<table>
<tr><th>NO</th><th>SECTION</th><th>PAGE</th><th>DRAFT PERMIT TEXT</th><th>DOE/SANDIA COMMENT</th></tr>
<tr><td>PA15-4</td><td>Table 15-1</td><td>360</td><td colspan="2">

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 15-1
Offsite TSDFs that may receive Hazardous Wastes from Facility Closure Activities

Name	Location	EPA ID Number
Waste Control Specialists, LLC	9998 W. Highway 176, Andrews TX 79714	TXD988088464
Envirocare of Utah, Inc	Interstate 80, Exit 49, Clive UT 84101	UTD982598898
Permafix Environmental Services Inc.	901 East Bodley, Memphis TN 38106	TND991279480

DOE/SANDIA COMMENT

This list of TSDFs is out of date. It will periodically become outdated in the future due to business changes at the TSDFs. DOE/Sandia will update the list prior to closure of each Unit unless it has been updated within the past 12 months. Please revise as follows:

TABLE 15-1
Offsite TSDFs that may receive Hazardous Wastes from Facility Closure Activities as of December 2007

Name	Location	EPA ID Number
EnergySolutions	Interstate 80, Exit 49, Clive UT 84101	UTD982598898
Perma-Fix of Florida	1940 NW 67th Pl, Gainesville FL 32653	FLD980711071
Diversified Scientific Services, Inc	157 Gallaher Rd, Kingston TN 37763	TND 982 109 142
Materials & Energy Corporation	2010 Hwy 58, Suite 1020, Bldg K1005, Oak Ridge TN 37830	TNR000005397

</td></tr>
<tr><td>PA15-5</td><td>15.3</td><td>361</td><td>

Closure methods proposed in this plan are based on the following assumptions about conditions during the operational life of the Permitted Units:

1. Hazardous and mixed wastes were stored in containers (e.g., drums);

2–7 (not included in comment)

</td><td>

DOE/Sandia note the wastes managed at the Permitted Units include large pieces of equipment and other self-contained items. Please revise as follows:

Closure methods proposed in this plan are based on the following assumptions about conditions during the operational life of the Permitted Units:

1. Hazardous and mixed wastes were stored in containers (e.g., drums) or were self-contained (e.g., equipment or other large items);

</td></tr>
</table>

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-6	15.3	361	In order to demonstrate achievement of the closure performance standards listed in Section 15-2 of this Attachment, the Permittees shall perform the following general closure activities: *1 (not included in comment)* 2. Phase II: Closure Activities -- Removal, Decontamination, and Verification Procedures. *a–b (not included in comment)* c. Each waste management area (including equipment, if necessary) shall be washed to remove waste residues. d. Rinse and wash waters shall be collected, sampled, and analyzed to verify clean closure. e. Additional decontamination shall be performed, if necessary, in any areas where analytical results indicate that hazardous wastes or hazardous constituents are at levels exceeding the closure criteria or if decontamination rinse or wash waters are hazardous. f. Wastes generated during closure activities shall be characterized and managed appropriately. *3 (not included in comment)*	DOE/Sandia note some portions of each unit will not need washing to remove waste residues. For example, ceilings and upper portions of walls are not likely to be contaminated unless there was an extreme event that could lead to such contamination (e.g., a drum of waste became pressurized and exploded). In such an event, appropriate cleanup and decontamination procedures would already have been performed in response to such a release. Also, analysis of wash waters, although proposed in the Application, will be of limited use in verifying clean closure because one would expect the wash water to potentially contain contaminants. DOE/Sandia will use wash water samples as qualitative indicators of contamination. Rinse waters will be used to verify clean closure. Wash waters will be collected and characterized to determine appropriate waste management as specified in item 2f. Please revise as follows: c. Appropriate portions of each waste management area (including equipment, if necessary) shall be washed to remove waste residues. d. Rinse waters shall be collected, sampled, and analyzed to verify clean closure. e. Additional decontamination shall be performed, if necessary, in any areas where analytical results indicate that hazardous wastes or hazardous constituents are at levels exceeding the closure criteria or if decontamination rinse waters are hazardous. f. Wastes generated during closure activities shall be characterized and managed appropriately.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-7	15.3.1	362	The DQO process identifies the type, quantity, and quality of environmental data to be used in decision-making are appropriate for the intended application. DQOs are qualitative and quantitative statements derived from a series of seven planning steps based on the scientific method. DQO statements applied to development of this Closure Plan and the closure activities to be implemented at Permitted Units are summarized as follows. *1–2 (not included in comment)* 3. *Identify Inputs to the Decision*. The inputs include the following: *a–e (not included in comment)* f. Established concentrations of hazardous waste or hazardous constituents in the environment *4–7 (not included in comment)*	The DQO process is designed to ensure that environmental data are appropriate; the process does not specifically identify appropriate data. Also, DOE/Sandia are not aware that concentrations of hazardous waste in the environment have been established. Accordingly, please revise as follows: The DQO process is designed to ensure that the type, quantity, and quality of environmental data to be used in decision-making are appropriate for the intended application. DQOs are qualitative and quantitative statements derived from a series of seven planning steps based on the scientific method. DQO statements applied to development of this Closure Plan and the closure activities to be implemented at Permitted Units are summarized as follows. 3. *Identify Inputs to the Decision*. The inputs include the following: f. Established concentrations of hazardous waste constituents in the environment
PA15-8	15.3.1	362	The DQO process identifies the type, quantity, and quality of environmental data to be used in decision-making are appropriate for the intended application. DQOs are qualitative and quantitative statements derived from a series of seven planning steps based on the scientific method. DQO statements applied to development of this Closure Plan and the closure activities to be implemented at Permitted Units are summarized as follows. *1–3 (not included in comment)* 4. *Define the Boundaries*. The evaluation will be limited to information that is relevant to activities conducted at each Permitted Unit and the planned closure activities: *a–d (not included in comment)* *5–7 (not included in comment)*	Please see preceding comment regarding the objectives of the DQO process. When defining boundaries for the closure process, it is reasonable to limit the Phase II decontamination activities to affected areas, as described in the Application and General Comment G-J. Please add item e to No. 4: e. Limiting Phase II decontamination activities to affected areas. The decontamination will be limited to the hardened surfaces present in the WMA (e.g., concrete floors). If decontamination of equipment is required, the decontamination effort will be limited to equipment directly associated with waste management. If decontamination of secondary containment surfaces is required, the decontamination effort will be limited to the bottoms and sides up to the secondary containment level, as these are the surfaces that would be contaminated.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-9	15.3.1	363	The DQO process identifies the type, quantity, and quality of environmental data to be used in decision-making are appropriate for the intended application. DQOs are qualitative and quantitative statements derived from a series of seven planning steps based on the scientific method. DQO statements applied to development of this Closure Plan and the closure activities to be implemented at Permitted Units are summarized as follows. *1–4 (not included in comment)* 5. *Develop the Decision Rule*. The decision consists of two parts: 1) defining Permitted Unit-specific closure criteria to indicate when the closure performance standard has been achieved; and 2) determining whether the results of the closure activities satisfy the closure criteria. a. In regard to the first part, the information obtained from records review will be used to select parameters to indicate the potential presence of waste constituents. The Sampling and Analysis Plan (SAP) in each Unit-specific closure plan describes the rationale for the indicator parameters currently selected for closure verification sampling. b. If analytical results of indicator parameters in residues (e.g., sweepings) and decontamination rinse and wash waters do not show significantly elevated concentrations, the Permitted Unit will be considered to be clean closed, and the closure certification step may commence. For the purpose of this closure plan, for non-naturally occurring constituents significantly elevated concentrations are those that are greater than 20% higher than their corresponding detection limits. For naturally occurring constituents significantly elevated concentrations are those that are greater than 20% higher than the corresponding concentration in unused wash or rinse waters. All detection limits are subject to approval by the Department. 6. *Specify Limits on Decision Errors.* Because measurement data from sampling and analysis can only estimate true values, there is always a possibility that decisions made based on measurement data will be in error. Decision errors can be attributed to either sampling error (when incorrect sampling fails to adequately represent the true environment) or measurement errors (when the combinations of random and systematic errors in the measurement process inaccurately represent the true values). Precautions that	Please see Comment PA15-7 regarding the objectives of the DQO process. DOE/Sandia note the rationale for the indicator parameters selected by NMED is not included in each Unit-specific sampling and analysis plan in the Permit Attachment. As discussed in General Comment G-J, DOE/Sandia selected non-volatile constituents that are present in many of the wastes commonly treated and/or stored at each Unit to serve as indicator parameters. If residual contamination is present on the floors, secondary containment, or interior fume hood surfaces, it is more likely to consist of metal constituents than volatile organic compounds. For these reasons, samples will be analyzed for hazardous waste toxicity characteristic metals only. The indicator parameter concentrations in the used wash water will be evaluated to provide a qualitative indication of contamination. Also, the sampling and analysis plan is in Section 15.7 of the Permit Attachment; the closure schedule is in Section 15.8. Please revise as follows: 5. *Develop the Decision Rule*. The decision consists of two parts: 1) defining Permitted Unit-specific closure criteria to indicate when the closure performance standard has been achieved; and 2) determining whether the results of the closure activities satisfy the closure criteria. a. In regard to the first part, the information obtained from records review will be used to select parameters to indicate the potential presence of waste constituents. The indicator parameters are non-volatile constituents present in many of the wastes commonly treated and/or stored at each Unit. If residual contamination is present on the floors, secondary containment, or interior fume hood surfaces, it is more likely to consist of metal constituents than volatile organic compounds. For these reasons, samples will be analyzed for hazardous waste toxicity characteristic metals only. The Sampling and Analysis Plan (SAP) for each Unit lists the indicator parameters currently selected for closure verification sampling. b. If analytical results of indicator parameters in residues (e.g., sweepings) and decontamination rinse waters do not show significantly elevated concentrations, the Permitted Unit will be considered to be clean closed, and the closure certification step may commence. For the purpose of this closure plan, for non-naturally occurring constituents, significantly elevated

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-9 (cont)			shall be taken to minimize either type of decision error when performing closure of a Permitted Unit are discussed in the Sampling and Analysis Plan in Section 15.8 of this Permit Attachment. 7 *(not included in comment)*	concentrations are those that are greater than 20% higher than their corresponding detection limits. For naturally occurring constituents significantly elevated concentrations are those that are greater than 20% higher than the corresponding concentration in unused wash or rinse waters. All detection limits are subject to approval by the Department. 6. *Specify Limits on Decision Errors.* Because measurement data from sampling and analysis can only estimate true values, there is always a possibility that decisions made based on measurement data will be in error. Decision errors can be attributed to either sampling error (when incorrect sampling fails to adequately represent the true environment) or measurement errors (when the combinations of random and systematic errors in the measurement process inaccurately represent the true values). Precautions that shall be taken to minimize either type of decision error when performing closure of a Permitted Unit are discussed in the Sampling and Analysis Plan in Section 15.7 of this Permit Attachment.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-10	15.3.2	364	All structures, surfaces, and equipment at a Permitted Unit shall be decontaminated. The following general principles shall apply to decontamination and verification of all Permitted Units at the Facility: 1. Verification samples shall be collected to determine whether the applicable closure criteria are met. The decontamination verification samples shall be collected as specified in the Unit-specific closure plan SAP. *2–3 (not included in comment)* 4. Personal protective equipment, plastic sheeting, and sampling equipment used by personnel performing decontamination activities shall be disposed of unless decontaminated. Such waste shall be placed in containers and characterized to determine if they are hazardous or mixed wastes, in accordance with all applicable requirements of 40 C.F.R. § 262.34. *5–6 (not included in comment)* 7. The Permittees will continue the long-standing practice of providing radionuclide data to the Department on a voluntary basis, in accordance with: 1) the joint guidance developed by the National Association of Attorneys General (NAAG), (NAAG, 1998), and 2) the data-sharing provisions of the current Agreement-in-Principle between the U.S. Department of Energy (DOE) and the State of New Mexico (DOE, 2000).	Please see Comments PA15-6 and PA15-8. Not all structures, surfaces, and/or equipment at each unit will need washing to remove waste residues. DOE/Sandia note it is not necessary to perform further decontamination on areas that are shown to be acceptable based on the verification sampling. Additionally, the waste items will be characterized according to the requirements of 40 CFR 261 and will be managed appropriately. Please delete "(NAAG, 1998)" and "(DOE, 2000)" unless a list of references is included in the final Permit. Please revise as follows: All contaminated structures, surfaces, and equipment at a Permitted Unit shall be decontaminated. The following general principles shall apply to decontamination and verification of all Permitted Units at the Facility: 1. Verification samples shall be collected to determine whether the applicable closure criteria are met. The decontamination verification samples shall be collected as specified in the Unit-specific closure plan SAP. Only those areas (e.g., floor grids) that do not meet closure criteria (based on results from rinse water sampling) will require further decontamination and verification sampling. 4. Personal protective equipment, plastic sheeting, and sampling equipment used by personnel performing decontamination activities shall be disposed of unless decontaminated. Such wastes shall be placed in containers and characterized to determine if they are hazardous or mixed wastes, in accordance with all applicable requirements of 40 C.F.R. § 261. The wastes shall be managed appropriately. 7. The Permittees will continue the long-standing practice of providing radionuclide data to the Department on a voluntary basis, in accordance with: 1) joint guidance developed in 1998 by the National Association of Attorneys General (as revised and updated), and 2) the data-sharing provisions of the current Agreement-in-Principle established in 2000 between the U.S. Department of Energy (DOE) and the State of New Mexico, (as revised and updated).

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-11	15.5	365	The decontamination procedures described below are the steps that shall be taken to remove or decontaminate all hazardous or mixed waste residues and contaminated containment system components, equipment, and structures during closure. The decontamination techniques described below apply to surfaces present at container storage units (e.g., asphalt, concrete, sheet plastic, and metal). These surfaces include floors, walls, doors, ceilings, sumps, drainage structures, secondary containment structures, and miscellaneous equipment. *1–4 (not included in comment)* 5. Washing appropriate hardened surface areas (e.g., floors, walls, secondary containment, and non-disposable equipment) with the non-phosphate detergent solution. Large areas to be washed shall be cleaned according to grids established in Unit-specific SAPs. Washing shall be done with mops, sponges or pressure washers, depending on the degree of contamination or other conditions at the time of closure. *6–8 (not included in comment)* 9. Repeating wash and wash/rinse water collection procedures until all visible signs of contamination have been removed. Visible contamination that cannot be removed by washing shall be removed by scraping or chipping or another method using appropriate tools and equipment. *10 (not included in comment)* 11. Collect two grab samples of used wash and rinse water from each decontaminated area or item and analyze them for the parameters identified in the Unit-specific SAP for the Unit being closed.	DOE/Sandia note containers of waste will be stored on floors or secondary containment structures. Large self-contained items will be stored on floors, as described in the Application. Therefore, only the floors, sumps, secondary containment structures, and miscellaneous equipment associated with storage or treatment would require decontamination. It is not reasonable to suspect that waste residue is routinely present on walls, doors, or ceilings, because it is not stored or handled in contact with these surfaces. It would not be present unless there was an extreme event as discussed in Comment PA15-6. Limited amounts of residue may be present on walls in enclosed treatment areas such as fume hoods; these are addressed in the Unit-specific sampling plans. Similarly, waste residue would not be present in drainage structures unless there were releases not controlled by the secondary containment. Additionally, DOE/Sandia note each Unit-specific closure plan will be reviewed, revised as needed to incorporate relevant information from the Unit operating history, and submitted to NMED for approval before closure begins, as specified in Section 15.3 of this Permit Attachment. As noted in Comment PA15-6, samples of used wash water will be analyzed but the data will not be used to determine whether decontamination has been successful. Please revise as follows: The decontamination procedures described below are the steps that shall be taken to remove or decontaminate all hazardous or mixed waste residues and contaminated containment system components, equipment, and structures during closure. The decontamination techniques described below apply to surfaces present at container storage units (e.g., asphalt, concrete, sheet plastic, and metal). These surfaces include floors, sumps, other secondary containment structures, and miscellaneous equipment. 5. Washing appropriate hardened surface areas (e.g., floors, secondary containment, and non-disposable equipment) with the non-phosphate detergent solution. Large areas to be washed shall be cleaned according to grids established in Unit-specific SAPs. Washing shall be done with mops, sponges or pressure washers, depending on the degree of contamination or other conditions at the time of closure. 9. Repeating wash and rinse water collection procedures until all visible signs of contamination have been removed. Visible contamination that cannot be removed by washing shall be removed by scraping or chipping or another method using

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-11 (cont)				appropriate tools and equipment. 11. Collect two grab samples of rinse water from each decontaminated area or item and analyze them for the parameters identified in the Unit-specific SAP for the Unit being closed.
PA15-12	15.7.9	370	The laboratory shall perform the following QC checks with each batch of samples at a minimum frequency of five percent. 1. Matrix duplicate: Split aliquots of a sample are spiked with identical concentrations of target analytes and analyzed. The results are used to document the precision and bias of a method in the sample matrix. 2. Matrix spike: An aliquot of sample is spiked with known concentrations of target analytes, the sample is prepared and analyzed, and the results are compared to the results of a split, non-spiked sample to determine and document the bias of the matrix on the analytical method. 3. Laboratory method blanks. 4. Laboratory duplicates (for calculating RPDs) 5. Percent Recovery	DOE/Sandia note the detailed specifications in this section for performing QC checks are unnecessary, as requirements are fully specified through reference to SW-846 and all updates in the preceding paragraph. Also, this requirement is not consistent with QA requirements in other sections of the draft Permit (e.g., Permit Part 6, Section 6.19.1.1 "Quality Assurance"). For consistency, please revise to read: At a minimum, the laboratories shall use a combination of standards, blanks, surrogates, duplicates, matrix spike/matrix spike duplicates (MS/MSD), and laboratory control samples to assess data quality at a minimum frequency of five percent.
PA15-13	15.7.10	370	The laboratory shall report the data in accordance with their internal QC requirements. Duplicate laboratory control samples shall be analyzed by the laboratory for indicators of bias and precision and shall be reported as percent recovery and relative percent difference. QC acceptance criteria for bias and precision shall be included in the analytical report.	DOE/Sandia note the detailed specifications in this section for reporting QC data are unnecessary, as requirements are fully specified through reference to SW-846 and all updates in Section 15.7.9. Please revise to read: The laboratory shall report the data in accordance with their internal QC requirements, and shall include data (e.g., acceptance criteria for bias, percent recovery, precision, and relative percent difference) in the analytical report.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-14	15.13.1	372	**Building 959** is an 1,800-square-foot pre-cast concrete building that contains eight separate and recessed waste holding cells and a repackaging area. The floor is coated with an epoxy finish. Small containers of wastes (typically less than 55 gallons) are stored in this building. The repackaging area includes a fume hood and local negative-pressure ventilation systems for use when opening containers of vapor-producing wastes to repackage them. **Building 958** (west of Building 959) is a 3,520-square-foot pre-cast concrete building that includes eight separate and recessed waste storage compartments for segregation of waste according to compatibility groups. The floor is covered with a chemical-resistant epoxy finish. Containers of wastes are stored in this building. **Buildings 958B and 958C** are modular, prefabricated safety storage structures used for container storage of reactive and ignitable wastes. Each structure is constructed of welded 10- and 12-gauge steel with supporting structural steel sections, and a 500-gallon containment reservoir. The inside surfaces are coated with chemical-resistant epoxy finish.	DOE/Sandia note the information about the epoxy coatings is not consistent with the information that should be specified in Permit Attachment 3, as concrete is sufficiently impervious to serve as secondary containment in accordance with the requirements of 40 CFR 264.175(b)(1-4). Please see Comment PA3-3 for further discussion and revise to read: **Building 959** is an 1,800-square-foot pre-cast concrete building that contains eight separate and recessed waste holding cells and a repackaging area. The floor is painted. Small containers of wastes (typically less than 55 gallons) are stored in this building. The repackaging area includes a fume hood and local negative-pressure ventilation systems for use when opening containers of vapor-producing wastes to repackage them. **Building 958** (west of Building 959) is a 3,520-square-foot pre-cast concrete building that includes eight separate and recessed waste storage compartments for segregation of waste according to compatibility groups. The floor is painted. Containers of wastes are stored in this building. **Buildings 958B and 958C** are modular, prefabricated safety storage structures used for container storage of reactive and ignitable wastes. Each structure is constructed of welded 10- and 12-gauge steel with supporting structural steel sections, and a 500-gallon containment reservoir. The inside surfaces are painted.

<table>
<tr><th>NO</th><th>SECTION</th><th>PAGE</th><th>DRAFT PERMIT TEXT</th><th>DOE/SANDIA COMMENT</th></tr>
<tr><td>PA15-15</td><td>15.13.2</td><td>373</td><td>The maximum volume of hazardous waste in storage at any time at the HWMU is estimated at 19,386 gallons of liquids or solids (including lab packs that contain substantial quantities of absorbent). This is the maximum volume of hazardous wastes that could be removed from the waste management areas as part of closure activities. The maximum total waste volume is broken down by structure as follows:
<table><tr><th>STRUCTURE</th><th>AMOUNT OF WASTE</th></tr><tr><td>Building 959</td><td>1,898 gallons</td></tr><tr><td>Building 958</td><td>14,988 gallons</td></tr><tr><td>Building 958B</td><td>1,250 gallons</td></tr><tr><td>Building 958C</td><td>1,250 gallons</td></tr></table></td><td>As discussed in General Comment G-F, these capacities do not reflect the current permitted capacities. Please see General Comment G-A and Comment PA15-1 regarding management of hazardous and mixed waste at each Permitted Unit. Please revise to read:

The maximum volume of hazardous or mixed waste in storage at any time at the HWMU is estimated at 77,540 gallons of liquids or solids (including lab packs that contain substantial quantities of absorbent). This is the maximum volume of hazardous or mixed wastes that could be removed from the waste management areas as part of closure activities. The maximum total waste volume is broken down by structure as follows:
<table><tr><th>STRUCTURE</th><th>AMOUNT OF WASTE</th></tr><tr><td>Building 959</td><td>7,590 gallons</td></tr><tr><td>Building 958</td><td>59,950 gallons</td></tr><tr><td>Building 958B</td><td>5,000 gallons</td></tr><tr><td>Building 958C</td><td>5,000 gallons</td></tr></table></td></tr>
<tr><td>PA15-16</td><td>15.13.3</td><td>372</td><td>Closure activities specified in this plan assume that the following conditions were met during the operational life of the HWMU.

1–2 (not included in comment)

3. If hazardous wastes or hazardous waste constituents were inadvertently released into the local exhaust systems during repackaging or bulking activities in Building 959, they would be present in the exhaust system.

4–5 (not included in comment)

6. Hazardous wastes or hazardous waste constituents are present in areas where wastes were managed.

7 (not included in comment)</td><td>As discussed in General Comment G-J, DOE/Sandia do not consider it appropriate to assume that hazardous waste constituents from all wastes managed at the Unit are constituents of concern for closure if there is no history of a release or evidence of any release of hazardous waste constituents. Additionally, the non-volatile indicator parameters chosen for evaluating effectiveness of decontamination are present in particulates; these would be most likely to be present in the exhaust system only up to the first filter, unless there were indications or records to indicate the filter had failed or was not present. If the filter had failed, appropriate cleanup and decontamination procedures would already have been performed. Please revise items 3 and 6 to read:

3. If hazardous or mixed wastes or hazardous waste constituents were inadvertently released into the local exhaust systems during repackaging or bulking activities in Building 959, they would be present up to the first filter, unless there were indications or records to indicate the filter had failed. If the filter was not present, the hazardous and mixed waste constituents would be present in the entire exhaust system.

6. Hazardous or mixed wastes or hazardous waste constituents are not present except in areas where wastes were managed.</td></tr>
</table>

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-17	15.13.4	374	The closure approach and general activities described at the beginning of this Attachment shall be applied to closure of the HWMU. With respect to the individual waste management areas, the Permittees shall use the following approach. 1. Items of equipment within the HWMU shall be evaluated individually to determine whether it is more effective to remove them or decontaminate them. Items that are most likely to be removed include local exhaust systems, filters, and portable equipment. Items that are most likely to be decontaminated include the interior of the fume hood. *2–3 (not included in comment)* 4. The walls, doors, ceilings, floors, and secondary containment structures of each waste management area shall be decontaminated by sweeping and washing as described elsewhere in this Attachment.	Please see the preceding comment and Comments PA15-6 and PA15-8 regarding Unit operations and the areas where contamination is most likely. Please revise items 1 and 4 to read: 1. Items of equipment within the HWMU shall be evaluated individually to determine whether it is more effective to remove them or decontaminate them. Items that are most likely to be removed include local exhaust systems (to the first filter), filters, and portable equipment. Items that are most likely to be decontaminated include the interior of the fume hood. 4. The floors and secondary containment structures of each waste management area shall be decontaminated by sweeping and washing as described elsewhere in this Attachment.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-18	Table 15-4	376		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 15-4
Closure Sampling for the Hazardous Waste Management Unit

Summary of Pre-Wash Sampling			
Media to be Sampled	**Sample Number & Type**	**Indicator Parameters[a]**	**Standards for Comparison[b]**
Floor sweepings	Single grab from collected material at each waste management area (representative of material removed from entire floor surface)	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver, Antimony, Beryllium, Nickel, Thallium, Vanadium, Zinc, Cyanide, SVOCs, VOCs, Herbicides, Pesticides, HE, PCBs	Background

Summary of Post-Wash Sampling: Used Wash Water and Used Rinse Water				
Area to be Decontaminated	**Grid(s)**	**Samples per Grid[c]**	**Indicator Parameters[b]**	**Closure Criteria (Milligrams per Liter)**
Building 958	A-H	4	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver, Antimony, Beryllium, Nickel, Thallium, Vanadium, Zinc, Cyanide, SVOCs, VOCs, Herbicides, Pesticides, HE, PCBs	Evaluate with respect to concentrations in unused wash and rinse waters

c One sample from each pair of used wash water and rinse water samples will be filtered when collected to remove particulates. Ceilings, doors, and secondary containment structures within the gridded area are considered part of the grid.

DOE/SANDIA COMMENT

Please see General Comment G-J and Comment PA15-9 regarding selection of indicator parameters based on chemical properties and Unit history. Additionally, the correct footnote for "Indicator Parameters" in the bottom part of the table is "a" rather than "b."

<table>
<tr><th>NO</th><th>SECTION</th><th>PAGE</th><th>DRAFT PERMIT TEXT</th><th>DOE/SANDIA COMMENT</th></tr>
<tr><td>PA15-18 (cont)</td><td></td><td></td><td colspan="2">Please revise as follows:

TABLE 15-4
Closure Sampling for the Hazardous Waste Management Unit

<table>
<tr><th colspan="4">Summary of Pre-Wash Sampling</th></tr>
<tr><th>Media to be Sampled</th><th>Sample Number & Type</th><th>Indicator Parameters[a]</th><th>Standards for Comparison[b]</th></tr>
<tr><td>Floor sweepings</td><td>Single grab from collected material at each waste management area (representative of material removed from entire floor surface)</td><td>Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver</td><td>Background</td></tr>
</table>

<table>
<tr><th colspan="5">Summary of Post-Wash Sampling: Used Wash Water and Used Rinse Water</th></tr>
<tr><th>Area to be Decontaminated</th><th>Grid(s)</th><th>Samples per Grid[c]</th><th>Indicator Parameters[a]</th><th>Closure Criteria (Milligrams per Liter)</th></tr>
<tr><td>Building 958</td><td>A-H</td><td>4</td><td>Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver</td><td>Evaluate with respect to concentrations in unused wash and rinse waters</td></tr>
</table>

c One sample from each pair of used wash water and rinse water samples will be filtered when collected to remove particulates. Secondary containment structures (bottom and sides up to the containment level) within the gridded area are considered part of the grid.</td></tr>
<tr><td>PA15-19</td><td>15.14.2</td><td>379</td><td>The maximum inventory of hazardous waste in treatment at any time at the TTU is not more than 20.8 gallons. The total quantity of hazardous waste that will be treated at the TTU over the Permit life of ten years is estimated to be 12,000 gallons.</td><td>The cumulative quantity of waste treated over the life of the TTU is not relevant, because the treatment residues are removed and the waste is not present at the time of closure. The maximum inventory of waste that could be present at closure is limited to 20.8 gallons. The cumulative quantity of waste that passed through a treatment facility such as the TTU during its operating life has no effect on the method of closure. Accordingly, please delete the second sentence.</td></tr>
<tr><td>PA15-20</td><td>15.14.3</td><td>378</td><td>If hazardous wastes were kicked out beyond the edge of the steel-lined concrete pad during treatment, they would have been deposited on the earthen berm and perhaps other adjacent areas near the pad.</td><td>DOE/Sandia note the reference to "other adjacent areas near the pad" needs clarification, as the earthen berm surrounds the TTU on three sides and prevents deposition of kickout beyond the berm. Kickout would potentially be present only in areas immediately adjacent to the pad; the only such area is the steps and paved surface in front of the Unit. Please revise to read:

If hazardous wastes were kicked out beyond the edge of the steel-lined concrete pad during treatment, they would have been deposited on the earthen berm or the area immediately in front of the TTU.</td></tr>
</table>

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-21	15.14.5.3	379	Each sample shall be analyzed for silver and HE using the Toxicity Characteristic Leaching Procedure (TCLP). The concrete pad shall be characterized to determine if it will be managed as solid waste or hazardous waste debris. A representative sample shall be collected, and the location shall be biased towards an area that is suspected of being contaminated (e.g., a visibly stained or discolored area). This sample will be analyzed for silver and HE using the TCLP.	DOE/Sandia note TCLP is not an appropriate method for analyzing for high explosives (HE). This requirement is included throughout Section 15.14. Additionally, please see General Comment G-J and Comment PA15-9 regarding selection of indicator parameters (e.g. silver) based on chemical properties and presence in the wastes managed at the Unit. Please revise to read: Each sample shall be analyzed for silver using the Toxicity Characteristic Leaching Procedure (TCLP).
PA15-22	15.14.5.8	380	Total silver concentrations (determined by analysis) from characterization sampling of the soil comprising the earthen berm and surrounding areas, including that beneath the concrete pad and storm-water catchment tank shall be compared to background levels for silver. If characterization-sampling results are equal to or lower than the background level, soil contamination is not indicated for silver. Analytical results for soil samples for HE and concentrations of silver exceeding the background level shall be evaluated by risk assessment. If the characterization sampling results indicate the silver level or the concentration of HE poses unacceptable risk to human health or the environment, the soil shall be excavated, removed, and disposed of.	DOE/Sandia note the corrective action requirements in Part 6 of the draft Permit specify contaminant cleanup to residential risk levels or residential land use screening levels (listed in the most current version of "Technical Background Document for Development of Soil Screening Levels") for sites that are to be released without long-term controls; indicating that NMED has determined these risk levels are acceptable to human health and the environment. Thus these contaminant levels are appropriate for closure of the TTU and should be incorporated in this Permit Attachment. Please revise to read: Total silver concentrations (determined by analysis) from characterization sampling of the soil comprising the earthen berm and surrounding areas, including that beneath the concrete pad and storm-water catchment tank, shall be compared to residential risk standards or residential land use screening levels (listed in the most current version of the Department's "Technical Background Document for Development of Soil Screening Levels") for silver. If characterization-sampling results are equal to or lower than the residential standards, soil contamination is not indicated for silver. Analytical results for soil samples for HE and concentrations of silver exceeding residential standards shall be evaluated by risk assessment. If the characterization sampling results indicate the silver level or the concentration of HE poses unacceptable risk to human health or the environment, the soil shall be excavated, removed, and disposed of.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-23	15.15.1	381	The floors of the north and south bays are coated with an epoxy-based chemical resistant coating that forms a continuous protective barrier over the concrete floor. The south bay includes an epoxy-coated sump that provides secondary containment for liquid wastes stored in the area. **15.15.1.2 Building 6921** Building 6921 is a single-story CMU building with approximately 1450 square feet of space used for treatment and container storage activities in three areas. The concrete floors are covered with a chemical-resistant epoxy coating.	DOE/Sandia note the information about the floors in Buildings 6920 and 6921 is not consistent with the information that should be specified in Permit Attachment 5, as concrete is sufficiently impervious to serve as secondary containment in accordance with the requirements of 40 CFR 264.175(b)(1-4). Please see Comment PA5-8 for additional discussion regarding the need for an epoxy coating. Also, Permit Attachment 15 does not include descriptions of Buildings 6925 and 6926, the Modular Storage Buildings, or the Outdoor Waste Storage Area. Please revise as follows: The floors of the north and south bays are painted concrete. The south bay includes a concrete sump that provides secondary containment for liquid wastes stored in the area. The building is used for treatment of hazardous and mixed wastes, for storage of hazardous and mixed wastes in containers, and for storage of large self-contained hazardous or mixed waste items. **15.15.1.2 Building 6921** Building 6921 is a single-story CMU building with a concrete floor. It has approximately 1450 square feet of space used for treatment and container storage activities in three areas. **15.15.1.3 Buildings 6925 and 6926** Buildings 6925 and 6926 are each 4,000-ft^2 prefabricated steel buildings on concrete foundations. The buildings are used for storage of hazardous and mixed wastes in containers and for storage of large self-contained hazardous or mixed waste items. Building 6925 is also used for treatment. **15.15.1.4 Modular Storage Buildings** Two modular, prefabricated storage structures located west of Building 6920 are used for container storage of hazardous and mixed reactive and ignitable wastes. Each structure is constructed of 10- and 12-gauge welded steel with supporting structural steel sections, and includes a welded steel containment pan covered by grating. The inside surfaces are painted. **15.15.1.5 Outdoor Storage Area** The outdoor waste storage area consists of 48,500 ft^2 of asphalt-paved areas to the north, east, and west of Building 6920 within the RMWMU fence. This area is used for storage of hazardous or mixed wastes in containers and for storage of large self-contained hazardous or mixed waste items. Containers of RCRA-regulated wastes are typically stored

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-23 (cont)				inside enclosed transportainers at this WMA. Containers with liquids are stored on portable spill containment pallets inside the transportainers.
PA15-24	15.15.2	382	The maximum total volume of mixed waste at any time at the RMWMU is approximately 52,388 gallons of liquids or solids. This is the maximum volume of waste that could be removed from the waste management areas as part of closure activities. The maximum total waste volume is broken down as follows: 1. Building 6920: 3,355 gallons 2. Building 6921: 1,953 gallons 3. Building 6925: 20,790 gallons 4. Building 6926: 20,790 gallons 5. Modular storage building TP 150: 275 gallons 6. Modular storage building TP 153: 275 gallons 7. Outdoor waste storage area: 4,950 gallons	Please see General Comment G-F regarding capacities. Please revise to read: The maximum total volume of hazardous or mixed waste at any time at the RMWMU is approximately 209,550 gallons of liquids or solids. This is the maximum volume of waste that could be removed from the waste management areas as part of closure activities. The maximum total waste volume is broken down as follows: 1. Building 6920: 13,420 gallons 2. Building 6921: 7,810 gallons 3. Building 6925: 83,160 gallons 4. Building 6926: 83,160 gallons 5. Modular storage building TP 150: 1,100 gallons 6. Modular storage building TP 153: 1,100 gallons 7. Outdoor waste storage area: 19,800 gallons

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-25	15.15.3	382	The closure activities specified in this plan assume that the following conditions were met during the operational life of the RMWMU: *1–2 (not included in comment)* 3. If mixed waste or hazardous constituents were inadvertently released into the local exhaust systems during treatment activities, they would be present in the systems. *4–5 (not included in comment)* 6. Containers of waste were stored in steel transportainers in the outdoor storage area. Containers of liquids were not routinely stored within the transportainers; those that were present were stored on spill pallets. Containers of waste were not opened within the transportainers. 7. Mixed waste or hazardous constituents are present in areas where wastes were managed. 8. The interior floors of the waste management areas in each building were maintained to retain their integrity by following established maintenance and inspection procedures, breaches of protective coatings did not occur, and a small amount of soil present on the floors is due to normal traffic and operations.	Please see Comments PA15-6, PA15-8, and PA15-16 regarding Unit operations and the areas where contamination is most likely. The non-volatile indicator parameters chosen for evaluating effectiveness of decontamination are present in particulates; these would be most likely to be present in the exhaust system only up to the first filter, unless there were indications or records to indicate the filter had failed. In such an event, appropriate cleanup and decontamination procedures would already have been performed in response to such a release. Also, DOE/Sandia note transportainers may be materials other than steel. Please revise as follows: 3. If hazardous or mixed waste or hazardous waste constituents were inadvertently released into the local exhaust systems during treatment activities, they would be present up to the first filter, unless there were indications or records to indicate the filter had failed. 6. Containers of waste were stored in transportainers in the outdoor storage area. Containers of liquids were not routinely stored within the transportainers; those that were present were stored on spill pallets. Containers of waste were not opened within the transportainers. 7. Hazardous or mixed waste or hazardous waste constituents are not present except in areas where wastes were managed. 8. The interior floors of the waste management areas in each building were maintained to retain their integrity by following established maintenance and inspection procedures, breaches of protective coatings were repaired in a timely manner, and a small amount of soil present on the floors is due to normal traffic and operations.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-26	15.15.4	383	The closure approach and general activities described in Sections 15.1 through 15.17 of this Permit Attachment shall be applied to closure of the RMWMU. With respect to the individual waste management areas the Permittees shall use the following approach. 1. Equipment and other items shall be evaluated individually to determine whether it is more effective to remove them or decontaminate them. Items that are most likely to be removed include local exhaust systems, filters, and portable equipment. Items that may be decontaminated include the interiors of fume hoods. 2. Transportainers used for storage in the outdoor waste management areas shall be visually examined for evidence of releases in addition to being sampled. The transportainers shall be evaluated individually to determine whether it is more effective to remove and dispose of them or decontaminate them. *3 (not included in comment)* 4. The walls, ceilings, doors, floors, and secondary containment structures of each treatment and storage area shall be decontaminated by sweeping and washing as described in Section 15.3.2 of this Attachment. 5. The asphalt in the outdoor waste management area shall be visually examined for evidence of deterioration and releases. Decontamination or removal of the asphalt shall be conducted at areas where there is visual evidence or documentation, including sampling results of a release of mixed wastes or hazardous constituents. Any contaminated soil beneath the asphalt shall be excavated and disposed of.	Please see PA15-6 and PA15-8 regarding Unit operations and the areas where contamination is most likely. Such areas at the RMWMU are further reduced by storage practices: secondary containment in most of the storage areas is provided by portable spill pallets and pans that would be removed with any remaining containers of waste prior to closure. Accordingly, please revise as follows: The closure approach and general activities described in Sections 15.2 through 15.12 of this Permit Attachment shall be applied to closure of the RMWMU. With respect to the individual waste management areas the Permittees shall use the following approach. 1. Waste management equipment and other items shall be evaluated individually to determine whether it is more effective to remove them or decontaminate them. Items that are most likely to be removed include local exhaust systems up to the first filter (unless there is evidence or records indicating filter failure), filters, and portable equipment. Items that may be decontaminated include the interiors of fume hoods. 2. Transportainers used for storage in the outdoor waste management areas shall be visually examined for evidence of releases. The transportainers shall be evaluated individually to determine whether it is more effective to remove and dispose of them or decontaminate them. 4. The floors and secondary containment structures (if present) of each treatment and storage area shall be decontaminated by sweeping and washing as described in Section 15.3.2 of this Attachment. 5. The asphalt in the outdoor waste management area shall be visually examined for evidence of deterioration and releases. Decontamination or removal of the asphalt shall be conducted at areas where there is visual evidence or documentation, including sampling results, of a release of hazardous or mixed wastes or hazardous waste constituents. Any soil beneath the asphalt contaminated above established background or risk levels, as appropriate, shall be excavated and disposed of.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-27	Table 15-5	385		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 15-5
Closure Sampling for the Radioactive and Mixed Waste Management Unit

Summary of Pre-Wash Sampling

Media to be Sampled	Sample Number & Type	Indicator Parameters[a]	Standards for Comparison[b]
Floor sweepings	Single grab from collected material at each waste management area, except for fume hoods (representative of material removed from entire floor surface)	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver, Antimony, Beryllium, Nickel, Thallium, Vanadium, Zinc, Cyanide, SVOCs, VOCs, Herbicides, Pesticides, HE, PCBs	Background

Summary of Post-Wash Sampling: Used Wash Water and Used Rinse Water

Area to be Decontaminated and applicable Sampling Grid	Grid(s)	Samples per Grid[c]	Indicator Parameters[a]	Closure Criteria
Building 6920 Figure 15-6, Permit Attachment 15 Bildg. 6920 Closure Grid	$S_1 - S_7$	4	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver, Antimony, Beryllium, Nickel, Thallium, Vanadium, Zinc, Cyanide, SVOCs, VOCs, Herbicides, Pesticides, HE, PCBs	Evaluate with respect to concentrations in unused wash and rinse waters
Building 6921 Figure 15-7, Permit Attachment 15 Bldg. 6921 Closure Grid	Fume Hood	4[e]	Same as above	Same as above
Modular Storage Buildings Figure 15-9, Permit Attachment 15 Modular Storage Bldg. Closure Grid	A	4[d]	Same as above	Same as above

c One sample from each pair of used wash water and rinse water samples will be filtered when collected to remove particulates. Ceilings, doors, and secondary containment structures within the gridded area are considered part of the grid.

DOE/SANDIA COMMENT

Please see General Comment G-J and Comment PA15-9 regarding indicator parameters and rationale. Additionally, there are no footnotes d and e to this table, please delete the references to them in the body of the table.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-27 (cont)			Please revise as follows:	

TABLE 15-5
Closure Sampling for the Radioactive and Mixed Waste Management Unit

Summary of Pre-Wash Sampling			
Media to be Sampled	**Sample Number & Type**	**Indicator Parameters[a]**	**Standards for Comparison[b]**
Floor sweepings	Single grab from collected material at each waste management area, except for fume hoods (representative of material removed from entire floor surface)	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver	Background

Summary of Post-Wash Sampling: Used Wash Water and Used Rinse Water				
Area to be Decontaminated and applicable Sampling Grid	**Grid(s)**	**Samples per Grid[c]**	**Indicator Parameters[a]**	**Closure Criteria**
Building 6920 Figure 15-6, Permit Attachment 15 Bildg. 6920 Closure Grid	$S_1 - S_7$	4	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver	Evaluate with respect to concentrations in unused wash and rinse waters
Building 6921 Figure 15-7, Permit Attachment 15 Bldg. 6921 Closure Grid	Fume Hood	4	Same as above	Same as above
Modular Storage Buildings Figure 15-9, Permit Attachment 15 Modular Storage Bldg. Closure Grid	A	4	Same as above	Same as above

c One sample from each pair of used wash water and rinse water samples will be filtered when collected to remove particulates. Secondary containment structures (bottom and sides up to the containment level) within the gridded area are considered part of the grid.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-28	15.16.1	387	The following is a brief description of each waste management area. *1 (not included in comment)* 2. The Work Area is located in the corner of the high bay north and east of the hot cell and the permanent shield wall. Waste management activities in the work area include storage and treatment. The floor of the work area is coated with an epoxy-based chemical-resistant coating that forms a continuous protective barrier over the concrete floor. The work area includes a 6-ft-wide walk-in fume hood, which is also used for storage and treatment of waste in containers. The fume hood is equipped with a negative-pressure ventilation system. A flexible exhaust hose can be attached to this system, allowing localized negative-pressure ventilation from the work area. Airflow from the ventilation system passes through a two-stage high-efficiency particulate air filter train before being released to the environment through an exhaust stack. The filter train removes particulates entrained in the airflow. *3 (not included in comment)* 4. Containers of Hazardous Waste may also be stored in the southern half of the high bay. The footprint of the storage area will vary, depending on the quantity and configuration of waste containers (e.g., containers may also be stored in the northwest portion of the high bay). The floor of the storage area is coated with an epoxy-based chemical-resistant coating that forms a continuous protective barrier over the concrete floor. The high bay area of building 6597 is also equipped with a system of floor trenches covered with steel plates or grating. These trenches are not used to provide secondary containment for management of mixed wastes.	DOE/Sandia note this is not consistent with the information that should be specified in Permit Attachment 6, as concrete is sufficiently impervious to serve as secondary containment in accordance with the requirements of 40 CFR 264.175(b)(1-4). Please see Comment PA6-4 for additional discussion regarding the need for an epoxy coating, and revise as follows: The following is a brief description of each waste management area. 2. The Work Area is located in the corner of the high bay north and east of the hot cell and the permanent shield wall. Waste management activities in the work area include storage and treatment. The concrete floor is painted. The work area includes a 6-ft-wide walk-in fume hood, which is also used for storage and treatment of waste in containers. The fume hood is equipped with a negative-pressure ventilation system. A flexible exhaust hose can be attached to this system, allowing localized negative-pressure ventilation from the work area. Airflow from the ventilation system passes through a two-stage high-efficiency particulate air filter train before being released to the environment through an exhaust stack. The filter train removes particulates entrained in the airflow. 4. Containers of Hazardous and Mixed Waste may also be stored in the southern half of the high bay. The footprint of the storage area will vary, depending on the quantity and configuration of waste containers (e.g., containers may also be stored in the northwest portion of the high bay). The concrete floor of the storage area is painted. The high bay area of Building 6597 is also equipped with a system of floor trenches covered with steel plates or grating. These trenches are not used to provide secondary containment for management of hazardous or mixed wastes.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-29	15.16.2	386	The maximum volume of mixed waste in storage at any time at the AHCU is estimated at 6,976 gallons of liquids and/or solids. This is the maximum volume of mixed waste that could be removed from the waste management areas as part of closure activities. The maximum total waste volume is broken down as follows: 1. Building 6597 hot cell (mixed waste) 225 gallons 2. Building 6597 work area 0 gallons 3. Building 6597 container storage area: 0 gallons 4. Building 6597 storage silos: 364 gallons	Please see General Comment G-F regarding capacities. Please revise to read: The maximum volume of hazardous or mixed waste in storage at any time at the AHCU is estimated at 6,976 gallons of liquids and/or solids. This is the maximum volume of hazardous or mixed waste that could be removed from the waste management areas as part of closure activities. The maximum total waste volume is broken down as follows: 1. Building 6597 hot cell 900 gallons 2. Building 6597 work area 1,100 gallons 3. Building 6597 container storage area: 3,520 gallons 4. Building 6597 storage silos: 1,456 gallons

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-30	15.16.3	386	In addition to the assumptions listed in Condition 15.4 of this Permit Attachment, closure activities specified in this plan specific to the AHCU assume that the following conditions were met during the operational life of the Unit. 1 Activities that involved opening waste containers were confined to the interior of the AHCU waste management areas. 2. Treatment activities were conducted in a controlled manner, minimizing the potential for releases of mixed wastes or hazardous constituents. 3. If mixed wastes or constituents were inadvertently released into the local exhaust systems during treatment activities, they would be present in the system. 4. Enclosed waste management areas (e.g. hot cell and floor silos) are considered independently of other waste management areas when evaluating the potential presence of mixed wastes or hazardous constituents. 5. Steel plates over floor trenches were moved only as needed for maintenance. 6. Covers to each silo have been opened only as needed for storage operations. *7 (not included in comment)* 8. Mixed wastes or hazardous constituents were or are present in areas where wastes were managed. *9 (not included in comment)*	Please see Comments PA15-6, PA15-8, and PA15-16 regarding Unit operations and the areas where contamination is most likely. Please revise as follows: In addition to the assumptions listed in Condition 15.3 of this Permit Attachment, closure activities specified in this plan specific to the AHCU assume that the following conditions were met during the operational life of the Unit. 1 Activities that involved opening waste containers or managing large self-contained hazardous or mixed waste items were confined to the interior of the AHCU waste management areas. If contamination occurred, it would have been confined to those areas. 2. Treatment activities were conducted in a controlled manner, minimizing the potential for releases of hazardous or mixed wastes or hazardous waste constituents. 3. If hazardous or mixed wastes or hazardous waste constituents were inadvertently released into the local exhaust systems during treatment activities, they would be present in the system up to the first filter unless there were evidence or records to indicate the filter had failed. 4. Enclosed waste management areas (e.g. hot cell and floor silos) are considered independently of other waste management areas when evaluating the potential presence of hazardous or mixed wastes or hazardous waste constituents. 5. Steel plates over floor trenches were moved only as needed for maintenance. Hazardous or mixed wastes or hazardous waste constituents are not present in any section of floor trench that has been covered with steel plates unless there has been a release of hazardous or mixed wastes into that section of trench. 6. Covers to each silo have been opened only as needed for storage operations. Hazardous or mixed wastes or hazardous waste constituents are not present in each silo unless there has been a release of hazardous or mixed waste into that silo. 8. Hazardous or mixed wastes or hazardous waste constituents could not be present except in areas where wastes were managed.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-31	15.16.4	388	The closure approach and general activities described in Condition 15.4 of this Permit Attachment shall be applied to closure of the AHCU. With respect to the individual waste management areas, the Permittees shall use the following approach. 1. The floors, ceilings, walls, doors, and secondary containment structures of the hot cell shall be visually examined for evidence of deterioration and releases. The floors, ceilings, walls, doors, and secondary containment structures shall be decontaminated by washing, as described in Condition 15.5 of this Permit Attachment. 2. Equipment within the work area shall be evaluated to determine whether it is more effective to remove and dispose of it or decontaminate it. Items that are most likely to be removed include local exhaust systems (up to the first filter), filters, and portable equipment. Items that are most likely to be decontaminated include the interior of the fume hood. The floors, ceilings, walls, doors, and secondary containment structures of the work area shall be decontaminated by sweeping and washing, as described in Condition 15.5 of this Permit Attachment. 3. The liners of the silos shall be visually examined for evidence of deterioration and releases. The liners of the silos shall be decontaminated by washing. 4. The container storage area shall be decontaminated by sweeping and washing the floors, ceilings, walls, doors, and secondary containment structures, as described in Condition 15.5 of this Permit Attachment	Please see Comments PA15-6 and PA15-8 regarding Unit operations and the areas where contamination is most likely. Such areas at the AHCU are further reduced by storage practices: secondary containment is provided by portable spill pallets and pans that would be removed with any remaining containers of waste prior to closure. Accordingly, please revise as follows: Please revise to read: The closure approach and general activities described in Condition 15.5 of this Permit Attachment shall be applied to closure of the AHCU. With respect to the individual waste management areas, the Permittees shall use the following approach. 1. The floor of the hot cell shall be visually examined for evidence of deterioration and releases. The floor shall be decontaminated by washing, as described in Condition 15.5 of this Permit Attachment. 2. Equipment within the work area shall be evaluated to determine whether it is more effective to remove and dispose of it or decontaminate it. Items that are most likely to be removed include local exhaust systems (up to the first filter), filters, and portable equipment. Items that are most likely to be decontaminated include the interior of the fume hood. The floor of the work area shall be decontaminated by sweeping and washing, as described in Condition 15.5 of this Permit Attachment. 3. The liners of the silos shall be visually examined for evidence of deterioration and releases. The silos are isolated from the rest of the AHCF waste management areas. If there is visual evidence of deterioration or a release, or there is documentation indicating a release occurred, the affected areas of the silos will be washed. 4. The container storage area shall be decontaminated by sweeping and washing the floor, as described in Condition 15.5 of this Permit Attachment.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-32	Table 15-6	390		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 15-6
Closure Sampling Criteria for the Auxiliary Hot Cell Unit

Summary of Pre-Wash Sampling			
Media to be Sampled	**Sample Number & Type**	**Indicator Parameters[a]**	**Standards for Comparison[b]**
Floor sweepings	Single grab from collected material in the work area and container storage area (representative of material removed from entire floor surface)	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver, Antimony, Beryllium, Nickel, Thallium, Vanadium, Zinc, Cyanide, SVOCs, VOCs, Herbicides, Pesticides, HE, PCBs	Background

Summary of Post-Wash Sampling: Used Wash Water and Used Rinse Water				
Area to be Decontaminated	**Number of Grids**	**Samples Per Grid[c]**	**Indicator Parameters[a]**	**Closure Criteria (milligrams per Liter)**
Hot Cell	1	4	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver, Antimony, Beryllium, Nickel, Thallium, Vanadium, Zinc, Cyanide, SVOCs, VOCs, Herbicides, Pesticides, HE, PCBs	Evaluate with respect to concentrations in unused wash and rinse waters

c One sample from each pair of used wash water and rinse water samples will be filtered when collected to remove particulates. Ceilings, doors, and secondary containment structures within the gridded area are considered part of the grid.

DOE/SANDIA COMMENT

Please see General Comment G-J and Comment PA15-9 regarding indicator parameters and rationale.

<table>
<tr><th>NO</th><th>SECTION</th><th>PAGE</th><th>DRAFT PERMIT TEXT</th><th>DOE/SANDIA COMMENT</th></tr>
<tr><td>PA15-32 (cont)</td><td></td><td></td><td>Please revise as follows:

TABLE 15-6
Closure Sampling Criteria for the Auxiliary Hot Cell Unit
<table><tr><th colspan="4">Summary of Pre-Wash Sampling</th></tr><tr><th>Media to be Sampled</th><th>Sample Number & Type</th><th>Indicator Parameters[a]</th><th>Standards for Comparison[b]</th></tr><tr><td>Floor sweepings</td><td>Single grab from collected material in the work area and container storage area (representative of material removed from entire floor surface)</td><td>Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver</td><td>Background</td></tr></table><table><tr><th colspan="5">Summary of Post-Wash Sampling: Used Wash Water and Used Rinse Water</th></tr><tr><th>Area to be Decontaminated</th><th>Number of Grids</th><th>Samples Per Grid[c]</th><th>Indicator Parameters[a]</th><th>Closure Criteria (milligrams per Liter)</th></tr><tr><td>Hot Cell</td><td>1</td><td>4</td><td>Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver</td><td>Evaluate with respect to concentrations in unused wash and rinse waters</td></tr></table>c One sample from each pair of used wash water and rinse water samples will be filtered when collected to remove particulates. Secondary containment structures (bottom and sides up to the containment level) within the gridded area are considered part of the grid.</td></tr>
<tr><td>PA15-33</td><td>15.17.2</td><td>393</td><td>The maximum total inventory of mixed waste in storage at any time in the MSB is approximately 28,930 gallons of liquids and/or solids. The maximum total waste inventory is broken down as follows:

Type B Bunker (37034): 6,270 gallons
Type C Bunker (37118): 8,800 gallons
Type D Bunkers (37045, 37055, and 37057): 13,860 gallons (4,620 gallons each)</td><td>Please see General Comment G-F regarding capacities. Please revise to read:

The maximum total inventory of hazardous or mixed waste in storage at any time in the MSB is approximately 115,720 gallons of liquids and/or solids. The maximum total waste inventory is broken down as follows:

Type B Bunker (37034): 25,080 gallons
Type C Bunker (37118): 35,200 gallons
Type D Bunkers (37045, 37055, and 37057): 55,440 gallons (18,480 gallons each)</td></tr>
</table>

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-34	15.17.3	393	In addition to the assumptions of Section 15.3 of this Permit Attachment, closure activities specified in this Section assume the following conditions were met during the operational life of the MSB: 1. Mixed waste handling activities involving the opening of waste containers at the MSB were confined to the interiors of the bunkers, and 2. The interior floors and each mixed waste management area were maintained to retain their integrity by following established maintenance and inspection procedures, and that breaches of protective coatings did not occur, and the small amount of soil present on the floors due to normal traffic and operations.	Please see Comments PA15-6 and PA15-8 regarding Unit operations and the areas where contamination is most likely. DOE/Sandia note the bunker floors are not coated, as the requirement in 40 CFR 264.175(b)(1) for a base underlying the containers that is free of cracks or gaps and is sufficiently impervious to contain leaks and spills until the collected material is detected and removed is fully satisfied through use of spill pallets and pans. Furthermaore, the spill pallets and pans will be removed with any remaining containers of waste prior to the start of closure, further reducing areas of potential contamination. Please revise to read: In addition to the assumptions of Section 15.3 of this Permit Attachment, closure activities specified in this Section assume the following conditions were met during the operational life of the MSB: 1. Hazardous and mixed waste handling activities did not involve opening waste containers at the MSB, and large self-contained items were managed in a manner to prevent releases of hazardous or mixed wastes or hazardous waste constituents. If a container breach or a release occurred, it would have been addressed in a timely manner and would be documented in the Operating Record, and 2. The floors in each hazardous and mixed waste management area were maintained to retain their integrity by following established maintenance and inspection procedures, and the small amount of soil present on the floors is due to normal traffic and operations.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-35	Table 15-7	395		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment

TABLE 15-7
Closure Sampling for the Manzano Storage Bunkers

Summary of Pre-Wash Sampling			
Media	**Sample Number & Type**	**Indicator Parameters[a]**	**Standards for Comparison[b]**
Floor sweepings	Single grab from collected material at each bunker	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver, Antimony, Beryllium, Nickel, Thallium, Vanadium, Zinc, Cyanide, SVOCs, VOCs, Herbicides, Pesticides, HE, PCBs	Background

Summary of Post-Wash Sampling: Used Wash Water and Used Rinse Water						
Area to be Decontaminated	**Dimensions of Area to be Decontaminated**	**Grid Size**	**Number of Grids**	**Samples Per Grid[c]**	**Indicator Parameters[a]**	**Closure Criteria[d] (mg/L)**
Bunker 37034	26' x 81'	26' x 40.5'	2	4	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver, Antimony, Beryllium, Nickel, Thallium, Vanadium, Zinc, Cyanide, SVOCs, VOCs, Herbicides, Pesticides, HE, PCBs	Evaluate with respect to concentrations in unused wash and rinse waters

c One sample from each pair of floor wash water and rinse water samples will be filtered when collected to remove particulates. Ceilings, doors, drainage structures, sumps, and secondary containment structures within the gridded area are considered part of the grid.

DOE/SANDIA COMMENT

Please see General Comment G-J and Comment PA15-9 regarding indicator parameters and rationale.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-35 (cont)			Please revise as follows:	

TABLE 15-7
Closure Sampling for the Manzano Storage Bunkers

Summary of Pre-Wash Sampling			
Media	**Sample Number & Type**	**Indicator Parameters[a]**	**Standards for Comparison[b]**
Floor sweepings	Single grab from collected material at each bunker	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver	Background

Summary of Post-Wash Sampling: Used Wash Water and Used Rinse Water						
Area to be Decontaminated	**Dimensions of Area to be Decontaminated**	**Grid Size**	**Number of Grids**	**Samples Per Grid[c]**	**Indicator Parameters[a]**	**Closure Criteria[d] (mg/L)**
Bunker 37034	26' x 81'	26' x 40.5'	2	4	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver	Evaluate with respect to concentrations in unused wash and rinse waters

c One sample from each pair of floor wash water and rinse water samples will be filtered when collected to remove particulates: drainage structures, sumps, and secondary containment structures (bottom and sides up to the containment level) within the gridded area are considered part of the grid.

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-101*	15.3.1	363	Precautions that shall be taken to minimize either type of decision error when performing closure of a Permitted Unit are discussed in the Sampling and Analysis Plan in Section 15.8 of this Permit Attachment.	Section 15.8 is Closure Schedule; Section 15.7 addresses sampling and analysis. Please revise accordingly.
PA15-102*	15.4	365	The closure processes described in Condition 15.5 of this Permit Attachment are for indoor storage areas and for indoor areas at Permitted Units where treatment in containers occurs (i.e., the Auxiliary Hot Cell Unit).	DOE/Sandia note the closure process is described in Section 15.3; decontamination steps that are part of closure are described in Section 15.5. Additionally, wastes are treated at the RMWMU. Please revise to read: The closure processes described in Condition 15.3 of this Permit Attachment are for indoor storage areas and for indoor areas at Permitted Units where treatment in containers occurs (i.e., the AHCU and RMWMU).
PA15-103*	15.7	366	Sample collection equipment and techniques are described in this closure plan, and summarized in Table 15-1 of this Permit Attachment, and the Unit-specific closure Sampling and Analysis Plans included herein.	Table 15-1 lists off-site TSDFs; Table 15-2 summarizes closure activities and associated sampling methods, parameters of interest, and sample numbers/frequencies. Please revise accordingly.
PA15-104*	15.13.6.8	377	If the concentrations of indicator parameters are significantly elevated, surface contamination is indicated, and the grid area represented by the sample shall be decontaminated again in accordance with the procedures outlined in Section 15.5.3 of this Attachment.	There is no Section 15.5.3; decontamination procedures are outlined in Section 15.5. Please revise accordingly.
PA15-105*	15.13.6.10	377	**15.13.6.9 Quality Control** Quality Control for sampling and analysis at the HWMU shall be implemented as described above in Condition 15.8.5 of this Permit Attachment. **15.13.6.10 Data Management and Reporting** Data management and reporting shall be performed as described in Condition 15.8.10 of this Permit Attachment.	Section 15.8 is Closure Schedule, Section 15.7 addresses sampling and analysis, including data management and reporting. Please revise accordingly.
PA15-106*	15.14.4	378	The closure approach and general activities described in Conditions 15.4 through 15.14 of this Permit Attachment shall be applied to the closure of the TTU.	The closure approach and general activities are described in Sections 15.2 through 15.12. Please revise accordingly.

*Comment is more administrative in nature

NO	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA15-107*	15.15.8.7	386	**15.15.8.7 Quality Control** Quality Control for sampling and analysis at the RMWMU shall be implemented as described above in Condition 15.8.5 of this Permit Attachment. **15.15.8.8 Data Management and Reporting** Data management and reporting shall be performed as described in Condition 15.8.10 of this Permit Attachment.	Section 15.8 is Closure Schedule, Section 15.7 addresses sampling and analysis, including data management and reporting. Please revise accordingly.
PA15-108*	15.16.6.9	392	Quality Control for sampling and analysis at the RMWMU shall be implemented as described above in Condition 15.8.5 of this Permit Attachment.	Section 15.8 is Closure Schedule, Section 15.7 addresses sampling and analysis, including data management and reporting. Please revise accordingly.
PA15-109*	15.18	393 - 396	Numbering of sections 15.18 15.18.1.1 through 15.18.1.7 15.18.2 through 15.18.2.2	These sections appear to be a continuation of Section 15.17. Please revise the numbers as follows: 15.18 should be 15.17.6 15.18.1.1 through 15.18.1.7 should be 15.17.6.1 through 15.17.6.7 15.18.2 through 15.18.2.2 should be 15.17.6.8 through 15.17.6.10 References to these sections in the text of Permit Attachment 15 should also be revised as needed.
PA15-110*	15.18.2.1	396	**15.18.2.1 Quality Control** QC for sampling and analysis at the MSB shall be implemented as described in Section 15.75 of this Attachment.	Please see Comment PA15-109 regarding Section numbers. This should be Section 15.17.6.9. Additionally, there is no Section 15.75; the correct reference is Section 15.7.5. Please revise accordingly.
PA15-111*	Attach-ment 15	after 396	Figures	The figures do not reflect the most current information provided in the Application. DOE/Sandia will provide updated figures under separate cover.

*Comment is more administrative in nature

Enclosure X

U.S. Department of Energy, National Nuclear Security Administration
Sandia Corporation

COMMENTS

PERMIT ATTACHMENT 16

Draft Hazardous Waste Facility Permit NM5890110518

Sandia National Laboratories
Albuquerque, New Mexico
January 17, 2008

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-1	16	397	Post-closure care of the CAMU began on October 15, 2003, and shall continue for 30 years after that date unless the New Mexico Environment Department (Department) determines that the post-closure care period needs to be extended pursuant to 40 C.F.R. § 264.117(a)(2)(ii).	DOE/Sandia note 40 C.F.R. § 264.117(a)(2)(i) includes the option for a shorter post-closure care period if NMED finds that a shorter period is sufficient to protect human health and the environment. The waste in the CAMU containment cell has been pretreated to significantly reduce the levels of contamination, and natural, biologically mediated processes will further reduce the concentrations over time. Once leachate flow has ceased, no migration of contaminated liquid from the cell is possible. Thus, the reduced risk to human health and the environment may indicate a reduction in monitoring or termination of the post-closure care period. Please revise to read: Post-closure care of the CAMU began on October 15, 2003, and shall continue for 30 years after that date unless the New Mexico Environment Department (Department) determines that the post-closure care period may be terminated earlier than 30 years or extended beyond 30 years pursuant to 40 C.F.R. § 264.117(a)(2).
PA16-2	16.3.2	401	**Filter Sand/Pea Gravel Layers -** A capillary barrier, comprised of a 4-inch-thick filter sand layer and a 6-inch-thick pea gravel layer, lies beneath the native soil blend. Because capillary pressure in a soil matrix is inversely proportionate to the effective pore size (i.e., the smaller the pore size, the higher the capillary pressure), the downward migration of percolating water is suspended when it arrives at the fine/coarse-grained soil interface, provided that the field capacity of the coarse-grained soil is not exceeded.	DOE/Sandia note the percolating water will be retained in the fine layer rather than the coarse layer because the capillary tension associated with the smaller pores exceeds the force of gravity and whatever tension is imposed by the coarse layer. As the fine layer becomes saturated the capillary tension decreases until a level of saturation is achieved where the moisture in the fine layer will drain into the coarser layer. Please revise to read: **Filter Sand/Pea Gravel Layers -** A capillary barrier, comprised of a 4-inch-thick filter sand layer and a 6-inch-thick pea gravel layer, lies beneath the native soil blend. Because capillary pressure in a soil matrix is inversely proportionate to the effective pore size (i.e., the smaller the pore size, the higher the capillary pressure), the downward migration of percolating water is suspended when it arrives at the fine/coarse-grained soil interface, provided that the field capacity of the fine-grained soil is not exceeded.
PA16-3	16.3.3.3	402	The CSS Monitoring Subsystem is designed to detect and shall be used to identify leakage of hazardous constituents from the sanitary sewer line, as well as volatile organic compounds that migrate from the CWL toward the containment cell.	DOE/Sandia note any leakage from the sanitary sewer line or migration of volatile compounds from the CWL is potential, not existing. Please revise to read: The CSS Monitoring Subsystem is designed to detect and identify leakage of hazardous constituents from the sanitary sewer line that could potentially occur, as well as volatile organic compounds that could potentially migrate from the CWL toward the containment cell.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-4	16.3.4	402	Leachate that collects in the LCRS sump shall be pumped into 55-gallon drums and managed as a listed hazardous waste (e.g., EPA Hazardous Waste Number F039) as outlined in the CAMU Waste Analysis Plan (Appendix 3 of this Permit Attachment). The leachate shall be shipped off-site for treatment and disposal at a Permitted RCRA Subtitle C facility.	As discussed in General Comment G-B, DOE/Sandia are responsible for characterizing the collected leachate in accordance with the requirements of 40 CFR 261. DOE/Sandia are responsible for managing hazardous wastes in accordance with the requirements of 40 CFR 262, and are responsible for arranging further off-site management that is compliant with all applicable requirements of 40 CFR 260-270. Please revise to: Leachate that collects in the LCRS sump shall be pumped into 55-gallon drums or other appropriate containers.
PA16-5	16.5	402	The gates shall be locked when authorized personnel are not present at the CAMU; only authorized personnel shall control the keys to the locks.	DOE/Sandia note authorized personnel are responsible for controlling access and may choose to do so by means other than control of keys. Please revise to read: The gates shall be locked when authorized personnel are not present at the CAMU; only authorized personnel shall control access.
PA16-6	16.6	403	The Permittees shall comply with the post-closure requirements contained in 40 C.F.R. § 264.117 through § 264.120 and § 264.552(e)(6)(v). In addition, this section outlines procedures necessary to protect human health and the environment, including monitoring and maintenance activities, and the frequency with which such activities shall be performed to ensure that the integrity of the final cover and waste containment cell is maintained. Among the other requirements in this Permit Attachment, the Permittees shall conduct the following activities to protect human health and the environment: *1–2 (not included in comment)* 3. Prevent run-on and run-off of surface water from eroding or otherwise damaging the final cover; *4–5 (not included in comment)* 6. Submit an annual report to the Department providing the results of required inspections, sampling results, and a summary of any needed repairs, indicating whether the repairs were effective and met the original CAMU construction specifications.	DOE/Sandia note it is not possible to prevent all instances of erosion of the final cover; engineering controls are in place to minimize erosion damage from surface water run-on and run-off, and damage will be repaired in accordance with this Permit Attachment. DOE/Sandia already submit an annual report to the NMED. The items specified in 6 are not required in 40 CFR 270, 40 CFR 264 Subpart G, or 40 CFR 264.552. Furthermore, as discussed in General Comment G-C, Permit requirements must be identical to the regulatory requirements. Results of inspections and sampling, and information regarding repairs, are maintained in the CAMU Operating Record; they are available for review, in accordance with 40 CFR 270.30(i) and Part 1 of the draft Permit. DOE/Sandia note that information regarding the effectiveness of repairs will be included in the Operating Record as it becomes apparent through subsequent inspection, maintenance, and monitoring activities. Please revise items 3 and 6 as follows: 3. Use engineering controls to minimize erosion damage to the final cover from run-on and run-off of surface water; 6. Include in the annual report to the Department a summary of required inspections and maintenance/repair activities.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-7	16.6.1	403	Currently, the DOE contact person is: Ms. Patty Wagner U.S. Department of Energy National Nuclear Security Administration Sandia Site Office P.O. Box 5400 M/S 0184 Albuquerque, NM 87185-0184 Currently, the Sandia Corporation contact person is: Mr. Les Shephard Sandia National Laboratories P.O. Box 5800 M/S 0724 Albuquerque, NM 87185-0724 The Permittees shall provide written notification to the Department within thirty days of any changes for any of the contact persons listed above. This notification shall constitute a Class 1 modification to this Permit, which does not require prior approval by the Department.	For purposes of implementing the Permit, use of position/title is more efficient and is consistent with the NMED contact information provided in Section 1.32.1 of the draft Permit. In accordance with 40 CFR 270.11, the names of responsible corporate officers and their delegated representatives will be provided to NMED by letter transmittal. Such a transmittal does not meet the criteria for a Class I modification to this Permit; please delete the last paragraph. Please revise to: The DOE contact person is: Site Office Manager U.S. Department of Energy P.O. Box 5400, M/S 0184 Albuquerque, NM 87185-0184 (505) 845-6036 The Sandia contact person is: Vice President Waste Management Operations Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185-5800
PA16-8	16.6.2	404	The Permittees shall submit a written request for a Permit modification to authorize a change in the approved post-closure care requirements whenever changes are needed because of changes in regulatory requirements or if needed to ensure protection of human health or the environment.	DOE/Sandia note that CAMU behavior is expected to change over time, particularly with respect to the quantity of leachate generated. The maintenance and monitoring schedule in the draft Permit may not be appropriate for the entire term of the Permit; changes in the schedule may require permit modifications in accordance with 40 CFR 270.42. Please revise to read: The Permittees shall submit a written request for a Permit modification to authorize a change in the approved post-closure care requirements whenever changes are needed because of one or more of the following: 1) changes in regulatory requirements 2) changes in the CAMU operations (e.g., lack of leachate), or 3) ensuring protection of human health or the environment.

<table>
<tr><th>NO.</th><th>SECTION</th><th>PAGE</th><th>DRAFT PERMIT TEXT</th><th>DOE/SANDIA COMMENT</th></tr>
<tr><td>PA16-9</td><td>16.6.4</td><td>404</td><td>As part of each monitoring event, analytical results obtained from the VZMS shall be evaluated to determine if there has been leakage from the containment cell and, if so, the character and magnitude of the leak. A soil moisture increase greater than 4 percent (expressed as gravimetric percent moisture content) or a total VOC concentration greater than 10 parts per million by volume (ppmv) at any monitoring location(s) shall trigger, within 15 days, the completion of a secondary assessment.</td><td>This requirement is not consistent with the capabilities of the VZMS, which is not suitable for obtaining analytical results. DOE/Sandia also note that total VOC concentration in the VZMS is not indicative of containment cell integrity and performance. In addition, DOE/Sandia note that it will not be possible to complete a secondary assessment within 15 days. Please revise to read:

As part of each monitoring event, soil moisture content results obtained from the VZMS shall be evaluated to determine if there has been leakage from the containment cell and, if so, the character and magnitude of the leak. An unexplained soil moisture increase greater than 4 percent (expressed as gravimetric percent moisture content) at any monitoring location(s) shall trigger a secondary assessment in 45 days.</td></tr>
<tr><td>PA16-10</td><td>Table 16-1</td><td>405</td><td>Note: only the column and footnote shown below is included in this comment.

Table 16-1
VZMS Post-Closure Monitoring Frequency, Parameters, and Methods
<table><tr><th>Time Frame</th></tr><tr><td>Year 1</td></tr><tr><td>Years 2–30</td></tr></table>TO-14 = EPA Method TO-14 (EPA, November 1986).</td><td>DOE/Sandia note the specifications for Year 1 are not necessary since closure was completed over 3 years ago. Also, the footnote should acknowledge that EPA methods are periodically revised and updated, thus the most recent requirements would be incorporated into the Permit. Please revise as follows:

Table 16-1
VZMS Post-Closure Monitoring Frequency, Parameters, and Methods
<table><tr><th>Time Frame</th></tr><tr><td>Year 1 after closure</td></tr><tr><td>Years 2–30 after closure</td></tr></table>TO-14 = EPA Method TO-14, as revised and updated.</td></tr>
<tr><td>PA16-11</td><td>16.6.5.1</td><td>406</td><td>The Permittees shall relocate animals prior to backfilling their burrows.</td><td>DOE/Sandia note that it may not be possible to find each animal. Any animals that are found will be relocated to minimize further damage to the cover. Please revise as follows:

The Permittees shall make reasonable attempts to relocate animals prior to backfilling their burrows.</td></tr>
</table>

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-12	16.6.5.2	406	**Maintenance/Repair** - Annually and when the vegetation exceeds a height of 12 inches, it shall be mowed to a height of 3 to 4 inches. The Permittees shall prevent the establishment of deep-rooted plants, such as shrubs and trees.	The natural grasses that make up the cover vegetation do not tolerate mowing; it affects their ability to survive during periods of limited precipitation. Some of the seed stalks for natural grasses exceed 12 inches in height; mowing will interfere with the annual reseeding that is necessary to sustain the vegetation. Taller grasses also enhance vegetative growth by protecting the soil from the direct impact of raindrops, and they provide shade that preserves soil moisture. Additionally, mowing is not necessary to prevent deep-rooted plants from becoming established; DOE/Sandia have successfully managed such plants by identifying them during the quarterly inspection and physically removing the plants while they are still small and without any significant root structure. Please delete the requirement for mowing the vegetation, and revise to read: **Maintenance/Repair** - The Permittees shall prevent the establishment of deep-rooted plants, such as shrubs and trees by identifying such species during quarterly inspection and physically removing them before they become established.
PA16-13	16.6.5.3	406	As described in Condition 16.3.4 of this Permit Attachment, leachate that collects in the LCRS sump shall be pumped directly into 55-gallon drums.	Other containers may be more suitable, depending on the volume of leachate. Please revise to: As described in Condition 16.3.4 of this Permit Attachment, leachate that collects in the LCRS sump shall be pumped directly into 55-gallon drums or other compatible containers.
PA16-14	16.6.5.5	407	Activities shall include, but are not limited to, removing excessive accumulations of wind-blown plants and debris, repairing broken wire sections and posts, repairing and oiling gates, cleaning or replacing locks, and repairing or replacing warning signs.	Not all the listed activities are needed all the time; please revise to read: Activities shall include, but are not limited to, the following as needed: removing excessive accumulations of wind-blown plants and debris, repairing broken wire sections and posts, repairing and oiling gates, cleaning or replacing locks, and repairing or replacing warning signs.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-15	16.6.6	407	Inspection results for each of the CAMU systems shall be recorded on the Post-Closure Inspection Form (PCIF), included in Appendix 2 of this Permit Attachment.	Consistent with Section 11.1 of the draft Permit governing use of inspection forms, please revise to: Inspection results for each of the CAMU systems shall be recorded on a post-closure inspection form. A representative Post-Closure Inspection Form (PCIF) is included in Appendix 2 of this Permit Attachment. This PCIF is provided for informational purposes only and is subject to change. Any PCIF used shall be functionally equivalent to the PCIF shown in Appendix 2.
PA16-16	16.7	408	The personnel training program for inspection, monitoring, and maintenance of the CAMU is included in this Permit Attachment as Appendix 9. All personnel working at the CAMU shall be trained, at a minimum, in accordance with the requirements of this Permit Attachment.	DOE/Sandia note the training requirements in the Appendix apply to the personnel performing the job descriptions in the Appendix. Please revise to read: The personnel training program for inspection, monitoring, and maintenance of the CAMU is included in this Permit Attachment as Appendix 9. The Project Lead and Field Technicians working at the CAMU shall be trained, at a minimum, in accordance with the requirements of this Permit Attachment.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-17	16.8	408	The following records shall be maintained at the Facility's Integrated Safety and Security Records Center: *1–3 (not included in comment)* 4. Written standard operating procedures (current editions) 5. All training records for current and past personnel; *6. (not included in comment)* 7. All leachate generation and management records; 8. All analytical data and manifests pertaining to leachate; 9. Site-specific health and safety plan (current edition); *10–11 (not included in comment)*	This section is not consistent with the recordkeeping requirements in Permit Attachment 13 or 40 CFR 264.73 regarding the type of records that are required, the length of time they must be maintained, and the name and location of the Facility Records Center. For example, training records for past personnel need only be kept for three years from the date they last worked at the Unit, in accordance with 40 CFR 264.16(e). Written standard operating procedures and a site-specific health and safety plan are not required by 40 CFR 264, and are not necessary for successful post-closure care; items 4 and 9 should be deleted. DOE/Sandia are responsible for characterizing the collected leachate in accordance with the CAMU WAP and the requirements of 40 CFR 261. As discussed in General Comment G-B, DOE/Sandia are also responsible for managing the leachate in accordance with the applicable requirements of 40 CFR 262, and for arranging further off-site management that is compliant with all applicable requirements of 40 CFR 260-270. There are many options for off-site management in compliance with the regulations, and the records associated with characterization and management of the leachate will be maintained in accordance with regulatory requirements; however, neither the options nor the records necessitate coverage under the Permit. Accordingly, item 8 should be deleted. Please revise as follows: The following records shall be maintained at the Facility's Records Center: *1–3 (not included in comment)* 4. Training records as specified in 40 CFR 264.16(e); *5 (formerly 6, not included in comment)* 6. All leachate generation records; 7. Summary reports and details of any incidents at the CAMU that require activation of the Contingency Plan; and *8–9 (formerly 10-11, not included in comment)*

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-18	16.8	409	During the post-closure care period , the Permittees shall submit a certified CAMU activity summary report to the Department on an annual basis.	Some or all of the annual reports may be consolidated: Also, DOE/Sandia note the requirement for a certified activity report is not consistent with 40 CFR 264 Subpart S. Please see General Comment G-C for further discussion of consistency between regulations and requirements in the draft Permit. Please revise to read: During the post-closure care period, the Permittees shall submit a CAMU activity summary report to the Department on an annual basis. The activity summary report may be combined with other annual deliverables that address post-closure or remediation activities.
PA16-19	16.9	409	In addition, the Permittees shall prepare a final post-closure care report containing, in an appendix, all PCIFs generated during the post-closure care period. The post-closure care report shall summarize pertinent PCIF information regarding post-closure monitoring, maintenance, and repair activities and any variances from this Permit Attachment and the reasons for the variances.	DOE/Sandia note that information regarding monitoring, maintenance, and repair is provided annually in the CAMU report. Individual PCIFs are maintained in the Facility Operating Record and are available for NMED inspection and review. Providing hundreds of PCIFs in an appendix to the post-closure care final report is not necessary. Please revise to read: In addition, the Permittees shall prepare a final post-closure care report summarizing pertinent information regarding post-closure monitoring, maintenance, and repair activities and any variances from this Permit Attachment and the reasons for the variances.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-20	Attach-ment 16 Appx I	413 414		

DRAFT PERMIT TEXT

Note: only the rows and footnote shown below are included in this comment.

CAMU Post-Closure Inspection and Maintenance/Repair Schedule

CAMU System to be Inspected	Inspection Parameters	Inspection Frequency	Maintenance/ Repair Implementation	Maintenance/Repair Frequency
Final Cover System	Vegetation in excess of 12 inches in height.	Quarterly	Mow vegetative cover	Annually and whenever vegetation exceeds 12 inches[a]
	Settlement of cover surface in excess of 6 inches		Repair cover system damage that exceeds prescribed limits	Within 60 days of discovery of needed repairs[b]
	Animal intrusion burrows in excess of 4 inches in diameter			
	Erosion of cover soil in excess of 6 inches deep			
	Contiguous areas of no vegetation >100 ft^2		Revegetate barren areas that exceed prescribed limits	

a When vegetation on the final cover exceeds a height of 12 inches, it shall be mowed to a height of 3 to 4 inches.
c The LCRS pump shall be manually activated on monthly basis for 12 consecutive months, then on a quarterly basis thereafter.
e The VZMS components shall be inspected during regularly scheduled monitoring events (see Table 21-1 for VZMS post-closure monitoring frequency).

DOE/SANDIA COMMENT

Please revise this table to recognize that the most effective means of ensuring a viable plant community consistent with cover integrity is to forgo mowing and remove plants with the potential to form deep roots. Please see Comment PA16-12 for additional discussion of mowing.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-20 (cont)			Footnote a should be deleted, and footnotes c and e should be revised to reflect current site conditions and the correct VZMS monitoring frequency.	

CAMU Post-Closure Inspection and Maintenance/Repair Schedule

CAMU System to be Inspected	Inspection Parameters	Inspection Frequency	Maintenance/ Repair Implementation	Maintenance/Repair Frequency
Final Cover System	Existence of plants with the potential for forming deep roots.	Quarterly	Physically remove the plant	Quarterly, as the plants are identified and tagged as part of the cover inspection
	Settlement of cover surface in excess of 6 inches		Repair cover system damage that exceeds prescribed limits	Within 60 days of discovery of needed repairs or as soon as possible if seasonal conditions are not appropriate within 60 days[b]
	Animal intrusion burrows in excess of 4 inches in diameter			
	Erosion of cover soil in excess of 6 inches deep			
	Contiguous areas of no vegetation >100 ft^2		Revegetate barren areas that exceed prescribed limits	

c The LCRS pump shall be manually activated on monthly basis for 12 consecutive months after closure, then on a quarterly basis thereafter.

e The VZMS components shall be inspected during regularly scheduled monitoring events (see Table 16-1 for VZMS post-closure monitoring frequency).

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-21	Attach-ment 16 Appx 2	416		

DRAFT PERMIT TEXT

Note: only the rows and items shown below are included in this comment.

CAMU
Post-Closure Inspection Form

CONTAINMENT CELL COVER SYSTEM			
Inspection Parameters	**Parameter Inspected (Yes or No)**	**Action Required (Yes or No)**	**Note Number**
A. Plants comprising the vegetative cover are in excess of 12 inches tall.	_____	_____	_____

Copy to: Environmental Operations Records Center, MS-1309

DOE/SANDIA COMMENT

Please revise as shown to be consistent with other sections with respect to mowing and deep-rooted vegetation. Please see Comments PA16-12 and PA16-20 for additional discussion.

CAMU
Post-Closure Inspection Form

CONTAINMENT CELL COVER SYSTEM			
Inspection Parameters	**Parameter Inspected (Yes or No)**	**Action Required (Yes or No)**	**Note Number**
A. Existence of deep-rooted plants or shrubs.	_____	_____	_____

Copy to: Records Center

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-22	Attach-ment 16 Appx 3 3.0	422	This WAP specifically applies to characterization of hazardous wastes that will be generated during the post-closure care period of the CAMU. Characterization is the process of identifying the hazardous aspects of waste using sampling and analysis methods, acceptable knowledge methods, or both, as appropriate. This WAP describes the parameters for which hazardous waste generated from the CAMU containment cell leachate collection and removal system (LCRS) shall be characterized, the rationale for selecting these parameters, the sampling and laboratory analytical methods that shall be used, and the frequency of characterization.	As discussed in General Comment G-B and Comment PA16-4, DOE/Sandia are responsible for characterizing the hazardous wastes generated during post-closure care at the CAMU in accordance with the requirements of 40 CFR 261. Also, the waste identification and characterization approach defined in Permit Attachment 9 (see Comments PA9-15 and PA9-16) is applicable to wastes managed at the CAMU. Thus, the wastes are characterized as needed to determine whether they are hazardous, to assign the appropriate waste codes, and to determine management requirements at the Permitted Unit. Accordingly, please revise to read: This WAP specifically applies to characterization of hazardous wastes that will be generated and managed at the CAMU during the post-closure care period. The Permittees shall obtain sufficient information about such wastes through acceptable knowledge, supplemented as needed by sampling and analysis, to determine whether the wastes are hazardous, assign the appropriate waste codes, and determine management requirements at the CAMU. Additionally, the Permittees shall periodically obtain additional information regarding the composition of the leachate to evaluate the post-closure performance of the containment cell. This WAP describes the characterization frequency and parameters, their rationale, and methods to be used for sampling and laboratory analysis.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-23	Attach-ment 16 Appx 3 3.1	422	The post-closure configuration of the CAMU consists of a capped containment cell that incorporates a LCRS. Leachate shall be pumped to the surface and stored in 55-gallon drums at the CAMU-containment cell less-than-90-day RCRA waste accumulation area shown in Figure 3-1 of this Permit Appendix, hereafter referred to as the less-than-90-day area. The leachate shall be managed as hazardous waste. Based upon analytical data collected from leachate previously pumped from the LCRS, the leachate consists of wastewater containing low levels of hazardous constituents, polychlorinated biphenyls (PCBs), and tritium. These hazardous constituents, including PCBs and tritium, are known to be compatible with the polyethylene or carbon steel drums used to manage the leachate. Personal protective equipment (PPE) that is used during leachate collection and management operations shall also be managed as hazardous waste.	As discussed in General Comment G-B and Comment PA16-4, DOE/Sandia are responsible for characterizing the hazardous wastes generated during post-closure care at the CAMU in accordance with the requirements of 40 CFR 261. Thus, the WAP should be limited to characterization of wastes as needed for operation of the Permitted Unit, and should not include specifications for off-site waste management. Tritium should be deleted from the analytical parameters, because it is a radionuclide not subject to this Permit, as discussed in General Comment G-A. Additionally, DOE/Sandia may collect the wastes in other appropriate containers and may manage it at other accumulation areas or Permitted Units. Accordingly, please revise to read: The post-closure configuration of the CAMU consists of a capped containment cell that incorporates the LCRS. Leachate shall be pumped to the surface and stored in 55-gallon drums or other compatible containers. The containers shall be managed in accordance with applicable regulatory requirements. Based upon analytical data collected from leachate previously pumped from the LCRS, the leachate consists of wastewater containing low levels of hazardous constituents and polychlorinated biphenyls (PCBs); it meets the listing description of hazardous waste F039 in 40 CFR 261.31(a). Used personal protective equipment and sampling equipment from leachate collection and management operations also meets the F039 listing description.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-24	Attach-ment 16 Appx 3	422 - 423		

DRAFT PERMIT TEXT

Hazardous waste management activities at the CAMU during the post-closure care period shall involve at a minimum the management of leachate and associated PPE.

Table 3-1 of this Permit Appendix provides information on the parameters and rationale identified to characterize the leachate and PPE. The Permittees shall characterize these waste streams based upon the parameters listed in Table 3-1.

Table 3-1
Waste Analysis Parameters and Rationale for Selection

Waste Stream	Waste Analysis Parameter(s)[a]	Rationale for Selection
PPE and Sampling Equipment	All hazardous constituents for wastewaters under waste code F039 found in 20.4.1.800, incorporating 40 C.F.R. 268.40, *Treatment Standards for Hazardous Wastes* plus Tritium	1 (F039)
Leachate	All hazardous constituents for wastewaters under waste code F039 found in 20.4.1.800, incorporating 40 C.F.R. 268.40, *Treatment Standards for Hazardous Wastes* plus Tritium	1, 2, 3 (F039)

[a]Table 3-5 of this Appendix provides the analytical test methods for waste parameters.
1 = Used to determine applicable EPA Hazardous Waste Numbers (shown in parentheses).
2 = Used to determine safe and appropriate handling and storage conditions.
3 = Used to identify special health and safety precautions and procedures.
EPA = U.S. Environmental Protection Agency.
PPE = Personal protective equipment.

DOE/SANDIA COMMENT

Please see General Comment G-B and the preceding comment regarding duties of the Permittees and waste management activities at the CAMU that require a permit. DOE/Sandia note that no analyses are needed for hazardous waste determination with respect to the leachate, the PPE, and any sampling equipment, as they meet the meet the listing description of hazardous waste F039 in 40 CFR 261.31.

Tritium should be deleted from the analytical parameters, because it is a radionuclide not subject to this Permit, as discussed in General Comment G-A.

Furthermore, extensive analytical data are available from past sampling activities. The soils placed in the containment cell were characterized, and the leachate has been repeatedly sampled and analyzed for the hazardous constituents under waste code F039 found in 40 CFR 268.40. The analytical data indicate the following are not present: dioxins/furans, herbicides, nitroaromatics/nitramines (explosives), and pesticides. Therefore, they should be deleted from the list of analytes in this table.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-24 (cont)			Additional analysis is not necessary for determining on-site management requirements in the CAMU less-than-90-day area or one of the SNL/NM Permitted storage Units. Periodic analysis of the leachate is appropriate for monitoring the performance of the containment cell and its contents. Please delete footnote a and revise to:	

Hazardous waste management activities at the CAMU during the post-closure care period shall involve at a minimum the management of leachate and associated PPE.

Table 3-1 of this Permit Appendix provides information on the parameters and rationale for identifying appropriate handling and storage requirements. The Permittees shall characterize these waste streams based upon the parameters listed in Table 3-1.

Table 3-1
Waste Analysis Parameters and Rationale for Selection

Waste Stream	Waste Analysis Parameter(s)[a]	Rationale for Selection
PPE and Sampling Equipment	As needed for disposal	1, 2, 3 (F039)
Leachate	As needed for disposal	1, 2, 3 (F039)
Leachate	All hazardous constituents for wastewaters under waste code F039 found in 40 C.F.R. 268.40, *Treatment Standards for Hazardous Wastes* except dioxins/furans, herbicides, nitroaromatics/nitramines (explosives), and pesticides	Monitor performance of containment cell and contents

1 No analysis is required for determining applicable EPA Hazardous Waste Numbers (shown in parentheses) if the waste meets a listing description in 40 CFR 261 Subpart D; analysis for verification purposes is described in Section 3.5.3.
2 Used to determine safe and appropriate handling and storage conditions.
3 Used to identify special health and safety precautions and procedures.
EPA U.S. Environmental Protection Agency.
PPE Personal protective equipment.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-25	Attachment 16 Appx 3 3.4	424	**DRAFT PERMIT TEXT** Table 3-3 of this Appendix provides the quality control targets for the analysis of leachate. Sampling and analysis of leachate shall be repeated if the QC targets listed in Table 3-3 are not fully met. If any of the QC targets are not met, the Permittees only need to analyze the new sample for the constituents that failed the QC targets.	

Table 3-3
Quality Control Targets for Leachate

Analytes	Percent (%) Recovered	Relative Percent Difference (RPD)
VOCs	50-130	+/- 20
SVOCs	10-130	+/- 25 to 50
PCBs	50-130	+/- 20
Cyanide (Total and Amenable)	75-125	+/- 35
Dioxins/Furans	20-140	+/- 50
Fluoride	75-125	+/- 20
Herbicides	50-130	+/- 20
Mercury	75-125	+/- 20
Nitroaromatics/Nitramines (Explosives)	50-130	+/- 25 to 50
Pesticides	20-160	+/- 20
Sulfide	75-125	+/- 20
Metals, ICP	75-125	+/- 20
Metals, AA	75-125	+/- 20
Tritium	75-125	+/- 20

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-25 (cont)			**DOE/SANDIA COMMENT** DOE/Sandia note setting accuracy and precision requirements for inorganic analyses is a generally accepted practice, but setting rigid criteria for organic compounds is generally not an accepted practice. The analytical performance for the measurement of organic compounds varies significantly between compounds and for different methods. This variation is widely accepted and can be seen in the performance tables published in the methods and in the performance requirements for accreditation in programs such as the National Environmental Laboratory Accreditation Conference (NELAC). Accordingly, it is appropriate to require that analytical performance criteria be established using industry standard practices, be compared to generally accepted criteria, and not include specific requirements. Current Sandia procedures and practices adequately address analytical performance criteria. For example, the acceptance range for Percent Recovered (%R) and Relative Percent Difference (RPD) are defined in the SNL/NM Statement of Work for Analytical Laboratories for each individual compound and analytical method. In addition, compliance with the acceptable range for %R and RPD is a required element of the SNL data review and validation procedures (SMO-05-03 and AOP 00-03). Please replace Table 3-3 with the following table:	

TABLE 3-3
Reference Documentation [a]

Document Number	Document Title
AOP 00-03	Data Validation Procedure for Chemical and Radiochemical Data
AOP 95-16	Sample Management and Custody
LOP 94-03	Sample Handling, Packaging, and Shipping
SMO 05-03	Procedure for Completing the Contract Verification Review
Not Applicable	SNL/NM Statement of Work for Analytical Laboratories
Not Applicable	Quality Assurance Project Plan for the Sample Management Office

AOP Administrative Operating Procedure
LOP Laboratory Operating Procedure
SMO Sample Management Office
a All documents in this table will be used as revised and updated.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-26	Attachment 16 Appx 3 Table 3-4	425		

DRAFT PERMIT TEXT

Note: only the rows shown below are included in this comment.

Table 3-4
Sample Containers and Preservation Techniques for Leachate

Analytes	Sample Container Volume, Type and Materials	Chemical Preservatives	Temperature	Holding Times
Dioxins/Furans	Two – 1 L amber glass	Unpreserved	Cool to 4°C	7 days
Herbicides	Two – 1 L amber glass	Unpreserved	Cool to 4°C	7 days
Nitroaromatics/Nitramines (Explosives)	Two – 1 L amber glass	Unpreserved	Cool to 4°C	7 days
Pesticides	Two – 1 L amber glass	Unpreserved	Cool to 4°C	7 days
Sulfide	One – 500 ml plastic	NaOH/Zinc Acetate	Cool to 4°C	7 days
Tritium	Two – 1000 mL plastic	HNO_3	Cool to 4°C	28 days

[a]Additional sample sets shall be prepared as trip and field blanks, which shall accompany the sample shipment to the laboratory.
[b]Total metals include antimony, arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium and vanadium.

°C = Degrees Celsius
HCl = Hydrochloric acid
HNO_3 = Nitric acid
L = Liter
ml = Milliliter
NaOH = Sodium Hydroxide
PCB = Polychlorinated biphenyl
SVOC = Semivolatile organic compound
VOC = Volatile organic compound

DOE/SANDIA COMMENT

DOE/Sandia note the following:

- The container requirements for sulfide are incorrect.
- The following should be deleted from the analyte list, as discussed in Comment PA16-24: tritium, dioxins/furans; herbicides; nitroaromatics/nitramines (explosives); and pesticides.

<table>
<tr><th>NO.</th><th>SECTION</th><th>PAGE</th><th>DRAFT PERMIT TEXT</th><th>DOE/SANDIA COMMENT</th></tr>
<tr><td>PA16-26 (cont)</td><td></td><td></td><td colspan="2">Please revise as follows:

Table 3-4
Sample Containers and Preservation Techniques for Leachate
<table>
<tr><th>Analytes</th><th>Sample Container Volume, Type and Materials</th><th>Chemical Preservatives</th><th>Temperature</th><th>Holding Times</th></tr>
<tr><td>Sulfide</td><td>One – 1 L glass</td><td>NaOH/Zinc Acetate</td><td>Cool to 4°C</td><td>7 days</td></tr>
</table>
[a]Additional sample sets shall be prepared as trip and field blanks, which shall accompany the sample shipment to the laboratory.
[b]Total metals include antimony, arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium and vanadium.
°C = Degrees Celsius
HCl = Hydrochloric acid
HNO_3 = Nitric acid
L = Liter
ml = Milliliter
NaOH = Sodium hydroxide
PCB = Polychlorinated biphenyl
SVOC = Semivolatile organic compound
VOC = Volatile organic compound</td></tr>
<tr><td>PA16-27</td><td>Attach-ment 16 Appx 3 3.5.2</td><td>427</td><td>Table 3-5 lists the analytical methods that shall be used for each waste parameter. Methods other than "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" SW-846 (EPA, 1986) may be used if approved in writing and in advance by the Department.</td><td>This should be consistent with the analogous requirement in Section 15.7.9 of Permit Attachment 15 regarding methods other than those in SW-846. Accordingly, please revise to:

Laboratory analytical procedures shall conform to the EPA's SW-846 "<u>Test Methods for Evaluating Solid Waste, Physical/Chemical Methods</u>," (EPA, 1986 and all approved updates) or other appropriate established methods approved by the Department.</td></tr>
<tr><td>PA16-28</td><td>Attach-ment 16 Appx 3 3.5.2</td><td>427</td><td>Note: only the rows shown below are included in this comment.

Table 3-5
Test Methods for Waste Parameters in Leachate
<table>
<tr><th>Analytical Parameter</th><th>Analytical Test Method[a]</th></tr>
<tr><td>Dioxins/Furans</td><td>SW 8280/8290</td></tr>
<tr><td>Herbicides</td><td>SW 8151</td></tr>
<tr><td>Nitroaromatics/Nitramines (Explosives)</td><td>SW 8330</td></tr>
<tr><td>Pesticides</td><td>SW 8141/8081</td></tr>
<tr><td>Total Metals[b]</td><td>SW 6010</td></tr>
</table></td><td>Please see Comment PA16-24 regarding analytical parameters for monitoring performance of the containment cell and contents. Also, DOE/Sandia note Method 6020 is appropriate for analyzing metals, as a combination of Methods 6010 and 6020 are best for achieving the required detection limits and DQOs for all metal suites of analysis. Please revise as follows:

Table 3-5
Test Methods for Waste Parameters in Leachate
<table>
<tr><th>Analytical Parameter</th><th>Analytical Test Method[a]</th></tr>
<tr><td>Total Metals[b]</td><td>SW 6010/6020</td></tr>
</table></td></tr>
</table>

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-29	Attachment 16 Appx 3 3.5.3	427	Leachate shall be sampled and analyzed each time leachate is removed from the LCRS. Contaminated PPE shall be managed as F-039 listed hazardous waste each time said waste is generated.	As discussed in Comment PA16-24, no analysis is needed for characterizing the waste leachate. Characterization for monitoring the performance of the containment cell is needed no more often than annually, because the existing data indicate very little change. Annual characterization of the hazardous constituents in the leachate will also allow the Permittees to check that on-site management methods are appropriate. Accordingly, please revise to: Leachate shall be sampled and analyzed annually (or every two years if there is not enough generated in a year) to verify that • Hazardous constituent concentrations are consistent with historical levels, indicating adequate performance of the containment cell and contents, and • On-site management methods are appropriate for the hazards presented by the waste.
PA16-30	Attachment 16 Appx 5 5.1.5	434	**5.1.5 CPN 503DR Hydroprobe Moisture Depth Gauge Correlation**	DOE/Sandia measure soil moisture to identify increases that may indicate leakage from the CAMU or the nearby sanitary sewer line. It will be more effective to identify increases in soil moisture by determining relative soil moisture content rather than absolute moisture content. The current process requires determination of the absolute moisture content of the soil beneath the containment cell through a complex calibration procedure using a drum of soil that approximates the in-situ conditions under the cell to correlate the direct neutron counts from the probe. This information is superfluous to the objective of determining whether the soil moisture has increased. DOE/Sandia note the relative moisture content obtained from a direct neutron count provides all the information needed for determining changes in moisture content. Determining the relative moisture in this manner provides more timely information and maximizes use of reliable equipment. Please delete Section 5.1.5 and Figure 5-1.
PA16-31	Attachment 16 Appx 7	451	**7.1.5.2 CPN 503DR Hydroprobe Moisture Depth Gauge Correlation**	Please delete Section 7.1.5.2 and Figure 7-1 as discussed in the preceding comment.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-32	Attachment 16 Appx 8 8.0	457	The leachate is placed into 55-gallon drums.	Please revise to read: The leachate is placed directly into 55-gallon drums or other compatible containers.
PA16-33	Attachment 16 Appx 8 8.2	458	Containerized leachate shall be stored in 55-gallon drums on spill containment pallets to prevent the accidental discharge of leachate to the ground surface.	Please revise to read: Containerized leachate shall be stored in 55-gallon drums or other compatible containers on spill containment pallets to prevent the accidental discharge of leachate to the ground surface.
PA16-34	Attachment 16 Appx 8 8.3	458	**8.3 WASTE DISPOSITION** The leachate stored in each drum shall be sampled and analyzed according to the Waste Analysis Plan (Appendix 3 of this Permit Attachment). The leachate shall be managed through the Facility's Hazardous Waste Management Unit as a F039 listed hazardous waste.	As discussed in General Comment G-B, the Permittees have a duty to manage the leachate in accordance with all applicable regulations. Leachate management is discussed in Section 16.3.4 of Permit Attachment 16. Additionally, DOE/Sandia note this Appendix (8) addresses CAMU-specific emergency response information. Please delete this section, as it is not relevant to emergency response.
PA16-35	Attachment 16 Appx 8	458	The CAMU is located inside TA-III, which is controlled by fences, KAFB security patrols, and limited access through security gates.	KAFB security patrols do not control TA-III. Please revise to read: The CAMU is located inside TA-III, which is controlled by fences, security patrols, and limited access through security gates.
PA16-36	Attachment 16 Appx 8 8.5	458	Typical containers managed within the CAMU include 55-gallon drums that are managed in accordance with applicable regulations in 20 NMAC 4.1.300, incorporating 40 C.F.R. Part 262.	In accordance with previous comments regarding containers, please revise to read: Typical containers managed within the CAMU include 55-gallon drums or other compatible containers of leachate that are managed in accordance with applicable regulations in 20 NMAC 4.1.300, incorporating 40 C.F.R. Part 262.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-37	Attach-ment 16 Appx 8	461		

DRAFT PERMIT TEXT

Note: only the rows and items shown below are included in this comment.

Table 8-2
Corrective Action Management Unit
Emergency Coordinator List

Emergency Coordinators[a]		Home Telephone	Office Telephone	Cellular or Pager
Primary:	Franz Lauffer P.O. Box 5800 Environmental Management MS-1042 Albuquerque, NM 87185	867-2043	845-7697	540-5513 (Pager)
1st Alternate:	Bruce Reavis P.O. Box 5800 Environmental Management MS-1042 Albuquerque, NM 87185	296-0007	845-8403	250-6388 (Cellular) 530-7538 (Pager)
2nd Alternate:	Robert Ziock P.O. Box 5800 Landfills and Test Areas MS-1088 Albuquerque, NM 87185	255-4714	845-0845	None

[a]At least one Emergency Coordinator must be at the CAMU or on call.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-37 (cont)			**DOE/SANDIA COMMENT** The table is not consistent with the information provided for other Unit-specific emergency coordinators in Permit Attachment 12. Additionally, Donald Schofield will serve as the primary coordinator. Please revise to read:	

Table 8-2
Corrective Action Management Unit
Emergency Coordinator List

CAMU Emergency Coordinators[a]		Office Phone	Home Pone
Primary	Donald P. Schofield Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-4088 (office) (505) 259-7098 (cell)	(505) 268-6888
First Alternate	Bruce Reavis Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 845-8403 (office) (505) 250-6388 (cell) (505) 530-7538 (pager)	(505) 296-0007
Second Alternate	Robert Ziock Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 845-0845 (office)	(505) 255-4714

[a]At least one Emergency Coordinator must be at the CAMU or on call during CAMU operations.

PA16-38	Attach-ment 16 Appx 9 9.1.2	464	The training director must complete the CAMU Operating Procedures and Refresher Training outlined in Table 9-3 of this Permit Appendix.	Please clarify by revising as follows: The training director must review the CAMU Operating Procedures and Refresher Training outlined in Table 9-3 of this Permit Appendix.

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-101*	16.0	397	The Sandia National Laboratories (the Facility) Corrective Action Management Unit (CAMU) is a 19-acre site located in the southeast corner of Technical Area (TA)-III, within the boundaries of Solid Waste Management Unit 107.	The closed CAMU containment cell is the Unit subject to post-closure care; it is a 3.75-acre site. Please revise accordingly.
PA16-102*	16.3.1.1	399	Additional details of the leachate collection process and system inspection/maintenance/repair are presented in Conditions 16.3.4 and 16.5.3 of this Permit Attachment.	Please revise the cross-reference as follows: Additional details of the leachate collection process and system inspection/maintenance/repair are presented in Conditions 16.3.4 and 16.6.5.3 of this Permit Attachment.
PA16-103*	16.3.3.1	401	It consists of five parallel-trending, sub-horizontal, vitrified clay pipes (VCPs) located 5 feet below the containment cell bottom liner, with horizontal spacing of 17 to 27 feet (see Figures 16-7 and 16-8 of this Permit Attachment).	Please revise to correct a typographic error: It consists of five parallel-trending, horizontal, vitrified clay pipes (VCPs) located 5 feet below the containment cell bottom liner, with horizontal spacing of 17 to 27 feet (see Figures 16-7 and 16-8 of this Permit Attachment).
PA16-104*	16.3.3.3	402	Figure 16-16-11 of this Permit Attachment presents a cross-sectional view of the CSS monitoring subsystem components.	DOE/Sandia note there is no Figure 16-16-11. Figure 16-11 is related to the Chemical Waste Landfill. Please provide the figure and revise the reference as follows: Figure 16-11 of this Permit Attachment presents a cross-sectional view of the CSS monitoring subsystem components.
PA16-105*	16.6.6	408	If any identified hazard meets the definition of an emergency, as specified in Condition 16.0 of this Permit Attachment, the Contingency Plan (Permit Attachment 7) and the Site-Specific Contingency Plan (Appendix 8 of this Attachment) shall be implemented and the notification procedures specified in the Contingency Plan shall be followed.	Emergencies are defined in Condition 16.12 of this Permit Attachment, and the Contingency Plan is Permit Attachment 12. Please revise accordingly.
PA16-106*	16.12	410	Any fire or explosion, or any releases of hazardous waste or hazardous constituents that immediately and significantly threaten human health or the environment are defined as emergencies requiring implementation of the Contingency Plan (Permit Attachment 7) and the CAMU Site-Specific Contingency Plan (Appendix 8 of this Permit).	The Contingency Plan is Permit Attachment 12 rather than Permit Attachment 7, and the Unit-specific information is in Appendix 8 to Permit Attachment 16. Please revise accordingly.

*Comment is more administrative in nature

<table>
<tr><th>NO.</th><th>SECTION</th><th>PAGE</th><th>DRAFT PERMIT TEXT</th><th>DOE/SANDIA COMMENT</th></tr>
<tr><td>PA16-107*</td><td>16.13</td><td>410</td><td>[Please update reference list.]</td><td>Please delete the following references that do not appear in the text of Attachment 16:

New Mexico Environment Department (NMED), December 2003.
U.S. Environmental Protection Agency (EPA), 1993.
U.S. Environmental Protection Agency (EPA), 1990.</td></tr>
<tr><td>PA16-108*</td><td>16.13 and Attach-ment 16 Appx 3 – 7</td><td>410</td><td>U.S. Environmental Protection Agency (EPA), November 1986. "Test Methods for Evaluating Solid Waste," 3rd ed., Update 3, SW-846, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, D.C.</td><td>Please make a global change throughout Attachment 16 and associated appendices to indicate that all references to SW-846 are to "EPA, 1986 and all updates."</td></tr>
<tr><td>PA16-109*</td><td>Attach-ment 16 Appx 5</td><td>434</td><td colspan="2">DRAFT PERMIT TEXT

Table 5-1
Applicable SNL/NM Operating Procedures
<table>
<tr><th>Number</th><th>Administrative and Field Operating Procedure Title</th></tr>
<tr><td>ASSOP 01-02[a]</td><td>"Activity Specific Standard Operating Procedure for Use of the CPN 503DR Hydroprobe Moisture Depth Gauge in Neutron Logging Activities at the Corrective Action Management Unit (CAMU)"</td></tr>
<tr><td>ASSOP 01-04[b]</td><td>"Activity Specific Standard Operating Procedure for Active Soil Gas Sampling Using Method TO-14 at the Corrective Action Management Unit (CAMU)"</td></tr>
<tr><td>ASSOP 01-05[c]</td><td>"Activity Specific Standard Operating Procedure for Active Soil Gas Sampling onto Sorbent Tubes at the Corrective Action Management Unit (CAMU)"</td></tr>
</table>
[a]SNL/NM November 2001a.
[b]SNL/NM November 2001b.
[c]SNL/NM November 2001c.
ASSOP = Activity Specific Standard Operating Procedure.
CPN = California Pacific Nuclear.
SNL/NM = Sandia National Laboratories/New Mexico.

DOE/SANDIA COMMENT

These internal operating procedures are updated periodically as needed. Please delete footnotes a, b, and c, and add a new footnote to the title to indicate these procedures/documents will be used "as revised and updated."</td></tr>
</table>

*Comment is more administrative in nature

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-110*	Attach-ment 16 Appx 6	442		

DRAFT PERMIT TEXT

Table 6-1
Applicable Facility Operating Procedures

Number	Administrative and Field Operating Procedure Title
ASSOP 02-03[a]	"Activity Specific Standard Operating Procedure for Time Domain Reflectometry and Temperature Data Collection from the CAMU Vertical Sensor Array Monitoring Locations Using a TDR100 System and CR23X Micrologger"
ASSOP 01-04[b]	"Activity Specific Standard Operating Procedure for Active Soil Gas Sampling Using Method TO-14 at the Corrective Action Management Unit (CAMU)"
ASSOP 01-05[c]	"Activity Specific Standard Operating Procedure for Active Soil Gas Sampling onto Sorbent Tubes at the Corrective Action Management Unit (CAMU)"

[a]SNL/NM November 2002.
[b]SNL/NM November 2001a.
[c]SNL/NM November 2001b.
ASSOP = Activity Specific Standard Operating Procedure.
CAMU = Corrective Action Management Unit.
SNL/NM = Sandia National Laboratories/New Mexico.
TDR = Time-domain reflectometry.

DOE/SANDIA COMMENT

These internal operating procedures are updated periodically as needed. Please delete footnotes a, b, and c, and add a new footnote to the title to indicate these procedures/documents will be used "as revised and updated."

*Comment is more administrative in nature

<table>
<tr><th>NO.</th><th>SECTION</th><th>PAGE</th><th>DRAFT PERMIT TEXT</th><th>DOE/SANDIA COMMENT</th></tr>
<tr><td>PA16-111*</td><td>Attach-ment 16 Appx 7</td><td>450</td><td colspan="2">

DRAFT PERMIT TEXT

Table 7-1
Applicable Facility Operating Procedures

<table>
<tr><th>Number</th><th>Administrative and Field Operating Procedure Title</th></tr>
<tr><td>ASSOP 01-02[a]</td><td>"Activity Specific Standard Operating Procedure for Use of the CPN 503DR Hydroprobe Moisture Depth Gauge in Neutron Logging Activities at the Corrective Action Management Unit (CAMU)"</td></tr>
<tr><td>ASSOP 01-04[b]</td><td>"Activity Specific Standard Operating Procedure for Active Soil Gas Sampling Using Method TO-14 at the Corrective Action Management Unit (CAMU)"</td></tr>
<tr><td>ASSOP 01-05[c]</td><td>"Activity Specific Standard Operating Procedure for Active Soil Gas Sampling onto Sorbent Tubes at the Corrective Action Management Unit (CAMU)"</td></tr>
</table>

[a]SNL/NM November 2001a.
[b]SNL/NM November 2001b.
[c]SNL/NM November 2001c.
ASSOP = Activity Specific Standard Operating Procedure.
CPN = California Pacific Nuclear.
SNL/NM = Sandia National Laboratories/New Mexico.

DOE/SANDIA COMMENT

These internal operating procedures are updated periodically as needed. Please delete footnotes a, b, and c, and add a new footnote to the title to indicate these procedures/documents will be used "as revised and updated."

</td></tr>
<tr><td>PA16-112*</td><td>Attach-ment 16 Appx 8 8.0</td><td>457</td><td>The Permittees' Contingency Plan is included in Permit Attachment 7.</td><td>The Contingency Plan is included in Permit Attachment 12; please revise accordingly.</td></tr>
<tr><td>PA16-113*</td><td>Attach-ment 16 Appx</td><td>after 468</td><td>Photographs</td><td>DOE/Sandia have provided photographs showing the CAMU in the Application; these should be included as Appendix 9 to Permit Attachment 16. DOE/Sandia will provide the photographs under separate cover.</td></tr>
</table>

NO.	SECTION	PAGE	DRAFT PERMIT TEXT	DOE/SANDIA COMMENT
PA16-114*	Attachment 16	397-468	Acronyms	The following acronyms appear in the text of this Permit Attachment but are not defined in the list of acronyms at the beginning of Permit Attachment 16 or in the list at the beginning of the draft Permit. Please include them in the Acronym List: AWG — American Wire Gauge COLIWASA — composite liquid waste sampler NELAC — National Environmental Laboratory Accreditation Conference

*Comment is more administrative in nature