

Permit 3/18/10

ENTERED

STATE OF NEW MEXICO
BEFORE THE SECRETARY OF ENVIRONMENT

IN THE MATTER OF:

APPLICATION OF THE UNITED STATES)
DEPARTMENT OF ENERGY AND)
LOS ALAMOS NATIONAL SECURITY, LLC)
FOR A HAZARDOUS WASTE FACILITY)
PERMIT FOR LOS ALAMOS NATIONAL)
LABORATORY)

No. HWB 09-37(P)
HWB 10-04(P)

Testimony of Gian Bacigalupa

My name is Gian Bacigalupa and I will testify that the majority of the conditions included in the draft renewal permit meet applicable State and Federal regulations. I will also present proposed replacement language for conditions that the Applicants do not support and the basis in the regulations supporting the changes. In some cases, I may summarize positions that will be further explained by other witnesses on behalf of the Applicants.

I. Witness Qualifications

I currently work for the Los Alamos National Security, LLC (LANS), in the Resource Conservation and Recovery Act (RCRA) permit section of the Water Quality and RCRA Group, Environmental Protection Division (ENV-RCRA). My education includes Bachelor of Science degrees in environmental engineering and biology from the New Mexico Institute of Mining and Technology. I have approximately twenty five years of experience in the environmental field in sampling and chemical analysis, regulatory enforcement and permitting with the New Mexico Environment Department (NMED), and with the Laboratory. My experience with LANL involves RCRA permit application and modification development and regulatory assistance for LANL waste management groups with ENV-RCRA or predecessor groups since 1992. I have been involved with the LANL permit renewal process since the preparation of renewal permit applications and through the negotiations resulting in the latest version of the proposed renewal permit.

In preparation for my testimony, I have reviewed the documents listed in Part VI of this testimony.

II. Overview of the LANL Permit

The LANL Hazardous Waste Facility Permit, issued by the New Mexico Environmental Improvement Division, in November, 1989 (NMED, 1989), authorized LANL to store and treat hazardous waste at Technical Areas (TA) 50 and 54. The Permit included all the conditions necessary for safe management of the waste and compliance with RCRA.

The permit has since been modified to incorporate several significant operations associated with the LANL waste management programs. These included the addition of Module VIII in 1990 for the corrective action program at the Laboratory, new waste management units for the transuranic waste management program, and modifications for the Transuranic Waste Inspectable Storage Program (TWISP), the TA-54-38 storage units, and the TA-50-69 storage units in 1997. The permit was also modified as units originally permitted in 1989 were closed – the Controlled Air Incinerator in 1998, the TA-16 industrial incinerator in 2001, and treatment tanks at TA-54 in 1994 and 2007.

Many existing mixed waste (radioactive and hazardous waste component) management units were incorporated into the LANL permit system when the State of New Mexico was authorized to regulate mixed waste. These units came into the system as interim status through submission of the Part A permit application of January, 1991 (AR: 15112). Most of these units were located at TA-50, 54, and 55. These units have been subject to 40 CFR Part 265 standards pending inclusion in the permit, although pursuant to DOE direction, they have been managed in accordance with 40 CFR Part 264 waste management standards. One of the purposes of the Proposed Permit is to incorporate these interim status units into the permit.

From 1997 through 1999, LANL submitted permit applications for units at TAs-3, 14, 15, 16, 36, 39, 50, 54 and 55. These submittals were followed with extensive requests for additional information and responses between NMED and LANL. This process resulted in a resubmittal of the Part B permit applications in 2003 (AR: 11809 for TA-54) with additional requests for information. NMED issued a draft Permit for public comment in August 2007. The comment period was extended through February 1, 2008 and a public hearing was requested by commenters. In July 2008, NMED issued an invitation to persons who had commented on the draft Permit and who had requested a public hearing to meet and confer with NMED and LANL to resolve the commenters' issues. From August 2008 to June 2009, NMED convened over 40 meetings with the participants. NMED issued a revised draft permit incorporating revisions based on these discussions in July 2009. Additional comments were received and resulted in the publication of the Proposed Permit on February 2, 2010.

In February 2010, NMED issued an "Intent to Deny A Permit" for the TA-16 open burning units, which resulted in the removal of Part 6 and related portions of the draft renewal permit.

III. Discussion of Permit Parts and Testimony

The Proposed Permit is divided into eight Parts that set forth the administrative and technical requirements for receipt and management of hazardous waste, as required by

20.4.1.500 New Mexico Administrative Code (NMAC) incorporating 40 CFR Part 264, Subparts A to G. Permit Attachments A through O set forth the specifications for the implementation of the conditions set in the body of the Permit.

The following testimony is divided into two parts. The first part addresses the operating portions of the current draft renewal permit (Parts 1- 4 and related Attachments). The second part of the testimony addresses the closure, post-closure, and corrective action portions of the permit (Parts 9-11 and related Attachments).

IV. Hazardous Waste Management at Active Permitted Units

The portions of the LANL draft permit that address the day-to-day storage and treatment of hazardous waste are contained in Parts 1- 4 and related Attachments A through F, I, J, L, M, and N of the draft permit. These include the general provisions of the permit and the associated storage and treatment conditions.

LANL is in agreement with the majority of the requirements contained in the operating portions of the proposed permit. These sections comply with the RCRA requirements and are protective of human health and the environment. In many cases, NMED has imposed additional conditions or expanded upon the original language of the regulation through the use of their omnibus authority under 40 CFR § 270.32(b)(2) and by inserting conditions reflective of other agreements with the Applicants. These conditions have been discussed and explained between the Applicants, NMED, and other interested parties through the negotiation process from August 2008 to June 2009. For the most part, the Applicants have accepted the basis for the additional conditions.

However, the Applicants have identified certain conditions in the Proposed Permit or the language of the permit that have not been resolved in the latest version (January 20, 2010). The Applicants signed a Second Stipulation on Permit Language (February 22, 2010) and included a list of exceptions identifying the specific conditions that have not been resolved. The basis for the objections will be expanded through the Applicants' testimony in this hearing. My testimony will address the specific sections of the Proposed Permit relative to waste management operations at LANL.

PART 1: GENERAL PERMIT CONDITIONS

This portion of the permit contains general and administrative conditions for the permit, including definitions.

1.1 AUTHORITY

This is a new section incorporating the discussion on the cover sheet of the existing permit that specifically describes the regulatory authorities for issuance of the permit. These are the New Mexico Hazardous Waste Act (HWA) and New Mexico Hazardous Waste Management Regulations as authorized through the Resource Conservation and Recovery Act (RCRA).

1.2 PERMITTEES AND PERMITTED ACTIVITY

This section identifies the Permittees as the United States Department of Energy (DOE) and Los Alamos National Security, L.L.C. (LANS). This is equivalent to the cover sheet of the existing permit.

1.3 CITATIONS

This section establishes the citation format in the Permit for references to regulations.

1.4 EFFECT OF PERMIT

This section states that compliance with the Permit demonstrates meeting the requirements of RCRA and HWA for the activities specifically authorized or addressed by the Permit. This does not apply for requirements becoming effective by statute after the Permit is issued or for requirements not covered by the Permit, such as the corrective action program or generators at LANL.

1.4.1 Effect of this Permit on Interim Status Units

The section requires the submittal of Part A permit applications or closure plans for interim status units within specified timeframes. The section also links to the active units list in Table J-1 (*Active Portion of the Facility*) of Attachment J (*Hazardous Waste Management Units*) of this permit to list the interim status units at LANL.

1.5 EFFECT OF INACCURACIES IN PERMIT APPLICATION

The section states that the revised draft Permit is based upon the information received from LANL in the referenced documents and that any inaccuracies may be grounds for termination, revocation and reissuance or modification of the Permit. The facility must inform NMED of any such discrepancies if found.

1.6 PERMIT ACTIONS

1.6.1 Duration of Permit

The Permit is effective for a fixed term of ten years. This condition is directly based on 40 CFR§ 270.50(a). The Permit will go into effect 30 days after NMED's decision to issue.

1.6.2 Permit Modification

Any modifications to the Permit are subject to the conditions of 40 CFR §§ 270.41 through 270.43. Existing permit conditions will remain in effect until a decision regarding the modification to the permit is made per 40 CFR §270.30(f).

1.6.3 Reserved

1.6.4 Permit Suspension, Termination, and Revocation and Re-Issuance

The described actions to the permit are subject to the requirements of 40 CFR §§ 270.41, 270.43.

1.6.5 Permit Re-Application

This section calls for submission of any renewal application at least 180 days before the expiration date of the Permit to continue hazardous waste management operations subject to this Permit. This section is based upon 40 CFR § 270.10(h) and § 270.30(b).

1.6.6 Continuation of Expiring Permit

This section states that the conditions of the expired permit continue to apply if a timely renewal application is submitted to the regulatory agency. This section is based upon 40 CFR § 270.51.

1.6.7 Permit Review by the Department

This section states that the Department will review the closure and post-closure requirements in the permit for potential modification five years after the effective date of permit issuance. This requirement is based upon 40 CFR § 270.50(d) as it applies for land disposal units included in the permit.

1.7 PERMIT CONSTRUCTION

1.7.1 Severability

This section states that if any permit provision is found to be invalid, the applicability of that provision to other portions of the permit is not affected.

1.8 DEFINITIONS

Defined terms are stated in this section. LANL is in agreement with the definitions with the exception of two:

“Hazardous Waste Management Unit”-The definition is acceptable but the Applicants reserves the objection to the definition of the categories contained in the term as used in the Proposed Permit. See the discussion at Sections 11.2(1) and (2).

“Permitted Unit”-the Applicants have excepted the reference to Table J-1 in the definition. See the discussion for Part 11.2.1

1.9 DUTIES AND REQUIREMENTS

1.9.1 Duty to Comply

This section states the Permittees' duty to comply with the conditions of the Permit. The requirement is based upon 40 CFR § 270.30(a).

1.9.2 Enforcement

This section describes the enforcement options available to NMED if LANL does not comply with the conditions of the Permit.

1.9.3 Transfer of Permit

This section requires NMED approval for any ownership transfer of the Permit. Such a transfer requires modification or revocation and re-issuance of the Permit. The section also requires that the new owner be notified of the conditions of the permit and file a disclosure statement with NMED if necessary. The requirement is based upon 40 CFR § 270.30(l)(3) and 40 CFR §§ 264.12(c).

1.9.4 Need to Halt or Reduce Activity Not a Defense

This section states that LANL cannot claim that permitted activities must be reduced to meet the conditions of the permit in an enforcement action as based on 40 CFR §270.30(c).

1.9.5 Duty to Mitigate

This section includes a condition that LANL will take all reasonable steps to minimize releases and prevent adverse effects to human health and the environment during the course of any noncompliances to the permit. The requirement is based on 40 CFR §270.30(d).

1.9.6 Proper Operation and Maintenance

This section requires that LANL properly operate and maintain all facilities and associated systems and procedures to meet the conditions of the permit. The requirement is based upon 40 CFR §270.30(e).

1.9.7 Duty to Provide Information

This section states that LANL will provide NMED with any relevant information needed to determine whether the facility is in compliance with the permit or cause exists for modification or suspension of the permit. This will include any information required by the permit and LANL will provide the information in a manner acceptable to NMED.

LANL will provide security sensitive or restricted information as soon as reasonably possible. The requirement is based upon 40 CFR § 270.30(h).

1.9.8 Inspection and Entry

This section includes conditions requiring that LANL allow NMED representatives to access and inspect facilities regulated by the Permit and to provide any relevant records requested. LANL will provide any records or photographs that are security sensitive or restricted as soon as reasonably possible. The requirement is based upon 40 CFR § 270.30(i).

1.9.9 Sampling and Records

1.9.9.1 Representative Sampling

This section requires that all samples and measurements taken by LANL to meet the conditions of the permit be representative of the medium, waste, or material being sampled. Acceptable methods are specified. The requirement is based upon 40CFR §270.30(j)(1).

1.9.10 Reporting Planned Changes

This section requires LANL to give written notice of planned changes to any permitted unit. The requirement is based on 40 CFR §270.30(l)(1).

1.9.11 Reporting Anticipated Noncompliance

This section requires LANL to give written notice of any planned changes or activity that may result in noncompliance with the Permit. The requirement is based on 40 CFR § 270.30(l)(2).

1.9.12 24 Hour and Subsequent Reporting

The section requires that LANL report any noncompliance to the permit that may endanger human health or the environment or that requires implementation of the Contingency Plan. The requirement is based on 40 CFR § 270.30(l)(6).

1.9.12.1 24 Hour Oral Report

This section requires that LANL make an initial oral report within 24 hours of any noncompliance with the permit as defined in Section 1.9.12. The requirement is based on 40 CFR § 270.30(l)(6).

1.9.12.2 Five Day Written Report

LANL is required to make a written report within five days after becoming aware of a noncompliance to the permit as defined in Section 1.9.12. The report will contain a full description of the event and subsequent efforts to correct or mitigate it. The requirement is based on 40 CFR § 270.30(l)(6)(iii). An e-mail notice for public information in accordance with Section 1.13 of this permit will be required for the 5-day written report.

1.9.13 Written Reporting of a Non-threatening Release

This section requires that LANL include information about any release not deemed to be a threat to human health or the environment in the report made under Section 1.9.14. The information to be included is listed. This requirement is supported by the omnibus provision, 40 CFR §270.32(b)(2).

1.9.14 Other Noncompliance

This section requires that an annual report of all instances of noncompliance not reported under Section 1.9.11 be incorporated into the LANL annual Environmental Surveillance Report. The information to be included is listed. The requirement is based on 40 CFR § 270.30(l)(10).

1.9.15 Omissions or Misstatements in Applications or Other Reports

LANL is required to report promptly any failure to submit relevant facts or submission of incorrect information in a permit application or report. The requirement is based on 40 CFR § 270.30(l)(11).

1.9.16 Signatory requirement

This section requires signing and certification of all submissions required by the permit as called for by 40 CFR §§ 270.11 and 270.30(k).

1.9.17 Submissions to the New Mexico Environment Department

This section provides directions for submitting reports to NMED.

1.9.18 Approval of Submittals

This section states that any documents submitted to NMED to meet the conditions of the permit will be subject to the procedures set forth in 20.4.2 NMAC and that any documents not subject to those procedures will be reviewed and decided upon by NMED. Upon approval, such submittals will become enforceable as part of the permit and will control over any inconsistent permit requirements. This condition will not affect any public process otherwise required by the permit, the HWA, or the regulations.

1.9.19 Extensions of Time

This section allows LANL to seek an extension of time to comply with a permit requirement and provides information to file the request. NMED's provision is based on 40 CFR § 270.32(b)(2) and § 270.33. An e-mail notice for public information in accordance with Section 1.13 of this permit will be required for extensions of time requests.

1.9.20 Confidential Information

This section allows LANL to claim that any information submitted to NMED is confidential and should not be made public. This provision is supported by 40 CFR §§ 260.2 and 270.12.

1.9.21 New or Modified Permitted Units

This section prohibits treatment or storage of waste in a new or modified permitted unit unless approval has been obtained through the permit modification procedures and a certification made that construction has been completed as authorized. The condition is based on 40 CFR §§ 270.30(l)(2)(i) and 270.42.

1.10 INFORMATION REPOSITORY

This section requires that the Applicants establish an information repository that contains key documents about the draft Permit. The establishment of an information repository is supported by 40 CFR §§ 124.33(c) through (f) and 270.30(m). The section lists the documents to be included in the repository that relate to the issuance and operation of the Permit. The documents are to be searchably indexed and printable. New documents are to be added within 10 days after their submittal to or receipt from NMED. NMED requires that the repository be an electronic (virtual) repository. The Applicants support this requirement as a physically located library would be difficult to maintain, potentially represent a security problem, and would not be efficiently used based on the facility's prior experience. Additional arguments supporting the use of a digital library include:

- No physical boundary. The user of a digital library need not go to the library physically; people can gain access to the same information from anywhere, as long as an Internet connection is available.
- Round the clock availability. A major advantage of digital libraries is that people can gain access to the information at any time, night or day.
- Multiple access. The same resources can be used simultaneously by a number of institutions and researchers.
- Information retrieval. The user is able to use any key word (word, phrase, title, name, subject) to search a document or an entire collection.
- Preservation and conservation. The condition of databases and digitized reports are preserved and updated in their original formats and condition. After scanning, copies of information can be preserved without further degradation. Certain characteristics of objects such as the quality of images, may be

improved. Digitization can enhance legibility and remove visible flaws such as stains and discoloration.

- Volume. Digital libraries have the potential to store much more information than traditional libraries because digital information requires little physical space for containment and media storage technologies continue to become larger and more affordable.
- Computer availability. Digital libraries on the Internet can be accessed through public computers at most community libraries and staff is often available to provide research or user assistance.

1.10.1 RACER

The section requires LANL to update the RACER database monthly with environmental data collected under the Permit and incorporated into other databases. This is a continuation of a procedure from the June 14, 2007 Settlement Agreement and Stipulated Final Order.

1.11 GENERAL DOCUMENTS AND INFORMATION TO BE MAINTAINED AT THE FACILITY

This section lists documents to be maintained at LANL. The documents are those related or called for by the Permit. The basis for the requirement is NMED's omnibus authority, 40 CFR § 270.32(b)(2) as described in the Fact Sheet for the draft Permit.

1.12 COMMUNITY RELATIONS PLAN

This section requires that LANL set up a community relations plan. This will be used to establish working relationships with communities and interested members of the public. It will include government-to-government consultation processes with local tribes and pueblos. The purpose of the plan is to disseminate information about permit actions, to seek to minimize disputes, and to receive feedback from communities and members of the public. Comments and the status of the program will be posted annually subject to approval from tribes and pueblos. The basis for the requirement is NMED's omnibus authority, 40 CFR § 270.32(b)(2) as described in the Fact Sheet for the draft Permit.

1.13 PUBLIC NOTIFICATION VIA ELECTRONIC MAIL (E-MAIL)

The revised draft Permit requires that LANL issue e-mail notifications for the filing of specified documents that will be of interest to members of the public. Interested persons may enter their e-mail address at the LANL facility environmental website. LANL will give notice within seven days of the document submittals to those on the mailing list and include a link to an electronic version of the document. The basis for the requirement is NMED's omnibus authority, 40 CFR § 270.32(b)(2) as described in the Fact Sheet for the draft Permit.

Specific actions requiring e-mail notification and the information that must be included appear throughout the revised draft Permit. These include:

- 1.9.12.2 5-day written report (threatening incident or noncompliance);
- 1.9.19 Extensions of time;
- 1.14.1 Dispute resolution invocation;
- 1.15 Submission and notices under current compliance schedule
- 1.16 Land transfer notice;
- 2.2.1 Notice of receipt of treatment residues with no disposal path;
- 4.4 Tank systems and stabilization unit containment (releases);
- 9.2.2.1 Notice of inability to attain closure performance standard
- 9.2.2.2 Petition for alternative closure standards
- 9.2.2.3 Notice of inability to attain closure performance standard
- 9.4.1 Closure schedule (expected date to initiate closure);
- 11.3.1.1 Notification of detections;
- 11.4.1.1 Proposal of groundwater cleanup level based on risk assessment
- 11.6.2 Variance to cleanup levels;
- 11.8.2.1 Department-initiated interim measures;
- 11.8.2.2 Permittee-initiated interim measures;
- 11.8.3 Emergency interim measures;
- 11.8.9 Accelerated cleanup process.

The sections where these notices are included are further noted in the section descriptions in this document.

1.14 DISPUTE RESOLUTION

The section states that LANL may seek dispute resolution if there is a disagreement regarding NMED's decision on a submittal. Subsections 1.14.1 through 1.14.5 list the steps of the process for dispute resolution. Other provisions of the Permit are not affected while such a resolution is pending. The basis for the requirement is NMED's omnibus authority, 40 CFR § 270.32(b)(2) as described in the Fact Sheet for the draft Permit. An e-mail notice for public information in accordance with Section 1.13 of this permit will be required when requesting dispute resolution.

1.15 COMPLIANCE SCHEDULE

The section directs LANL to submit permit documents to NMED in accordance with the schedule contained in Attachment I of the draft permit. Additional compliance schedules for documents to be submitted in accordance with the Permit will be incorporated into Attachment I upon approval by NMED. The compliance schedule requirement is based on 40 CFR § 270.33(a). An e-mail notice for public information in accordance with Section 1.13 of this permit will be required for the submission of documents and notices contained in the compliance schedule.

1.16 TRANSFER OF LAND OWNERSHIP

This section describes the conditions that must be met before properties within the units subject to the permit may be transferred. LANL must give notice 120 days before the planned transfer and describe the status of any investigation or remediation. The notice must describe the property to be transferred, the purchaser, and the location on the property of any unit subject to the Permit, or solid waste management unit or area of concern that may have undergone corrective action. It must also describe the presence of any known contaminants (hazardous waste, hazardous constituents, or radionuclides) and the status of investigation or remediation. The notice must comply with CERCLA § 120(h), 42 USC § 9620(h), and indicate any restrictions on future use of the property. The requirements of this section are based on NMED's omnibus authority, 40 CFR § 270.32(b)(2). An e-mail notice for public information in accordance with Section 1.13 of this permit will be required for the land transfer notice.

1.16.1 Determination of Need for Further Action

This section states that NMED will determine whether closure, post-closure, or corrective action efforts are sufficiently protective in light of the intended use and, if not, what further efforts are needed. DOE may transfer the property after the decision for no further effort. LANL must advise the purchaser of any future obligations as to the property and submit a permit modification to update the map of the Facility.

1.16.2 Restricted Use

This section states that DOE shall be required to include a deed restriction to limit future use of the land to those uses consistent with its cleanup level (e.g., industrial use only) if cleanup has achieved less than residential-use levels.

1.16.3 Enforceability against Transferee

This section describes the actions to be taken by DOE and the property transferee to meet the covenant required by CERCLA § 120(h)(3)(A)(ii) and the requirements of Section 1.15.1.2. The contract of sale will confirm that the parties to the agreement agree the deed restriction is a requirement within the meaning of CERCLA and will survive the transfer of the deed. The deed restriction will be an obligation of the transferee and is enforceable by NMED and the transferor. The deed will be recorded in the property title at an appropriate office to ensure the notice of use restriction is provided to subsequent transferees.

1.16.4 EPA Institutional Controls Tracking System

This section requires that EPA Region 6 be notified of any deed restriction.

1.16.5 Transfer of Facility Property to another Federal Agency

This section provides for notice under Permit Section 1.16.1 120 days before (or as soon as possible if LANL learns of the transfer less than 120 days before) any transfer of operational control to another federal agency.

1.17 NOTICE OF DEMOLITION ACTIVITIES

This section is based on a settlement agreement between LANL and NMED regarding annual notice of planned demolition of buildings or structures that may contain hazardous materials (Settlement Agreement and Stipulated Final Order (NMED, 2007)). The conditions for Subsections 1.17.1-3 are derived from the agreement.

LANL is not in agreement with this section as revised in the Proposed Permit. A sentence has been added that states "This notice shall be provided at least 30 days prior to demolition of any building or structure." The added sentence makes this section internally inconsistent and substantially changes the requirement for two reasons.

First, the added sentence requires that notice be provided for "any" building or structure. This is not consistent with the limiting phrase "structures that contain hazardous material" used earlier in the paragraph. The sentence can be read to require notice for all structures demolished at LANL rather than just those that may contain hazardous waste and is therefore onerous and beyond the scope of the original agreement and this permit.

Secondly, the condition is not clear that the notice discussed in the section is the only notice required when combined with the discussion in Section 1.17.3. The section discusses only the annual notice on or before September 30 of each year.

Although the Applicants agreed to give notice to NMED of decommissioning and demolition activities in the 2007 Settlement Agreement, the Applicants did not agree to wait for a response from NMED before initiating demolition.

In order to resolve this issue, the added sentence, at lines 13-14, page 34, should be deleted.

1.17.1 Content and Format of Notice

This section lists the required contents of the annual notice of planned demolition activities, which includes a list of buildings and other fixed structures that may contain hazardous material scheduled to be demolished in the following federal fiscal year and facts related to the uses of the buildings, their relation to any corrective action units, types of hazardous wastes included and the dates of demolition.

1.17.2 Demolition Activities Update

This section requires quarterly updates of the list of buildings to be demolished.

1.17.3 Actions

This section requires LANL to give 30 days notice of the start of actual demolition of any buildings or structures for which NMED requests such notice. LANL is also required to provide demolition completion report for such building or structure. It is not clear that the requirement is limited to the annual notice discussed in Section 1.17. If additional notices are required, this will add further delays to the schedules of building demolitions because separate notices will involve additional 30 day wait periods.

PART 2: GENERAL FACILITY CONDITIONS

2.1 DESIGN, CONSTRUCTION, MAINTENANCE, AND OPERATION OF THE FACILITY

This section requires design, construction, maintenance and operation of the hazardous waste units in the permit to minimize the possibility of fire, explosion, or unplanned release. The requirement is based on 40 CFR § 264.31.

2.2 AUTHORIZED WASTES

Section 2.2 limits the management of hazardous wastes in the permitted units to only those wastes listed in Attachment B (*Part A application*), of this permit. This requirement is based on 40 CFR §270.13(j).

2.2.1 Hazardous Waste from Off-Site Sources

This section lists the offsite wastes that LANL may manage at the Facility and gives conditions for their management. A request to modify the list of off-site facilities that waste may be received from (Attachment L, *Listing of Off-Site Facilities*) will be a Class 1 or 2 modification request depending upon the type of waste. An e-mail notice for public information in accordance with Section 1.13 of this permit will be required for the receipt of any treatment residues with no further treatment or disposal options.

2.2.2 Hazardous Waste from Foreign Sources

This section prohibits the acceptance or management of waste from foreign sources.

2.2.3 PCB -Contaminated Waste

This section prohibits the storage of liquid hazardous wastes containing polychlorinated biphenyls (PCBs) in excess of 50 parts per billion, except for storage for less than one year in compliance with 40 CFR § 761.65(b) This requirement is based upon 40 CFR §268.50(f).

2.3 LAND DISPOSAL RESTRICTIONS

2.3.1 Hazardous Waste Storage

This section contains the one year limit upon hazardous waste storage at a permitted unit and exceptions based on the Land Disposal Restrictions (LDR), 40 CFR §268.50 and the Federal Facility Compliance Act, 42 USC 6961. The section adds a labeling and recording requirement to date the beginning of storage. The basis for the requirement is NMED's omnibus authority, 40 CFR § 270.32(b)(2), as described in the Fact Sheet for the draft Permit.

2.3.2 Prohibition on Dilution

This section prohibits the dilution of waste that is subject to the land disposal restrictions, or its treatment residual, as a substitute for treatment. It also states that aggregating or mixing wastes in a legitimate treatment process is not prohibited. It requires that hazardous constituents be destroyed, removed, or immobilized before land disposal. The requirements are based on 40 CFR § 268.3.

2.3.3 Documentation of Exclusion or Exemption

This section requires that LANL place a one-time notice in the Operating Record for any LDR prohibited wastes that are excluded from the definition of hazardous or solid waste or exempted under 40 CFR §§ 261.2-6 after generation. The notice must be specific to the waste stream involved and explain the circumstances justifying an exclusion or exemption. Under this provision, documentation may include files created by LANL as generator of the waste. The requirement is based on 40 CFR §268.7(a)(7)

2.4 WASTE ANALYSIS

2.4.1 General Waste Characterization Requirements

This section states that LANL may only manage hazardous waste that has been characterized to meet the requirements of 40 CFR § 264.13, this Section, and Attachment C (*Waste Analysis Plan (WAP)*) of the Permit. The minimum requirements for waste characterization are listed in the section as based on 40 CFR Parts 264 and 268. The section also states that waste stream characterization will be performed using NMED approved sampling and analysis methods, acceptable knowledge (defined in the WAP) or a combination of both. The section also requires that all waste characterization information be kept in the Operating Record as required by Section 2.12.2 or be available by means of a traceable identifier. The basis for the requirement is NMED's omnibus authority, 40 CFR § 270.32(b)(2).

2.4.2 Sampling and Analysis for Hazardous Wastes

This section requires that sampling and analysis follow NMED approved procedures, including methods contained in SW-846 and those specified in Attachment C, Tables C-16, C-17, and C-18. The section contains additional procedural conditions for representative sampling, a quality assurance and quality control program, laboratory analysis, and contracting with an independent analytical laboratory. The section also provides the information needs for a written request for the use of an alternate analytical method that deviates from NMED approved methods. This request will require NMED approval or a permit modification.

2.4.3 Acceptable Knowledge

This section allows LANL to use acceptable knowledge (AK) for waste characterization in addition to, or in place of, sampling and analysis. Such practice is supported by EPA guidance on waste characterization. (see EPA, 1994). The use of acceptable knowledge requires the documentation of all background information assembled and used in the characterization process. Documentation of any resolution of data discrepancies between different sources of AK is also required. The basis for the requirement is NMED's omnibus authority, 40 CFR § 270.32(b)(2).

2.4.4 Waste Received from Off-Site

This section requires that LANL obtain a detailed characterization of a representative sample of the waste from any off-site facility that sends treatment-derived waste or sealed source waste to LANL. This characterization will follow the requirements of Section 2.4. If acceptable knowledge is used for the characterization of waste received from off-site, LANL shall require the off-site facility to provide all acceptable knowledge documentation used to characterize the waste. The section also requires that LANL ensure that the waste matches the identity of the waste described in accompanying shipping documents. The requirement is based on 40 CFR § 264.13(a)(1).

2.4.5 Treatment-Derived Waste

The section requires LANL to characterize treatment-derived waste to determine whether the applicable LDR treatment standard has been met, if such was the purpose of treatment. The requirement is based on 40 CFR § 268.7(b). The notification and recordkeeping requirements of 40 CFR § 268.7(b)(3)(ii) and the general characterization requirements of Permit Section 2.4.1 also apply.

2.4.6 Reserved

LANL has excepted the deletion of the TA-16 open burn units from this permit. This will be addressed by Luciana Vigil-Holterman in her direct testimony.

2.4.7 Waste Characterization Review

The section requires the review and confirmation of characterization of waste streams to verify that the characterization is accurate and up-to-date. The section lists the requirements for such review, including annual re-evaluation, recharacterization of waste streams where there is a change in the process or analytical results indicate a change in the waste stream, and a random annual verification of 1% of the waste streams characterized by acceptable knowledge. The section lists several waste types that are exempt from the annual random verification. LANL will also recharacterize waste streams when told by a receiving off-site facility that the waste received do not match the manifest or waste analysis and will be required to notify NMED within three days of the receipt of such a notice. Such review is required under NMED's omnibus authority, 40 CFR § 270.32(b)(2).

The Applicants do not agree with the time allowed for reporting off-site manifest discrepancies to NMED as the condition is more stringent than the applicable regulation. This section requires LANL to notify NMED in writing within three days of receiving notice from a waste disposal facility that there is a discrepancy between the waste received and the pre-approved waste analysis certification or accompanying waste manifest or shipping paper. 40 CFR §264.72(c), which addresses manifest discrepancies and which is the regulatory requirement most similar to this condition, states that the owner or operator of the receiving facility must attempt to reconcile significant manifest discrepancies, as defined in 40 CFR §264.72(b), with the waste generator or transporter. 40 CFR §264.72(c) allows 15 days for resolution of the discrepancy before notice must be given to the administrative agency. LANL requests that the three day requirement in the revised draft Permit be changed to 15 days. Three days does not provide reasonable time to attempt to reconcile the discrepancy with the receiving facility, particularly in the event of intervening holidays.

LANL requests that condition (4) on Page 44 be modified to read as follows:

Permittees shall notify the Department in writing within ~~three~~ 15 days of their receipt of the notice of the discrepancy from the receiving facility.

2.4.8 Waste Characterization for Compliance with RCRA Air Emission Requirements

This section requires characterization of average VOC concentrations in waste in compliance with 40 CFR Part 264 Subpart CC. There are several exempted waste types as listed in the regulations:

- containers that store mixed waste. (40 CFR § 264.1080(b)(6)).
- containers storing wastes with a total capacity of less than 0.1 cubic meters. (40 CFR § 264.1080(b)(2)).
- containers that have stopped receiving hazardous waste and are undergoing closure. (40 CFR § 264.1080(b)(3)).
-

Additionally LANL is not required to determine average VOC concentration if pollution

control is achieved using the container construction specifications and operating requirements of 40 CFR § 264.1086(b) per the regulation.

2.4.9 Waste Characterization for Compliance with Land Disposal Restrictions

This section requires characterization to meet the Land Disposal Restrictions before any hazardous waste is managed at a permitted unit pursuant to 40 CFR §268.7(a). Waste to be disposed of at the Waste Isolation Pilot Plant (WIPP) will be characterized only to determine whether it is subject to land disposal prohibitions.

The permit section requires that, when using laboratory analysis as part of a hazardous waste characterization, LANL will require the laboratory to report concentrations of all hazardous constituents listed at 40 CFR § 268.48, Table of Universal Treatment Standards (UTS) and that the analytical test method used is capable of measuring as specified at the most recent version of the U.S. EPA's Test Methods for Evaluating Solid Wastes (SW-846).

The section also requires that LANL shall ensure that quantification limits do not exceed the regulatory standard when analyzing a waste for compliance with treatment standard concentrations in 40 CFR § 268.40. LANL is also required to characterize treatment-derived waste to determine whether they are hazardous and to meet the notification and recordkeeping requirements of 40 CFR §268.7(b)(3)(ii).

LANL has agreed to the basic condition regarding the analytical requirement contained in this section but is requesting that additional language be added to provide clarification about the extent of the analysis needed to meet the condition.

The use of the term "capable of measuring" is not sufficiently explained by the additional reference to SW-846 to resolve its meaning for compliance purposes. Some analytical methods listed in SW-846 can potentially be used for much wider ranges of analytes than routinely analyzed for. For example, Method 8260B (gas chromatography/ mass spectrometry) of SW-846 is used to determine volatile organic compounds for waste characterization. In addition to the analytes commonly listed for the method, the method further states that it can be used to quantitate most volatile organic compounds that have boiling points below 200°C (Section 1.3 of the method). This would potentially add many analytes in Table UTS that are not specifically listed for the method in SW-846 Table 2-1 where the appropriateness of the analytical requirements (e.g., detection limits, reproducibility) are not known. Additionally, there are six potential sample preparation techniques for Method 8260B (Section 1.2), none of which are appropriate for all the potential analytes capable of being measured by the method. These two factors potentially expand the use of the method beyond that routinely used by analytical laboratories to meet the requirements of the method. The proposed permit condition does not resolve the applicability of these factors in determining how compliance will be achieved.

LANL proposes that an additional sentence be added to the section:

"While performing this laboratory analysis, the Permittees will not be required to perform sample preparation or determinative procedures other than those performed routinely for the target analyte(s)."

The conditions in Section C.2.2 of Attachment C (Waste Analysis Plan) of this permit should also be made consistent with this revised requirement.

2.5 SECURITY

This section contains security requirements to prevent the unknowing entry and minimize the possibility of unauthorized entry of persons or livestock onto permitted units, based on 40 CFR § 264.14.

2.5.1 Warning Signs

This section requires warning signs at permitted units. The signs are bilingual in English and Spanish and are also posted in Tewa at boundaries with San Ildefonso Pueblo and as requested by Santa Clara Pueblo. The requirement is based upon 40 CFR §264.14(c).

2.6 GENERAL INSPECTION REQUIREMENTS

This section contains general inspection requirements to detect malfunctions or other problems at permitted units. Inspections will be conducted in accordance with Attachment E (*Inspection Plan*) of the permit. A copy of the Inspection Plan, at minimum an electronic version, must be kept at the permitted unit or administrative offices for the unit. This section is based on the requirements of 40 CFR § 264.15(a) and (b).

2.6.1 Inspection Schedule

This section requires that LANL conduct inspections on a schedule in compliance with Attachment E (*Inspection Plan*) of the permit. This requirement is based on 40 CFR § 264.15.

2.6.2 Repair of Equipment and Structures

LANL is required to remedy any deterioration or malfunction that may cause a hazard within 24 hours of discovery. LANL will remedy a hazard immediately when it is imminent or already exists. These requirements are based on 40 CFR § 264.15(c).

2.6.3 Inspection Logs and Records

This section requires inspection logs and records of actions taken in accordance with Attachment E (*Inspection Plan*) of the permit. The section provides requirements for

documenting these inspections and lists the activities to be included. The requirement is based on 40 CFR § 264.15 and the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

2.7 PERSONNEL TRAINING

This section requires that hazardous waste management personnel be trained to meet the requirements of 40 CFR § 264.16 and Attachment F (*Personnel Training Plan*) of this permit.

2.8 SPECIAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

This section states that LANL shall manage ignitable, reactive, and incompatible wastes in accordance with 40 CFR §§ 264.17, 264.176, 264.177, 264.198, and 264.199, and Permit Parts 3 and 4. The section defines the boundaries applicable to those regulations as the boundary of the LANL Technical Area each permitted unit is located in. The section lists the performance standards regarding these wastes that will prevent releases that could lead to fire, violent reactions, structural damage, or a threat to human health and the environment. The section is based on 40 CFR 264.17(b).

2.8.1 Ignitable and Reactive Waste Precautions

This section includes a list of conditions to prevent accidental ignition or reaction of ignitable or reactive wastes. They include segregating the waste from ignition sources, maintaining adequate clearance at fire hydrants, lightning protection, inspection of fire control equipment, limited stacking of drums, and venting considerations. The listed items are based on 40 CFR § 264.17(a) and NMED's omnibus authority under 40 CFR § 270.32(b)(2).

2.8.2 Incompatible Waste Precautions

This section contains rules for the separation of incompatible wastes. These include conditions for segregation of incompatible waste containers, prohibitions on storage of incompatible containers in the same secondary containment, spill commingling prevention, Department of Transportation (DOT) compatibility group storage segregation, cyanide storage restrictions, and container conditions. These requirements are based on 40 CFR §§ 264.177(b), 264.177(c), 264.199(b), and NMED's omnibus authority under 40 CFR § 270.32(b)(2).

2.9 WASTE MINIMIZATION PROGRAM

This section requires a waste minimization program to reduce the volume and toxicity of hazardous wastes generated at the Facility. 40 CFR § 264.73(b)(9) requires an annual certification by LANL that they have in place a program to reduce the volume and toxicity of hazardous waste generated. The section includes program requirements

similar to those contained in the Hazardous and Solid Waste Amendments (HSWA) module of the current facility permit (Module VIII, Section B.1).

2.10 PREPAREDNESS AND PREVENTION

This section states the general requirement that LANL maintain and operate the permitted units to the safety standards contained in 40 CFR §264.31 to minimize the potential for fire, explosion or releases of hazardous waste or constituents. The section also establishes that LANL will comply with unit specific safety procedures and maintain the equipment listed in Attachments A (*Facility Description*) and D (*Contingency Plan*) of this permit.

2.10.1 Required Equipment

The requirements in this Section will be addressed by James Blankenhorn in his direct testimony.

2.10.2 Testing and Maintenance of Equipment

This section requires testing and maintenance of emergency response equipment. LANL is required to maintain the safety equipment specified in these sections to ensure that it will work correctly in an emergency based upon 40 CFR § 264.33. The equipment will be periodically inspected to the schedules contained in Attachment E (*Inspection Plan*) of this permit as required by 40 CFR § 264.15. If equipment is found to be faulty, the section requires that it be promptly repaired or replaced. The malfunctioning equipment will be marked and the location of substitute equipment indicated. LANL will ensure that all personnel in the affected permitted units be notified and trained to any new substitute equipment. These procedures will be documented in the Operating Record. The basis for this requirement is 40 CFR §264.31 and the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

2.10.3 Access to Communications or Alarm System

This section provides requirements for personnel access to alarm or emergency communication devices at permitted units that are storing hazardous waste. This requirement is based on 40 CFR §264.34 and the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

2.10.4 Spill Response

This section specifies steps to be taken in response to a spill, including isolation of the spill area, containment of the spill, defining the nature and extent of the spilled waste, packaging the spilled waste and contaminated materials in containers, and decontaminating the area, equipment, and personnel. This requirement is based on NMED's omnibus authority under 40 CFR § 270.32(b)(2).

2.10.5 Arrangements with Local Authorities

The section requires that LANL maintain preparedness and prevention support agreements with local emergency response authorities. The requirement is based on 40 CFR § 264.37.

2.11 CONTINGENCY PLAN

2.11.1 Implementation of Contingency Plan

The section requires that LANL implement Attachment D (*Contingency Plan*) of this permit as necessary and directs that LANL will use the procedures in the plan when there is an incident at a permitted unit that threatens human health or the environment. The section lists the criteria used during a release of a hazardous waste, explosion or fire that will trigger the implementation of the plan. The section also requires that LANL provide adequate and available trained emergency response personnel at all times. The requirement is based on 40 CFR § 264.52(a).

2.11.2 Content of the Contingency Plan

This section specifies the Contingency Plan content for each permitted unit including descriptions of actions to be taken, arrangements and contracts with local emergency responders, names and phone numbers of primary and alternate emergency managers, lists of all on-site emergency equipment at each permitted unit, and evacuation plans. The requirement is based on 40 CFR §264.52 and the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

2.11.3 Distribution

This section specifies the agencies where copies of the Contingency Plan will be submitted and maintained. It includes the timeframe for sending notices of changes and stipulates certified mail for all submittals. The section also requires that evacuation routes be prominently posted at all permitted units. The section is based on 40 CFR §264.52 and NMED's omnibus authority under 40 CFR § 270.32(b)(2).

2.11.4 Amendments to Plan

This section requires review and amendment of the Contingency Plan, if necessary. It includes a listing of events that would trigger amendments and requires that primary and alternate Emergency Managers listed in the Contingency Plan also review the plan annually and document the review. The requirements are based on 40 CFR § 264.54 and the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

2.11.5 Emergency Manager

This section contains the requirements for the LANL Emergency Manager or Incident Commander implementing the Contingency Plan and requires that LANL inform NMED of any changes to the personnel in this position by following the procedures for a Class 1 permit modification. This requirement is based on 40 CFR §264.55.

2.11.6 Required Emergency Procedures

2.11.6.1 Immediate Actions

This section describes the actions waste management personnel and emergency responders will take in the event of an emergency including activation of alarms and notifications to response agencies. This section is based on 40 CFR § 264.56.

2.11.6.2 Release, Fire, or Explosion

This section lists the actions the Emergency Manager will take to identify the nature and scope of any release of hazard waste or hazardous constituents and assess the potential hazards to human health and the environment. The section is based on 40 CFR §264.56(b) and (c).

2.11.6.3 Reporting Findings

This section lists the reporting actions that the Emergency Manager will take when there is an event that requires implementation of the Contingency Plan. This section is based on 40 CFR § 264.56(d).

2.11.6.4 Mitigative Measures

This section states that the Emergency Manager will take all reasonable measures to ensure that fires, explosions, or releases do not occur, recur, or spread to other hazardous wastes at the facility. This section is based on 40 CFR § 264.65(e).

2.11.6.5 Monitoring

The permit section requires that during an emergency, the Emergency Manager utilize available air monitoring resources to measure and characterize any air emissions caused by the fire or release. This requirement is based on 40 CFR § 264.56(f) and the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

2.11.7 Post-Emergency Procedures

This section requires that the Emergency Manager will provide for the management of any hazardous wastes or contaminated material resulting from the emergency, that incompatible waste are not managed in the permitted unit until cleanup is completed, and

that all emergency equipment is cleaned and ready for further use before operations are resumed. This section is based on 40 CFR §§ 264.56(g) and (h).

2.11.8 Need for Further Corrective Action

This section states that NMED may require additional corrective action pursuant to Part 11 (*Corrective Action*) of this permit if they determine that a release under this section has not been completely remediated.

2.11.9 Notification and Record Keeping

This section states that LANL must notify NMED of implementation of the Contingency Plan as required by permit section 1.9.12. The section also requires that LANL notify local authorities, and tribal governments before operations resume in the areas affected. Additionally, LANL will document in the Operating Record any cases where an indoor fire suppression system has been activated on a waste storage pad for purposes of closure reviews. This section is based on 40 CFR § 264.56(i) and the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

2.12 RECORDKEEPING AND REPORTING

This section requires LANL to perform all recordkeeping and reporting requirements contained in the Permit and in 40 CFR § 264.73(a).

2.12.1 Manifest Systems

This section incorporates the manifest record keeping and reporting requirements of 40 CFR §§ 264.71, 264.72, and 264.76.

2.12.2 Facility Operating Record

This section requires maintenance of a Facility Operating Record for each permitted unit until NMED has approved either the closure certification statement or, if the unit enters post-closure care, the post-closure certification statement for the unit (i.e., for the permitted lifetime of the unit). The section lists the acceptable format for the records and the information necessary to be put into the Operating Record. The section is based on the record requirements of 40 CFR Parts 264, 268, and 270 and the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

2.12.2 Facility Operating Record

No. 8 LANL has excepted the financial assurance requirements. Please see the discussion regarding financial assurance contained in the exception to Section 2.13.

2.12.3 Availability of Facility Operating Record

This section requires that the Operating Record and other Permit records will be reasonably available for inspection by NMED. This is based upon 40 CFR § 264.74(a).

2.12.4 Record Retention

This section requires retention of all records during the process and resolution of any enforcement action. This is based on 40 CFR § 264.74(b).

2.12.5 Biennial Report

This section requires a biennial report as required by 40 CFR § 264.75.

2.13 COST ESTIMATE FOR CLOSURE AND POST-CLOSURE

2.14 FINANCIAL ASSURANCE FOR CLOSURE AND POST-CLOSURE

2.15 LIABILITY REQUIREMENTS

2.16 INCAPACITY OF OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS

The Applicants oppose the requirements for financial assurance in these sections. The financial assurance requirements will be addressed by other witnesses for the Applicants.

PART 3: STORAGE IN CONTAINERS

The requirements in this Section will be addressed by James Blankenhorn in his direct testimony.

PART 4: TA-55 STORAGE IN TANKS AND TREATMENT BY STABILIZATION

4.1 GENERAL CONDITIONS

This section includes general conditions for the stabilization tanks at TA-55 including the applicability of requirements at 40 CFR Part 264, Subparts J and X, operations in compliance with Attachment A (*General Facility and TA-Specific Description*) of this permit, storage and treatment limitations, appropriate EPA Hazardous Waste Numbers, and a prohibition on placement of wastes or chemicals that could damage the permitted units. The last requirement is based on 40 CFR § 264.194(a).

4.2 EXISTING TANK SYSTEM INTEGRITY

This permit section requires that the written integrity assessments of the existing tank unit systems be included in the Facility Operating Record. The requirement is based on 40 CFR § 264.191.

4.3 REPLACEMENT TANK SYSTEM AND STABILIZATION UNIT COMPONENTS

This section provides requirements for the replacement of any tank system components. These include that repairs are performed in accordance with 40 CFR §§ 264.196(e)(2) through (4) or the units closed, proper handling procedures are used to prevent damage to the units, their components, or any ancillary equipment, inspection qualifications, certification requirements, tightness testing, and Operating Record documentation. These requirements are based on 40 CFR §§ 264.192, 196, and 197.

4.4 TANK SYSTEMS AND STABILIZATION UNIT CONTAINMENT

This section addresses requirements for secondary containment of the tank systems. These include meeting the requirements of 40 CFR § 264.193, the use of appropriate controls and practices to prevent spills and overflows from the components, removal of spilled waste within 24 hours of detection, maintenance or replacement of any sealants used for secondary containment, component removal criteria, and spill notifications. These requirements are based on 40 CFR §§ 264.193, 194, and 196, and supported by NMED's omnibus authority under 40 CFR §270.32(b). An e-mail notice for public information in accordance with Section 1.13 of this permit will be required for releases from tank systems and stabilization containment.

4.5 IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTES

This permit section requires that LANL ensure that the mixed waste storage tank and stabilization units do not manage ignitable or reactive waste. This section requirement is based on 40 CFR § 264.199.

4.6 TA-50 RADIOACTIVE LIQUID WASTE TREATMENT FACILITY

LANL has excepted the entire section and is requesting that the Section be deleted. The basis for the deletion is addressed in testimony of Tony Grieggs.

PART 5: (RESERVED)

PART 6: (RESERVED)

LANL has excepted the deletion of Treatment by Open Burning in this section. The open burning units are addressed in the direct testimony of other witnesses for the Applicants.

PART 7: (RESERVED)

PART 8: (RESERVED)

ATTACHMENTS

The following Attachments to the Proposed Permit are those that address conditions for the management of waste and operations at the active permitted units in the Permit. As such, they have been included at this Part of this testimony. They include Attachment A (*Technical Area (TA) Unit Descriptions*), Attachment B (*Part A Application*), Attachment C (*Waste Analysis Plan*), Attachment D (*Contingency Plan*), Attachment E (*Inspection Plan*), Attachment F (*Personnel Training Plan*), Attachment I (*Compliance Schedule*), Attachment J (*Hazardous Waste Management Units*), Attachment L (*Listing of Off-Site Facilities*), Attachment M (*Cost Estimates for Financial Assurance*), and Attachment N (*Figures*).

Attachment A Technical Area (TA) – Unit Descriptions

Attachment A contains specific unit descriptions set out by Technical Areas and the included hazardous waste management units. These include functions, dimensions, materials of construction, security procedures, and emergency equipment.

The Applicants have excepted Section A.2 of the attachment for removal of the TA-16 open burn units.

Attachment B Part A Application

The attachment B identifies the U.S. EPA Hazardous Waste Numbers each permitted hazardous waste management unit is authorized to manage. Additional waste types may only be added through the use of permit modifications.

Attachment C Waste Analysis Plan

The attachment includes descriptions of the hazardous waste types managed at LANL and the waste analysis procedures used to characterize and document the contents of the wastes. The purpose of the plan is to set out the procedures to be used to demonstrate that sufficient information is known about the wastes to properly manage them. This includes procedures for sampling and analysis, appropriate analytical methods for hazardous constituents, acceptable knowledge determinations, verification sampling, the use of the WIPP transuranic waste certification program to provide sufficient information for disposal off-site, and procedures for specific regulations such as 40 CFR Part 264, Subpart CC. The section meets the requirements of 40 CFR 264.13.

The Applicants have excepted Section C.1.3.2, Table C-12 and C-13 and other sections of this Attachment for the removal of discussions regarding high explosives wastes from the Waste Analysis Plan.

Attachment D Contingency Plan

The plan describes the actions facility personnel will take in response to fires, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous constituents from the permitted units. The plan describes related procedures such as arrangements with local first responders in emergencies, evacuation plans, and provides a list of emergency coordinators and emergency equipment available at the permitted units and other facilities. The plan meets the requirements of 40 CFR §§ 264.51 and 264.52.

In order to clarify the equipment at TA-50-69, the following changes need to be made.

- Equipment list for TA-50-69, please remove “evacuation alarms” from description of capabilities.
- Change PA system to “pagers, cell phones, or radios.”

The Applicants have excepted the removal of the TA-16 open burn units throughout this Attachment.

Attachment E Inspection Plan

The inspection plan provides the procedures to be used for periodically determining that any deterioration, spills, equipment malfunctions or other detrimental conditions at permitted units are detected and remedied.

LANL has excepted the removal of the TA-16 open burn units throughout this Attachment.

Attachment F Personnel Training Plan

The training plan describes the training classes and procedures to be used to ensure that all hazardous waste management personnel are adequately trained to manage waste and understand the potential for problems in their permitted units. The final plan addresses the requirements of 40 CFR §264.16.

Attachment I Compliance Schedule

This attachment lists the submittals required by the permit. (See 40 CFR § 270.33).

Attachment J Hazardous Waste Management Units

The attachment lists the hazardous waste management units at LANL. Three tables are included: 1) Table J-1 shows the active portion of the Facility, listing active units including those treating and storing wastes, those in closure, and those in interim status; 2) Table J-2 shows permitted units in post-closure care, listing units that are not active, have completed closure, and are in post-closure care; and 3) Table J-3 shows the closed portion of the Facility, listing units that are not active, have completed closure, and are

not in post-closure care because their clean closure certification has been approved by NMED.

LANL has excepted Table J-1 for references to identification of the entirety of TA-54 Areas "G," "H" and "L" as regulated units and to the listing of the TA-16 open burn treatment units as interim status units under closure.

As will be discussed more fully under Permit Section 11, below, in order to be fully consistent with the Consent Order and to ensure that the Consent Order is the only enforceable document for MDAs G, H and L, the references to TA-54 G, H, and L in Table J-1 should be revised to identify the specific pits and shafts that are the regulated units subject to the Permit. Table J-1 should be revised as follows:

- Page 3, revise the row identified as TA-54 "G" as follows:
~~Material Disposal Area G~~ Pit 29 and Shaft 124.
- Page 5, revise the row identified at TA-54 "H" as follows:
~~Material Disposal Area H~~ Shaft 9
- Page 5, revise the row identified as TA-54 "L" as follows:
~~Material Disposal Area L~~ Shafts 1, 13-17, 19-34 and Impoundments B and D

Attachment L Listing of Off-site Facilities

Attachment L is a list of off-site facilities that may return treatment derived waste or waste residuals to LANL or are otherwise eligible to send waste to LANL. Any revisions to this table will be made in compliance with Section 2.2.1.

Attachment M Cost Estimates for Financial Assurance

Attachment M contains cost estimates for financial assurance for certain closure activities listed on a hazardous waste management unit basis. The table is based on the requirements of Section 2.14.

LANL has excepted this Attachment based on the objection to financial assurance.

Attachment N Figures

Attachment N contains the maps and facility figures referenced throughout the proposed permit.

V. Closure, Post-Closure and Corrective Action at Permitted Units

The portions of the Proposed Permit that relate to the closure, post-closure, and any necessary corrective action activities for the permitted units are contained in Parts 9, 10, and 11 and the related Attachments G, H, K, and O of the Proposed Permit.

The Applicants are in agreement with the majority of the requirements contained in these portions of the proposed permit. These sections comply with the RCRA requirements and are protective of human health and the environment. In many cases, NMED has imposed additional conditions or expanded upon the original language of the regulation through the use of their omnibus authority under 40 CFR § 270.32(b)(2) and by inserting conditions reflective of other agreements with the Applicants. These conditions have been discussed and explained between the Applicants, NMED, and other interested parties through the negotiation process from August 2008 to June 2009. For the most part, the Applicants have accepted the basis for the additional conditions.

However, the Applicants have identified certain conditions in the Proposed Permit or the language of the permit that have not been resolved in the latest version (January 20, 2010). The Applicants signed a Second Stipulation on Permit Language (February 22, 2010) and included a list of exceptions identifying the specific conditions that have not been resolved. The basis for the objections will be expanded through the Applicants' testimony in this hearing. My testimony will address the specific sections of the Proposed Permit relative to closure, post-closure and corrective action at LANL.

PART 9: CLOSURE

The Applicants agree with the closure process outlined in Section 9.3 and its interface with the Consent Order requirements. However, the Applicants do not agree with the identification of "MDA G," "MDA H," and "MDA L" as regulated units in Table J-1. The requested change to Table J-1 is set forth above. Therefore, because of the disputed identification of the regulated units, the Applicants maintain an exception to use of the term "regulated unit" and references to Table J-1 throughout Part 9. Additionally, LANL does not agree with the removal of references to open burning units.

9.1 INTRODUCTION

This section contains a general description of the categories of permitted units that are subject to this Part of the Proposed Permit. The regulatory authority for the closure requirements is identified. The closure plans in Attachment G (*Closure Plans*) of the permit are referenced for unit specific closure procedures.

9.1.1 Regulated Units

This section addresses the first category of permitted units subject to closure under the permit and states that the regulated units are not permitted to accept hazardous waste and

are required to close. It also states that the units must be closed to the conditions of Sections 9.1, 9.3, and 9.5 of this Part.

The Applicants agree with the prohibition on further disposal of waste in the regulated units and with the requirement that they be closed. However, as discussed above, the regulated units need to be properly identified in Table J-1.

As discussed below, the references to “regulated units” should actually refer to “solid waste management units” (SWMUs) and “areas of concern” (AOCs).

Numbers 1 through 3 should be changed as follows:

- (1) regulated units (*i.e.*, ~~material disposal areas G, H, L~~ Area G Pit 29 and Shaft 124; Area H Shaft 9; and Area L Shafts 1, 13-17, 19-34 and Impoundments B and D);
- (2) indoor units (structures and related equipment); and
- (3) outdoor units (asphalt or concrete pads and related structures and equipment):
 - a. co-located with ~~a regulated unit~~ solid waste management units (SWMUs) and areas of concern (AOCs);
 - b. not co-located with ~~a regulated unit~~ SWMUS and AOCs.

9.1.2 Indoor Units

This section describes the second category of permitted units for closure. It states that the units must be closed to the conditions of Sections 9.2, 9.4, and 9.5 of this Part.

9.1.3 Outdoor Units

This section describes the third category of permitted units for closure. It states that the units, including buildings and structures associated with the unit, must be closed to the conditions of Sections 9.2, 9.4, and 9.5 of this Part.

LANL has excepted this section based upon the inclusion of a “regulated unit” reference. Further discussion of the objection to that term is contained at Section 11.2.1. Additionally, new requirements do not take into account that buildings, structures, and equipment may not have been used for the management of waste.

As discussed below, the references to “regulated units” should actually refer to “SWMUs” and “AOCs.”

Numbers 1 through 3 should be changed as follows:

(1) asphalt or concrete pads co-located with ~~a regulated unit~~ SWMUs and AOCs (i.e. outdoor storage unit)(e.g., TA-54 Area L);

(2) asphalt storage pads not co-located with ~~a regulated unit~~ SWMUs and AOCs (i.e. outdoor storage unit) (e.g., TA-50-69 Outdoor Unit).

9.2 CLOSURE PERFORMANCE STANDARDS

9.2.1 Clean Closure

This section sets the general clean closure performance standard for the permitted units. The standard is the removal of all hazardous waste residues and hazardous constituents. In contaminated media the cleanup criteria is established in accordance with Sections 11.4 and 11.5 of the permit. This includes residential use limits for soils and that LANL must demonstrate no potential for residues to contaminate groundwater. The basis for this section is 40 CFR § 264.112(b)(4).

9.2.2 Inability to Achieve Clean Closure Performance Standards

This section sets the closure standard for the permitted units if they cannot achieve clean closure. These standards include the removal of waste residuals to a risk level equivalent to a total excess cancer risk of 10^{-5} for carcinogens or a target non-carcinogen Hazard Index of 1.0 for human receptors and Ecological Screening Levels established under Section 11.5 of the Permit. The closure controls must minimize the need for further maintenance and control post-closure releases from the unit. The section is based on 40 CFR §264.111.

9.2.2.1 Indoor Units

This section establishes procedures for notifying NMED if the closure standards in Section 9.2.1 cannot be met for indoor units. These include a closure plan amendment with a justification and a permit modification request to describe how the standards of Section 9.2.2 will be met. A post-closure plan subject to the requirements of Part 10 (*Post-Closure Care*) of this permit may be required to maintain any control measures. The section is based on 40 CFR §264.112(c). An e-mail notice for public information in accordance with Section 1.13 of this permit will be required if the closure standards of Section 9.2.1 are not obtainable.

9.2.2.2 Outdoor Units Co-located with Regulated Units

This section establishes procedures for petitioning NMED for alternative closure standards if the closure standards in Section 9.2.1 cannot be met for an outdoor unit co-located with a regulated unit. The section is based on 40 CFR §264.110(c). An e-mail notice for public information in accordance with Section 1.13 of this permit will be required for petition for alternative closure standards.

LANL has excepted this section based upon the inclusion of a “regulated unit” reference.

As discussed below, the references to “regulated units” should actually refer to “SWMUs” and “AOCs.”

The title to this section should be changed to:
“Outdoor Units Co-located with SWMUs and AOCs.”

Line 28, page 98 should be changed to:

indoor structures) co-located ~~with a regulated unit~~ SWMUs or AOCs.

9.2.2.3 Other Outdoor Units

This section establishes procedures for notifying NMED if the closure standards in Section 9.2.1 cannot be met for outdoor units that are not co-located with a regulated unit. These include a closure plan amendment with a justification and a permit modification request to describe how the standards of Section 9.2.2 will be met. A post-closure plan subject to the requirements of Part 10 (*Post-Closure Care*) of this permit may be required to maintain any control measures. The section is based on 40 CFR §264.112(c). An e-mail notice for public information in accordance with Section 1.13 of this permit will be required if the closure standards of Section 9.2.1 are not obtainable.

LANL has excepted this section based upon the inclusion of a “regulated unit” reference.

As discussed below, the references to “regulated units” should actually refer to “SWMUs” and “AOCs.”

Line 1, page 99 should be changed to:

~~regulated unit~~ SWMUs or AOCs

9.3 CLOSURE REQUIREMENTS FOR REGULATED UNITS

This section states that closure of the regulated units must meet the corrective action requirements of the March 1, 2005 Compliance Order on Consent (Consent Order (NMED, 2005)) as the applicable enforceable document required in the event of alternative closure standards in accordance with 40 CFR § 264.110(c). The section sets out the appropriate remedy proposal mechanism and states that fulfilling the requirements of the approved Corrective Measures Implementation Plan will meet the requirements of 40 CFR Part 264, Subpart G. The section is based on the alternative closure standards of 40 CFR §264.110(c). Under alternative closure, the closure requirements of Subpart G may be replaced with alternative requirements that are contained in an enforceable document if the regulated units are co-located with SWMUs and AOCs. The Consent Order is the enforceable document for SWMUs and AOCs at LANL. (Consent Order, Section III.W.2).

The Applicants agree with the concept for closure included in this section that allows the option of using alternative closure requirements for regulated units. However, the identification of the regulated units contained in the Proposed Permit conflicts with the Consent Order and LANL has excepted this section because the identification of the units does not meet the requirements for alternative closure.

Technical Area 54 (TA-54) G, H and L include SWMUs and AOCs as identified in the current permit and the Consent Order. There are also units that have accepted hazardous waste for disposal since the regulatory date and thus are regulated units. The regulated units are Shaft 124 and Pit 29 at G, Shaft 9 at H, and a number of shafts and surface impoundments at L. These are the only discrete units that accepted hazardous waste after July 26, 1982. Pursuant to the regulatory requirements and the intent to close these units under the permit, LANL has submitted several closure plans that identified these pits, surface impoundments, and shafts as discrete hazardous waste units. These identifications are also consistent with Part A permit applications LANL has submitted since the early 1990s and for this permit renewal. Other units at TA-54, including MDAs G, H, and L, have been identified as SWMUs by both LANL and NMED in the Consent Order. The specifically identified regulated units, which are the pits, shafts and surface impoundments listed above, are thus distinct and individually situated among SWMUs and AOCs at G, H, and L making them eligible for alternative closure. This distinction allows the use of alternative closure for the regulated units.

The Applicants position regarding the inconsistency between the identification of the units is further discussed in Section 11.2.

9.4 CLOSURE REQUIREMENTS FOR INDOOR AND OUTDOOR UNITS

9.4.1 Closure Schedule

This section sets the schedule for closure proceedings including start notices to NMED and timeframes for different aspects of the closure process. The section is based upon the requirements of 40 CFR §§ 264.112(d)(1) and 264.113(a). An e-mail notice for public information in accordance with Section 1.13 of this permit will be required when the notice for the expected date to initiate closure is sent.

9.4.1.1 Time Allowed for Closure

This section states that all closure activities must be completed in compliance with this Part of the permit within 180 days after receiving the final volume of hazardous waste at a permitted unit. An extension may be requested from NMED. An e-mail notice in accordance with Section 1.13 of this permit for the closure extension request will be required. The section is based on 40 CFR §§ 264.113(b)(1) and (2).

9.4.2 Removal of Hazardous Waste

This section states that all hazardous waste must be removed from the permitted unit undergoing closure, treated or disposed of within 90 days of the final receipt of waste. This condition is based upon 40 CFR § 264.113(a).

9.4.3 Decontamination and Removal

This section establishes that LANL shall decontaminate, remove, or both, all structures and related equipment and materials as part of closure procedures and to the closure standards set in Part 9.2. The section is based on 40 CFR § 264.112(b)(4) and 40 CFR § 264.114.

9.4.3.1 Decontamination of Surfaces, Structures, and Related Equipment

This section states that decontamination of inner surfaces and equipment at permitted indoor and outdoor units will use pressure-washing or steam-cleaning. This will occur at least twice if volatile organic compounds (VOCs) are to be decontaminated for. The section states that the closure plans will identify the structures and equipment to be decontaminated and the methods to be used. LANL will propose an alternative decontamination method in the closure plans if these methods are not practical. The section additionally states that outdoor asphalt pads are not required to decontaminate.

9.4.3.2 Removal of Structures, Related Equipment, and Pads

This section states that structures and related equipment that cannot be decontaminated will be removed and managed appropriately. Asphalt pads at permitted units will be removed. These requirements are supported by 40 CFR § 264.114 and the use of NMED's omnibus authority at 40 CFR § 270.32(b)(2).

9.4.4 Decontamination Verification and Soil Sampling

This section requires that LANL verify that each indoor and outdoor permitted unit has been decontaminated to meet the closure performance standards in Section 9.2 through sampling and analysis or demonstration of the double decontamination process for VOCs in accordance with Permit Section 9.4.3.1. The section also limits the use of radionuclide wipe samples as surrogates. The requirement is supported through the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

9.4.4.1 Decontamination Verification and Soil Sampling Activities

This section contains the sampling criteria for wipe samples and soil samples used to demonstrate closure at permitted units.

9.4.5 Management and Disposal Procedures for Waste Generated During Closure

This section states that all contaminated equipment, structures, and soils resulting from closure activities must be properly disposed of or decontaminated and managed in

accordance with all applicable requirements of 40 CFR Part 262. The section is based on 40 CFR § 264.11.

9.4.6 Records Review and Structural Assessment

This section states that a records review and a structural assessment for each permitted unit will be conducted before closure. The results of these evaluations may modify the closure's sampling and analysis plan and will require a permit modification in accordance with Permit Section 9.4.8.

9.4.6.1 Records Review

The section describes the requirements for the records review including types of records, events to be evaluated, need to specify locations of releases or equipment deterioration, schedule, and revisions to the sampling and analysis plan. The requirement is supported through the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

9.4.6.2 Structural Assessment

This section describes the requirements for the structural assessment including visual evidence, schedule, notifications to NMED, and revisions to the sampling and analysis plan. The requirement is supported through the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

9.4.7 Closure Plans

This section states that LANL must have an approved closure plan that describes how each permitted unit will be closed to meet the closure performance standards. This section is based on 40 CFR §264.112(a) and (b).

9.4.7.1 Sampling and Analysis Plan

This section states that each closure plan shall have a sampling and analysis plan (SAP) and lists the required contents. These include the constituents to be sampled, a site plan showing sample locations, type of samples used, appropriate sampling and analytical methods, and quality assurance procedures.

9.4.7.1.i Decontamination Verification Wipe Sampling Grid for Indoor Units or Structures

The section gives the minimum sampling requirements based the area of the surfaces of the permitted unit structures and additional sampling locations identified in Permit Section 9.4.7.1.ii.a. LANL will include an alternative sampling method if an alternative decontamination method has been submitted pursuant to Permit Section 9.4.3.1.

9.4.7.1.ii Soil Sampling Grid for Outdoor Units

This section and sub-section 9.4.7.1.ii.a give the minimum sampling requirements based on the functional areas and other specified points for outdoor storage units. The requirement is supported through the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

Section previously identified as 9.4.7.1.ii.b Outdoor Treatment Units.

LANL has excepted the removal of the TA-16 open burn treatment units from this Proposed Permit.

9.4.8 Amendment of the Closure Plan

This section describes the conditions that will require the submittal of a permit modification to NMED to seek changes to the approved closure plans. The requirement is based upon 40 CFR §§ 264.112(c).

9.4.9 Variance to Decontamination Verification Standards

This section lists the requirements to support a request for a variance from the decontamination verification conditions of Permit Section 9.4.4.1.

9.5 CLOSURE CERTIFICATION REPORT TO THE DEPARTMENT

This section requires that the LANL submit a closure certification report to NMED within 60 days after completion of closure. The required contents of the report are listed including closure activity results, certifications, variances from the closure plan, documentation of the structural assessment and records review, sampling and quality assurance results, and waste disposal history. If waste is left in place, a survey plat will be submitted to NMED. These requirements are supported by 40 CFR §§ 264.115 and 116.

LANL has excepted the reference to financial assurance requirements. Please see the discussion regarding financial assurance contained in the exception to Section 2.13.

The basis for this exception will be addressed in testimony by other LANL witnesses.

PART 10: POST-CLOSURE CARE

Part 10 contains the post-closure care conditions for any permitted unit that becomes subject to these requirements. Part 10 is based on the requirements of 40 CFR §§ 264.117 through 264.120.

10.1 POST-CLOSURE CARE

This section discusses the general conditions for post-closure care including the timeframe for the post-closure care period, the basis for monitoring and reporting, waste containment system maintenance, need for NMED approved post-closure care plans, and the related permit modifications. The section is based on the requirements of 40 CFR §264.117 and NMED's omnibus authority under 40 CFR § 270.32(b)(2).

10.1.1 Post-Closure Care Plan

This section lists the content of the post-closure care plan including the nature and frequency of monitoring, maintenance of containment systems and monitoring equipment, identification of contact person, sampling and analysis, security, inspections, applicable alternative requirements, dates of applicability, and the location of formal records. This section is based on 40 CFR § 264.118(a) through (c).

10.1.2 Amendment of the Post-Closure Care Plan

This section requires that LANL amend the post-closure care plan during the active life of the permitted unit or during the post-closure care period if there are changes in operating plans or design that affect the post-closure care plan, there is a change in the closure date, events occur that affect the approved post-closure care plan, or alternative requirements pursuant to 40 CFR §264.110(c). The conditions in this sections are based on 40 § CFR 264.118(d).

10.1.2 Amendment of Post-Closure Care Plan

No. 4- LANL has excepted this section based upon the inclusion of a "regulated unit" reference. Further discussion of the objection to that term is contained at Section 11.2.1.

10.2 NOTICES AND CERTIFICATIONS

10.2.1 Notification Requirements

This section requires LANL to maintain copies of any documentation submitted to the local zoning authority. LANL will submit to NMED records of the type, location, and quantity of disposed waste for each permitted unit with special considerations for waste disposed of before January 12, 1981. The basis for the section is 40 CFR § 264.119(a) and the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

10.2.2 Record Requirements

This section requires LANL to maintain documentation of certification of closure of permitted units. The section lists the information contained in a notation on the LANL deed or another title searchable document that will notify any potential purchaser of the

previous land use. This requirement is supported by 40 CFR §264.119(b) and the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

10.2.3 Completion of Post-Closure Requirements

This section requires that a certification that post-closure care was performed in accordance with the post-closure care plan with supporting documentation be submitted to NMED within 60 days after completion of post-closure care. This requirement is based on 40 CFR § 264.120 and supported through the use of NMED's omnibus authority under 40 CFR § 270.32(b)(2).

PART 11: CORRECTIVE ACTION

11.1 CORRECTIVE ACTION REQUIREMENTS UNDER THE CONSENT ORDER

This section describes the scope of the Compliance Order on Consent (Consent Order) dated March 1, 2005, which requires LANL to conduct corrective action at all SWMUs and AOCs associated with the Laboratory pursuant to 40 CFR §264.101. The Consent Order is an enforceable document pursuant to section 20.4.1.500 NMAC (incorporating 40 CFR § 264.90(f)), and section 20.4.1.900 NMAC (incorporating 40 CFR § 270.1(c)(7)). This section also states that nothing in Part 11 constitutes a change to the Consent Order.

This review of the conditions contained in Part 11 is limited to the major sections. The majority of the language in this Part appears to be taken directly from the conditions of the Consent Order.

The Applicants are in agreement with the stated history and authority for the Consent Order. However, the Applicants are in disagreement with the last sentence in the section. As discussed below, the Proposed Permit does conflict with the Consent Order in two instances. Permit Section 11.2 refers to the four exceptions identified in Section III.W.1 but does not contain the exact language from the Consent Order. In order to be fully consistent with the Consent Order and to avoid any possible confusion, numbers 1 through 4 of Section 11.2 should be revised to include the exact wording from the Consent Order. The second area of conflict and confusion arises in the Proposed Permit's identification of Material Disposal Areas (MDA) G, H and L as "regulated units" under the Proposed Permit. The regulated unit issue is discussed below in Section 11.2.1, and in Section 9.3.

11.2 CORRECTIVE ACTION REQUIREMENTS UNDER THE PERMIT

This section lists the circumstances in which corrective action is conducted under the Permit. This includes a listing of the four categories of units potentially needing corrective action that are not specifically covered by the Consent Order, and therefore,

included in this permit. Corrective action activities under the permit are to be coordinated with corrective action under the Consent Order, including any releases from hazardous waste management units that commingle with releases originating from other sources. The section goes on to reference the tables in the permit that define the SWMUs, AOCs, and hazardous waste management units and their status (Subsection 11.2.1).

The Permittees agree that the procedures contained in this Part of the Proposed Permit and those in the Consent Order should be coordinated. The Applicants accept the majority of the conditions contained in Part 11 because the facility has been involved in these procedures since the implementation of the Consent Order, has experience with the requirements, is committed to the successful cleanup goal of the document, and believes the regulatory authority is appropriate. Additionally, the Applicants support the potential use of the alternative closure standards of 40 CFR §264.110(c), which may allow the consolidation of remedies for closure and corrective action at sites where this will result in more comprehensive and efficient procedures for the final cleanup and further monitoring needs.

The Applicants excepted the language of the conditions in Item Nos. 1 to 4. because the language in the Proposed Permit is not consistent with the Consent Order at Section III.W.1. This section should incorporate the Consent Order language by reference or include it verbatim.

Page 111, lines 14-23, substitute the following for the language in the revised draft Permit:

- (1) new releases of hazardous waste or hazardous constituents from operating units at the Facility;
- (2) the closure or post-closure care requirements of 20.4.1.500 NMAC (incorporating 40 CFR 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 [Table K-2 in the draft permit];and
- (4) any releases of hazardous waste or hazardous constituents that occur after the date on which the Consent Order terminates.

Subsection 11.2.1 Identification of SWMUs and AOCs Requiring Corrective Action

The Proposed Permit identifies three categories of permitted units at the facility, including "regulated units" (Section 9.1). The regulated units are identified as "material disposal areas G, H, L" in Table J-1 of Attachment J. NMED's stated position in the Fact Sheet of July 6, 2009 is that all the land area contained within the boundaries of G, H, and L at TA-54 represent three regulated units. The term "regulated unit" is used throughout the revised draft Permit and is excepted by the Applicants in Sections 9.3, 10.1.2, 11.3.1, 11.3.1.2, and Table J-1 of Attachment J of this permit. The Applicants

oppose the designation of the entirety of "material disposal areas G, H, I." as regulated units because it is inconsistent with the history of the facility and the 2005 Compliance Order on Consent (Consent Order).

40 CFR §264.90 defines regulated units as a "surface impoundment, waste pile, and land treatment unit or landfill that receives hazardous waste after July 26, 1982." The included date is the authorization date for hazardous waste placement restrictions and would also correspond with the mixed waste authorization date of July 25, 1990 for units that received mixed waste for disposal. This is significant because these dates represent a dividing line between units that qualify as hazardous waste management units and would need to be permitted and those units that are subject to the corrective action requirements under HSWA. Units that were operated and became inactive prior to the authorization dates are subject to the corrective action program and Consent Order and units that received waste after that date are subject to the closure requirements of the proposed permit.

The LANL SWMU report (LANL, 1990), required by EPA, and Module VIII to the current RCRA Permit, identified the TA-54 units that received hazardous waste before 1982 and mixed waste before 1990 as solid waste management units subject to corrective action. These units were listed as discrete disposal pits, surface impoundments, and shafts and have been consistently identified in corrective action documents since the SWMU report. At Area G, these include SWMUs 54-013(b), 54-014 (b,c,d), 54-015(k), and 54-017 through 20. At Area H, these are SWMU 54-004 and at Area L 54-006 (See Table K-1 of this permit). These units are identified as Material Disposal Areas (MDAs) under the corrective action program documents, including the Consent Order and the table in this Proposed Permit. Each material disposal area listed in the corrective action documents is made up of all the associated SWMUs and AOCs in that area. For example, MDA G consists of all the subsurface SWMUs and AOCs at Area G. Extensive requirements for these areas are included in the Consent Order under this designation (e.g., Section IV.C.1.c, MDA G Investigation).

In addition, the Consent Order specifically required that all the corrective action requirements for the SWMUs and AOCs be removed from the current Permit at Module VIII as they were already regulated under the Consent Order as a separate enforceable document (see Section III.W.3.a). LANL submitted that permit modification to NMED in July 2005 (LANL, 2005) pursuant to that requirement. Corrective action for the SWMUs in the MDAs is to be completed under the Consent Order.

Therefore, there is a conflict between these sections of the Proposed Permit and the Consent Order. By its terms, the Consent Order is the "sole enforceable document" for corrective action at SWMUs and AOCs. (Consent Order Section III.W). The corrective action program documentation, including the Consent Order, distinguished between the hazardous waste management units and SWMUs and AOCs based on the date they received waste. The Proposed Permit uses the same terminology for everything within the boundary of the areas and does not take into account the different regulatory authorities but identifies the Consent Order as the instrument for corrective action.

The Applicants agree that the use of the Consent Order for alternative closure purposes is appropriate and potentially more efficient for final remedy of the cleanup at TA-54 but the regulatory scheme being set up in the Proposed Permit is confusing and conflicts with the Consent Order. The units identified as "MDAs G, H, and L" that are included in the Proposed Permit, and designated as the regulated units, are already regulated by the Consent Order.

The investigation and final remedy will encompass all the SWMUs and AOCs in G, H and L and, under the alternative closure, will also include the pits, shafts and surface impoundments subject to this permit. The final remedy for the combined units using alternative closure requirements will be protective of human health and the environment. The criteria to be used to determine that that condition is met are the same because the cleanup levels in the Proposed Permit and the Consent Order are identical. This Part of the Proposed Permit specifically references the Consent Order requirements. Public access to decisions and input provisions will be sought for the final remedy selection at the TA-54 areas so this issue will not be neglected.

Specifically, corrective action at these sites is being conducted pursuant to the Consent Order, which meets the statutory and regulatory requirements for 1) corrective action under RCRA for releases of hazardous waste or hazardous waste constituents; 2) corrective action for releases to groundwater; and 3) groundwater monitoring, groundwater characterization and groundwater corrective action requirements for regulated units under 40 CFR Subpart F, and 4) additional groundwater information required in RCRA Part B permit applications. (Consent Order Section III.A). The Consent Order requires LANL to submit a Corrective Measures Implementation Plan, which will be equivalent to a closure plan under the RCRA regulations and Part 9 of the revised draft Permit.

In addition, there are several pits at G that are used for disposal of radioactive low-level waste that do not contain hazardous waste. These disposal practices are subject to DOE Order 435-1, "*Radioactive Waste Management*" and not covered by this permit. By defining all of G as the regulated unit, the Proposed Permit includes units for which it has no authorization.

11.2.1 Identification of SWMUs and AOCs Requiring Corrective Action

This section addresses SWMUs and AOCs and there is no reason to reference Table J-1.

Delete lines 13-15:

~~Attachment J, Table J-1 (Active Portion of the Facility) includes lists of hazardous waste management units at the Facility and their status (e.g., interim status, permitted operating, closed) of each unit.~~

11.3 GENERAL CONDITIONS

This section addresses groundwater monitoring conditions for those permitted units that require it based on the use of 40 CFR § 264.90(a)(2). These include how monitoring will be conducted, notifications for detections of contaminants, notices of detections that exceed cleanup levels, periodic monitoring reports, notices of releases beyond the Facility boundary, notices of newly discovered releases, notices of any field sampling activities related to corrective action at permitted units to allow coordinating the collection of split samples, and records of monitoring data.

The section specifies that groundwater monitoring for the applicable units shall be coordinated with groundwater monitoring conducted under the Consent Order. It states that fulfilling the groundwater monitoring requirements of the Consent Order will meet the groundwater monitoring requirements of 40 CFR §§ 264.90 through 264.100 while the Consent Order is in effect. The section includes an e-mail notice for public information in accordance with Section 1.13 of this permit that will be required for any notification of contaminant detection as described in Section 11.3.1.1.

11.3.1 Groundwater Monitoring

The Applicants have excepted this section based upon the inclusion of a “regulated unit” reference. Further discussion of the objection to that term is contained at Section 11.2.1.

If Table J-1 is revised as proposed by the Applicants, the Applicants will no longer have exceptions to this section.

11.3.1.2 Source Identification

LANL has excepted this section based upon the inclusion of a “regulated unit” reference. Further discussion of the objection to that term is contained at Section 11.2.1.

If Table J-1 is revised as proposed by the Applicants, the Applicants will no longer have exceptions to this section.

11.4 CLEANUP LEVELS

This section sets the cleanup levels for various media to determine the success of corrective actions and the need for additional activities. The section also contains certain reporting requirements. The overall human health target risk levels are 10⁻⁵ for carcinogens and a Hazard Index of 1.0 for non-carcinogens. The levels are specified for groundwater, surface water, soil and sediments. The section additionally sets cleanup levels for perchlorates in groundwater and PCBs in soil. The section is equivalent to Section VIII of the Consent Order. The section includes an e-mail notice for public information in accordance with Section 1.13 of this permit that will be required for any proposal to NMED of groundwater cleanup levels based on risk assessment as described in Section 11.4.1.

11.5 ECOLOGICAL RISK EVALUATION

This Section sets the technical requirements for any ecological risk assessments used to support corrective action. The technical documents containing these standards are listed and their use described as appropriate.

11.6 VARIANCE FROM CLEANUP LEVELS

This section discusses the options available to support a request for a variance from a particular cleanup level. This includes the ability to seek an alternative abatement standard pursuant to the WQCC regulations, 20.6.2.4103.E and F where a case may be presented to NMED that shows the attainment of a cleanup level is impracticable. This section is equivalent to Section VIII.E of the Consent Order. The section includes an e-mail notice for public information in accordance with Section 1.13 of this permit that will be required for any proposal to NMED of a variance to cleanup levels as described in Section 11.6.2.

11.7 PERMIT MODIFICATION FOR CORRECTIVE ACTION COMPLETE

This Section states that LANL may request to move a unit from the listing of "corrective action required" to "corrective action complete" when a SWMU or AOC is classified as Corrective Action Complete with Controls by using a Class 3 permit modification. A plan for long-term maintenance and monitoring shall be submitted as part of the permit modification to include maintenance of engineered controls, maintenance of access controls, or continued environmental monitoring of media. All long-term maintenance and monitoring plans will be included in the Permit at Attachment O.

11.8 CORRECTIVE ACTION PROCEDURES

This section describes the procedures for conducting corrective action at sites where a release has occurred from a permitted unit. The procedures are listed through the subsections proceeding from the initial assessment of newly discovered releases through the completion of corrective actions at the site. The procedures include the requirements to file the various documents necessary to demonstrate progress in remediation, the standards to evaluate and address corrective actions and the contents of such reports. These include release assessment reports, interim measures to quickly address immediate threats, corrective action investigations of sites and histories, corrective measures evaluations, corrective measure implementation of the selected remedy, remedy completion, and accelerated cleanup processes. The section includes e-mail notices for public information in accordance with Section 1.13 of this permit that will be required for NMED initiated interim measures (Section 11.8.2.1), LANL initiated interim measures (Section 11.8.2.2), emergency interim measures (Section 11.8.3), or the use of accelerated cleanup processes (Section 11.8.9).

11.8.10 Well Completion Report

This new section in the Proposed Permit requires that LANL provide well completion reports for intermediate-perched and regional aquifer wells within 30 days of the well casing being set. Further requirements for completion of the reports are included.

11.9 APPROVAL OF SUBMITTALS

This section states that all documents will be reviewed and approved as described in Permit Section 1.9.18.

11.10 METHODS AND PROCEDURES

This section specifies the requirements of work plans, reports and submittals used in conducting corrective action. Minimum requirements for environmental investigation and sampling are described. These include requirements to summarize the procedures used in each report, describe the investigation sampling and analytical methods, provide drilling and groundwater sampling methodologies, requirements for laboratory analysis, and methods for risk assessments.

11.11 MONITORING WELL CONSTRUCTION REQUIREMENTS

This section discusses the allowable procedures for installation, management, and abandonment of monitoring wells.

11.12 REPORTING REQUIREMENTS

This section outlines the requirements for reports on the conduct of investigations, corrective action, monitoring, risk assessment, and corrective measures evaluation.

ATTACHMENTS

The following Attachments contained in the Proposed Permit are relevant to the closure, post-closure, and corrective action discussion of this Part of this testimony and are reviewed here. They include Attachment G (*Closure Plans*), Attachment H (*Post-Closure Plans, (Reserved)*), Attachment K (*Listing of SWMUs and AOCs*), and Attachment O (*Long-Term Maintenance and Monitoring Plans (Reserved)*).

Attachment G Closure Plans

This attachment contains the closure plans for all the permitted units included in this permit. Closure plans are required at 40 CFR § 270.14(b)(13) to be included in a Part B permit application and must address the closure performance standards at § 264.111, the specific contents at § 264.112(b), the schedule at § 264.113, the container specific requirements at §264.178, and the tank system specific requirements at § 264.197.

LANL has excepted the removal of the open burning unit closure plans as drafted in the July 7, 2009 revised draft permit (Attachments G.2 and G.3).

Additionally, the Closure Schedule Tables within the closure plans conflict with the text in Section 9.4.1 which state "The beginning of closure is marked by initiating removal of waste from permitted unit." Schedule tables in the closure plans list the "Final receipt of waste" as day 0. LANL proposes that the tables be revised to include the language from Section 9.4.1.

There is a new issue associated with new language added to Attachment G.16 "*Technical Area 54 West, Building 38, Indoor Container Storage Unit Closure Plan.*" Page 2, second paragraph contains a discussion regarding the unit description for the outside loading dock at TA-54 West. There is a description of a truck loading ramp included which is no longer there. The text states: "A truck ramp, which is not part of the loading dock CSA, runs perpendicular to the loading dock platform. At the bottom of the truck ramp is a 38-inch-square grate covering a drainage culvert. A slide gate valve is closed to seal the culvert whenever potential liquid bearing waste container are loaded or unloaded at the loading dock." These sentences should be deleted.

The truck loading ramp being described is no longer present at the facility. It was filled in to provide a base for the existing empty drum storage area under the canopy shown in Figure G.17 (Structure TA-54-462 Canopy; the structure is not associated with waste management activities). The text that was placed in the closure plan was available from the facility description in Attachment G, *Container Management*, in the LANL TA-54 Part B Permit Application of January, 1999 (LANL, 1999a). This facility description was modified to reflect the new configuration in Revision 1.0 to that document submitted in December 1999 (LANL, 1999b).

Attachment H Post-Closure Plans (Reserved)

There are currently no LANL hazardous waste management units in post-closure care. Future post-closure plans containing the information specified at 40 CFR §§ 270.28 and 264.117 through 120 will be included here.

Attachment K Listing of SWMUs and AOCs

Attachment K contains lists for three categories of SWMUs and AOCs at LANL based on their status in the corrective action program. These include: (a) those requiring corrective action, (b) those where corrective action is complete with controls, and (c) those where corrective action is complete without controls.

Attachment O Long-term Maintenance and Monitoring Plans (reserved)

Attachment O is reserved for long-term maintenance and monitoring plans for SWMUs and AOCs with controls in place after corrective action is complete. The table is based on the requirements of Section 11.7.

VI. References and Reviewed Documents

Comments received from interested members of the public

EPA, 1994 Waste Analysis at Facilities That Generate, Treat, Store, and Dispose of Hazardous Wastes—A Guidance Manual; U.S. Environmental Protection Agency, Research Triangle Park, NC, 1994; EPA-OSWER 9938.4-03

LANL, 1985 Closure and Post Closure Plans for TA54-Area G Landfill at Los Alamos National Laboratory, Los Alamos National Laboratory, (Administrative Record (AR): 11214), September 1985.

LANL, 1990 Revised Solid Waste Management Units Report, Los Alamos National Laboratory, (AR:15098), November, 1990.

LANL, 1999a Los Alamos National Laboratory Technical Area 54 Part B Permit Renewal Application, Los Alamos National Laboratory (AR:8878, 11430), January 1999.

LANL, 1999b Los Alamos National Laboratory Technical Area 54 Part B Permit Renewal Application, Los Alamos National Laboratory, Revision 1.0 (AR:11453), December 1999.

LANL, 2002 Closure/Post-Closure Plan for the Technical Area 54 Area G Landfill (Pit 29 and Shaft 124), Los Alamos National Laboratory (AR:11730), April, 2002.

LANL, 2002 Closure/Post-Closure Plan for the Technical Area 54 Area L Landfill (Shafts 1, 13-17, and 19-34 and Impoundments B and D), Los Alamos National Laboratory (AR:11730), April 2002.

LANL, 2005 Permit Modification Request to Remove Corrective Action Requirements, Los Alamos National Laboratory, LA-UR-05-5565, (AR:16271) July, 2005.

LANL, 2007 Closure/Post-Closure Plan for the Technical Area 54 Area G Landfill (Pit 29 and Shaft 124), Los Alamos National Laboratory (AR:11980), March 2007.

LANL, 2007 Closure/Post-Closure Plan for the Technical Area 54 Area L Landfill (Shafts 1, 13-17, and 19-34 and Impoundments B and D), Los Alamos National Laboratory (AR:11980), March 2007.

LANL, 2009 Los Alamos National Laboratory General Part A Permit Application, Revision 6.0, Los Alamos National Laboratory (AR:31720), June, 2009.

NMED, 1989 Los Alamos National Laboratory Hazardous Waste Facility Permit, EPA ID No. 0890010515-1, (AR:8662), November 8, 1989.

NMED, 2005 Compliance Order on Consent, New Mexico Environment Department, (AR:16255), March 1, 2005.

NMED, 2007a Settlement Agreement and Stipulated Final Order, New Mexico Environment Department, HWB No. 07-10-(CO), April 10, 2007.

NMED, 2007b Los Alamos National Laboratory Draft Permit, Hazardous Waste Bureau-New Mexico Environment Department (NMED-HWB LANL webpage), August 27, 2007.

NMED, 2009 Fact Sheet: "Intent to Issue a Hazardous Waste Facility Permit Under the New Mexico Hazardous Waste Act, Los Alamos National Laboratory (LANL), Los Alamos County, New Mexico. (NMED-HWB LANL webpage) July 6, 2009.

NMED, 2009 Los Alamos National Laboratory Revised Draft Permit, Hazardous Waste Bureau-New Mexico Environment Department (NMED-HWB LANL webpage), July 6, 2009.

NMED, 2010 Los Alamos National Laboratory Proposed Permit, Hazardous Waste Bureau-New Mexico Environment Department (NMED-HWB LANL webpage), January 20, 2010.

FURTHER AFFIANT SAYETH NAUGHT

Gian Bacigalupa
Gian Bacigalupa

STATE OF NEW MEXICO)
) ss.
COUNTY OF LOS ALAMOS)

SUBSCRIBED, SWORN TO AND ACKNOWLEDGED before me this 18th day of
March, 2010

Joseph W. Lopez
NOTARY PUBLIC

My Commission Expires:

02/22/2012

STATE OF NEW MEXICO
ENVIRONMENT DEPARTMENT



NEW MEXICO ENVIRONMENT)
DEPARTMENT,)
)
Complainant,)
)
v.)
)
UNITED STATES DEPARTMENT)
OF ENERGY and)
LOS ALAMOS NATIONAL)
SECURITY, LLC,)
)
Respondents.)
_____)

NO. HWB ~~07-10~~ 07-10(CO)

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SETTLEMENT AGREEMENT AND STIPULATED FINAL ORDER

This Settlement Agreement and Stipulated Final Order (“Stipulated Order”) is made by and among the New Mexico Environment Department (the “Department”), and the Respondents, the United States Department of Energy (“DOE”) and Los Alamos National Security, LLC (“LANS”) (collectively the “Parties”). The Parties enter into this Stipulated Order to resolve alleged violations of the New Mexico Hazardous Waste Act, NMSA 1978, §§ 74-4-1 to 74-4-14 (the “Act”), the New Mexico Hazardous Waste Management Regulations, 20.4.1 NMAC, and the Respondents’ Hazardous Waste Facility Permit (“Permit”) for the Los Alamos National Laboratory in Los Alamos County, New Mexico (the “Laboratory”). The Department alleges that DOE and LANS, as successor to the Regents of the University of California (“UC”), violated the Hazardous Waste Management Regulations and the Permit by improperly storing hazardous remediation waste generated by the removal of sumps at the Laboratory.

I. BACKGROUND

A. PARTIES

1. The Department is an agency of the executive branch of the State of New Mexico, created pursuant to NMSA 1978, § 9-7A-6(B)(3) (1991). The Department is authorized to administer and enforce the HWA, including assessing civil penalties for violations thereof.

2. The Respondent DOE is a Department of the United States government. It is the owner and a co-operator of the Laboratory.

3. The Respondent LANS is a limited liability company organized under the laws of the State of Delaware. It is a co-operator of the Laboratory pursuant to a contract with DOE, effective June 1, 2006. Prior to June 1, 2006, UC was the co-operator of the Laboratory pursuant to a contract with DOE. LANS is the successor to UC.

B. HISTORY

4. The Laboratory is a national research laboratory covering approximately 40 square miles located on the Pajarito Plateau in Los Alamos County, New Mexico. Its operations include nuclear weapons design and testing, high explosives research, development, fabrication, and testing, chemical and material science research, electrical research and development, laser research and development, and photographic processing.

5. The Laboratory operations generate a variety of hazardous wastes and other solid wastes. The Laboratory also treats and stores hazardous waste, under the Hazardous Waste Facility Permit No. NM0890010515-1, issued by the Department.

6. Until it was demolished in January and February 2005, DOE and UC operated an explosives synthesis building in Technical Area 16 at the Laboratory, the TA-16-340 Building

Complex. The TA-16-340 Building Complex included two solid waste management units ("SWMU's"), SWMU 16-003(o) and SWMU 16-029(f). The first unit, SWMU 16-003(o), consisted of six concrete sumps and the outfall from Building 16-340. The second unit, SWMU 16-029(f), consisted of one concrete sump and a connected drain line.

7. During the operation of the TA-16-340 Building Complex, DOE and UC managed several listed and characteristic hazardous wastes at SWMU 16-003(o) and SWMU 16-029(f), including listed spent non-halogenated solvents (F005), reactive wastes (D003), waste containing toxic levels of barium (D005), and wastes containing toxic levels of 2,4-dinitrotoluene (D030).

8. In January and February 2005, DOE and UC conducted a demolition of the TA-16-340 Building Complex. Concurrently, DOE and UC conducted a remediation of SWMU 16-003(o) and SWMU 16-029(f) by excavating and removing the sumps and drain lines. DOE and UC placed the rubble from the demolition, together with the rubble from the remediation of the sumps on the ground adjacent to the demolition site. The total volume of rubble was approximately 8,000 cubic yards, of which approximately 20 cubic yards consisted of rubble from the sump remediation. Between February 1, 2005 and February 15, 2005, DOE and UC moved the rubble to Sigma Mesa at TA-60 and placed it in a pile.

9. On August 31, 2005, DOE and UC notified the Department that rubble from the TA-16-340 Building Complex demolition had been mixed with hazardous remediation waste from SWMU 16-003(o) and SWMU 16-029(f) and moved to Sigma Mesa.

10. During September 2005, DOE and UC conducted sampling of the rubble at Sigma Mesa to identify and quantify the hazardous constituents present.

11. Based on the results of the sampling, in a meeting on November 17, 2005, DOE and UC orally asked the Department to determine, under section 20.4.1.200 NMAC (incorporating 40 C.F.R. § 261.3(f)(2)), that given the extent of the residual contamination in the debris in the pile at Sigma Mesa, the debris was no longer contaminated with hazardous waste and did not need to be managed as hazardous waste. DOE and UC provided sampling and analytical data to the Department in support of the request.

12. On December 9, 2005, DOE and UC provided to the Department indexed sample data; an aerial photograph of the concrete debris at Sigma Mesa; a contour map outlining the location of the debris and indicating the sample grid and sampling locations in the debris; and a copy of the Data Quality Objectives developed for the September 2005 sampling event. On March 13, 2006, in response to a request by the Department, DOE and UC submitted to the Department for approval the engineering controls plan. On April 18, 2006, DOE and UC provided the Department additional information, including a description of the management of the remediation waste and the results of laboratory analysis of the waste.

13. On August 18, 2006, DOE and LANS, the new co-operator, submitted to the Department a written request for a determination under section 20.4.1.200 NMAC (incorporating 40 C.F.R. § 261.3(f)(2)) that given the extent of the residual contamination in the debris in the waste pile at Sigma Mesa, the debris was no longer contaminated with hazardous waste and did not need to be managed as hazardous waste.

14. On October 25, 2006, the Department sent a notice of violation letter ("NOV") to DOE and LANS. The NOV alleges two violations of the New Mexico Hazardous Waste Management Regulations and the Hazardous Waste Facility Permit:

a. The Respondents stored listed hazardous remediation waste in a staging pile at the TA-16-340 Building Complex from February 1, 2005 through February 15, 2005 without obtaining from the Department a staging pile designation subject to conditions, in violation of section 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.554(b)) of the regulations.

b. The Respondents placed listed hazardous remediation waste in a waste pile on Sigma Mesa without treating the waste to meet the standards for land disposal and without a permit for the waste pile, in violation of sections 20.4.1.800 NMAC (incorporating 40 C.F.R. part 268) and 20.4.1.900 NMAC (incorporating 40 C.F.R. § 270.10) of the regulations and section VIII.B.4(a) of the Permit.

15. On October 25, 2006, the Department sent a separate letter to DOE and LANS proposing to settle the Department's claims for civil penalties resulting from the violations. The letter included a civil penalty calculation.

16. The Respondents do not admit the allegations in Paragraph 14 above.

17. On December 8, 2006, and on February 13, 2007, representatives of the Department and the Respondents met in Santa Fe to attempt to reach a settlement of the Department's claims for civil penalties for the alleged violations.

18. The Parties enter into this Stipulated Order to settle and completely resolve the Department's claims for the violations alleged in Paragraph 14 above, and to avoid further expense and litigation.

II. CIVIL PENALTY

19. The Respondents shall pay to the State of New Mexico a civil penalty of one hundred and nineteen thousand, eight hundred and forty-five dollars (\$119,845.00) to resolve their liability

for the violations alleged in Paragraph 14 above. The Respondents shall pay the civil penalty to the State of New Mexico within thirty (30) days after the effective date of this Stipulated Order. Payment shall be by certified check or other guaranteed negotiable instrument payable to the New Mexico Hazardous Waste Emergency Fund, and shall be sent to the Department at the following address:

New Mexico Environment Department
Hazardous Waste Bureau
c/o Mr. James Bearzi, Bureau Chief
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

A copy of the transmittal letter shall be sent to counsel for the Department.

20. If the Respondents fail to make timely and complete payment, the Respondents shall pay interest on the outstanding balance at the rate established for judgments and decrees under NMSA 1978, § 56-8-4.

III. NOTICE OF DEMOLITION ACTIVITIES

21. The Respondents shall provide the Department with the following information:

a. Within thirty (30) days after the effective date of this Stipulated Order, the Respondents shall submit to the Department a list of buildings, and other fixed structures, that may contain hazardous material scheduled to be demolished during the remainder of federal fiscal year 2007 (April 1, 2007 through September 30, 2007).

b. On or before September 30 of each year from 2007 until the effective date of the final renewed hazardous waste facility permit for the Laboratory at which time the permit conditions will control, the Respondents shall submit to the Department a list of buildings and other

fixed structures that may contain hazardous material scheduled to be demolished in the following federal fiscal year (October 1 through September 30).

c. On or before the last day of each quarter (December 31, March 30, and June 30), the Respondents shall update the list to include any additional buildings and fixed structures that may contain hazardous material scheduled for demolition, or shall notify the Department in writing that no such additional demolitions have been scheduled.

d. Each list shall be presented in the form of a table with additional information attached, as available. The table shall contain the following general information for each building or fixed structure that may contain hazardous material to be demolished, to the extent it is available at the time it is submitted: (1) the Technical Area (TA) and building number; (2) a brief statement of current and historic uses of the building or fixed structure; (3) the approximate dates of operation of the building or structure; (4) a list of any solid waste management units (SWMU) or areas of concern (AOC) within fifty (50) feet of the footprint of the building or fixed structure; (5) the categories (e.g., chemical residues, RCRA metals, asbestos, high explosives residues) of potential wastes expected to be present in the building or fixed structure; (6) the date, if available, or the quarter in which the demolition is scheduled to begin or anticipated to begin; and (7) any buildings or fixed structures identified in the previous fiscal year that were not demolished. The attachment shall describe the processes or conditions that may result in the presence of hazardous material in each building or fixed structure. The list will not identify any maintenance or renovation activities, or any trailer, transportable building, or building which consists of fabric supported by a frame, or any building that will be demolished pursuant to closure or corrective action activities under the HWA, as the

Department approves those activities pursuant to the Hazardous Waste Facility Permit or the Administrative Order on Consent dated March 1, 2005.

e. Based on the list, the Department may identify in writing those buildings or fixed structures for which it requires notice. For each identified building and fixed structure, the Respondents shall submit to the Department a notice of the commencement of demolition at least 30 days prior to the start of such demolition.

f. For each building and fixed structure identified under subparagraph 21.e above, if a demolition completion report is prepared, the Respondents shall provide to the Department a copy of the report within 30 days after such final report is written.

22. The scope and schedule of demolition activities identified in the list and table provided to the Department under Paragraph 21 above are not subject to approval by the Department, unless otherwise provided by law including a regulation, permit, or order.

23. By agreeing to provide the Department with the information described in Paragraph 21, the Respondents do not concede that the Department has the authority to include such requirements in the renewed hazardous waste facility permit, and they reserve the right to challenge any such requirements.

IV. OTHER TERMS AND CONDITIONS

A. ENFORCEMENT

24. Except as expressly provided in Paragraph 25 of Section IV.B (Covenants Not to Sue), the Department reserves the right to take any action, administrative or judicial, civil or criminal, to enforce the requirements of the HWA, the Hazardous Waste Management Regulations, the Hazardous Waste Facility Permit, or this Stipulated Order. In any such action, DOE and LANS

reserve the right to assert any defenses they may have.

B. COVENANTS NOT TO SUE

25. The Department covenants not to sue or take any administrative action against DOE or LANS for the violations of the HWA, the Hazardous Waste Management Regulations, and the Hazardous Waste Facility Permit alleged in Paragraph 14 above, or in the October 25, 2006 NOV. Such covenant applies only to civil liability.

26. DOE and LANS covenant not to sue the State of New Mexico for any claims arising from the October 25, 2006 NOV.

C. LIABILITY

27. The Respondents shall assume all costs and liabilities incurred in performing all obligations under this Stipulated Order. The Department, on its own behalf and on behalf of the State of New Mexico, does not assume any liability for the Respondents' performance of any obligation under this Stipulated Order.

28. The Respondents shall be jointly and severally liable for their obligations under this Stipulated Order.

D. EFFECTIVE DATE

29. This Stipulated Order shall become effective on the date it is approved and signed by the Department Secretary.

E. INTEGRATION

30. This Stipulated Order merges all prior written and oral communications between or among the Parties concerning the subject matter of this Stipulated Order, contains the entire agreement among the Parties, and shall not be modified without the express written agreement of the

Parties.

F. BINDING EFFECT

31. This Stipulated Order shall be binding on the Department and its successor agencies, on DOE and its successor agencies, and on LANS and its successors as operators of the Laboratory.

G. AUTHORITY OF SIGNATORIES

32. Each person executing this Stipulated Order represents that he or she has the authority to bind the Party he or she represents to this Stipulated Order, and such representation shall be legally sufficient evidence of actual or apparent authority to bind such Party to this Stipulated Order.

For the NEW MEXICO ENVIRONMENT DEPARTMENT:

By:  _____ Date: 4-10-07
JON GOLDSTEIN
DIRECTOR
WATER AND WASTE MANAGEMENT DIVISION

For the UNITED STATES DEPARTMENT OF ENERGY:

By:  _____ Date: April 4, 2007
GEORGE J. RAEI
ASSISTANT MANAGER, ENVIRONMENTAL OPERATIONS
LOS ALAMOS SITE OFFICE
NATIONAL NUCLEAR SECURITY ADMINISTRATION

For the LOS ALAMOS NATIONAL SECURITY, LLC:

By: *Richard S. Watkins*

Date: 4 April 2007

RICHARD S. WATKINS
ASSOCIATE DIRECTOR FOR ENVIRONMENT, SAFETY,
HEALTH & QUALITY
LOS ALAMOS NATIONAL SECURITY, LLC
LOS ALAMOS NATIONAL LABORATORY

Pursuant to 20.1.5.601.B NMAC, this Settlement Agreement and Stipulated Final Order, agreed to by the Department and the Respondents the United States Department of Energy and Los Alamos National Security, LLC, is hereby **APPROVED** as a **FINAL ORDER**.

R. Currey
RON CUREY
SECRETARY OF ENVIRONMENT

Date: 4/10/07

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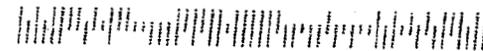
Ellen T. Louderbough
Los Alamos National Security, LLC
1650 Trinity Drive
Building 760
Los Alamos, New Mexico 87544

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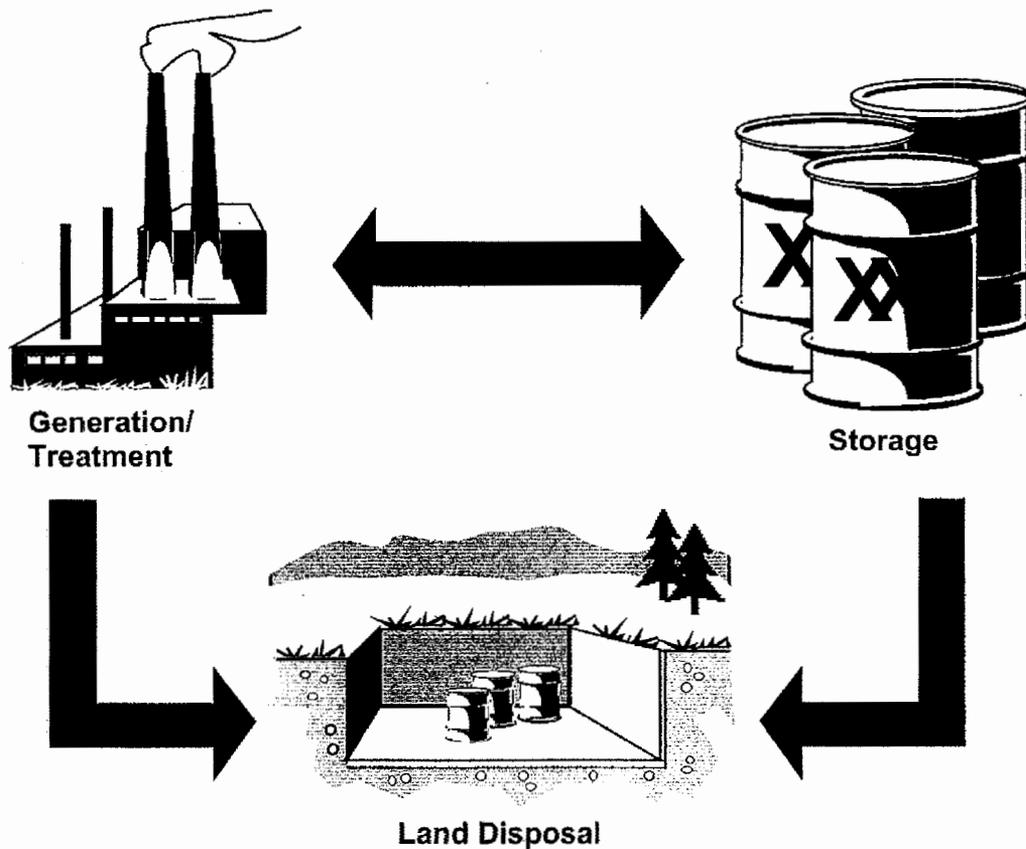
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Waste Analysis At Facilities That Generate, Treat, Store, And Dispose Of Hazardous Wastes

A Guidance Manual



- Procedures to ensure that the waste expected at the off-site TSDF, if applicable, is the waste described in the manifest
- Parameters to be analyzed
- Sampling methods
- Testing and analytical methods
- Frequency for re-evaluating wastes; or frequency of spot check or fingerprint analysis (for off-site TSDFs)
- Acceptance/rejection criteria for each wastestream (for off-site TSDFs).

For generators that are not treating hazardous waste in tanks, containers, and/or containment buildings to meet LDR treatment standards, you need only conduct waste analysis; no formal WAP is required, although 40 CFR §262.40 imposes recordkeeping requirements for generators performing waste analysis.

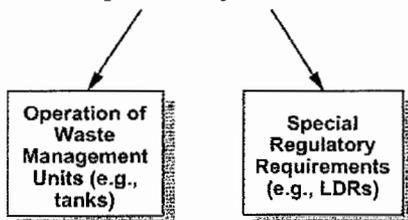
[Note: Part Two of this manual provides a full account of all general waste analysis requirements and guidance on meeting these requirements.]

1.4.2 Specific Waste Analysis Requirements

In addition to the general waste analysis requirements, RCRA also contains waste analysis requirements for specific waste management methods. These requirements are different for permitted facilities and interim status facilities [40 CFR §264.13(b)(6) versus §265.13(b)(6)]. Specific waste analysis requirements apply to the operation of tanks, containers, incinerators, and other specified TSDF units. Specific waste analysis requirements also include the application of special regulatory requirements, such as:

- Managing ignitable, reactive, or incompatible wastes.
- Placing bulk, containerized, or non-containerized liquid hazardous wastes in a landfill. As of May 8, 1985, placement of bulk or non-containerized liquid hazardous wastes or hazardous wastes containing free liquids (whether or not absorbents have been added) in any landfill is prohibited. However, placement of containerized liquid hazardous waste in a landfill is permissible under certain conditions. For example, landfill disposal is allowed when the containerized hazardous waste has been mixed

What Are Specific Waste Analysis Requirements?



with a nonbiodegradable sorbent so that free-standing liquid is no longer observed. Criteria for choosing such a sorbent are outlined in 40 CFR §264.314(e) and §265.314(f).

- Complying with the LDR requirements. For example, EPA ordinarily requires that treatment and disposal facilities do independent corroborative testing (i.e., periodic detailed physical and chemical analysis) on their waste to ensure compliance with LDR treatment standards and prohibitions. Treatment facilities may rely on information provided to them by generators or treaters of the waste; however, EPA clearly states in 55 FR 22669 that "**the restricted waste testing requirement is not superseded by the ability of the facility to rely on information supplied by the generator or treater.**" This preference for corroborative testing, even though it arguably may be redundant, is designed to ensure that the waste is what others have represented it to be (even if the generator also tested the waste or certified that it meets LDR requirements) and provides reinforcement that it will meet LDR treatment standards prior to land disposal.

1.5 How Can You Meet The Waste Analysis Requirements For Your Facility?

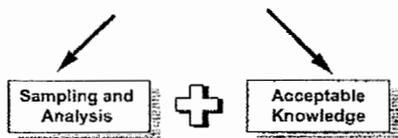
You can meet general and specific waste analysis requirements using several methods or combinations of methods. Wherever feasible, the preferred method to meet the waste analysis requirements is to conduct **sampling and laboratory analysis** because it is more accurate and defensible than other options. (The procedures and equipment for both obtaining and analyzing samples are discussed in Part Two of this manual, and are described in Appendices I and II of 40 CFR Part 261.)

However, generators and TSDFs also can meet waste analysis requirements by applying **acceptable knowledge**. Acceptable knowledge can be used to meet all or part of the waste analysis requirements.

Acceptable knowledge can be broadly defined to include:

- "**Process knowledge**," whereby detailed information on the wastes is obtained from existing published or documented waste analysis data or studies conducted on hazardous wastes generated by processes similar to that which generated the waste. As mentioned previously, EPA lists (i.e., F, K, P, and U lists) certain hazardous

What Are Your Waste Analysis Options Under RCRA?



wastes in 40 CFR Part 261. The K-listed wastes, for example, contain wastes generated from specific sources. Examples of K-listed wastes include:

- K001 -- Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.
- K062 -- Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry.

K-listed wastes, therefore, are identified by comparing the specific process that generated the waste to those processes listed in 40 CFR §261.32 (rather than conducting a chemical/physical analysis of the waste). Similarly, any waste described in the F, P, or U list has already been designated as hazardous by EPA. Therefore, with many listed wastes the application of acceptable knowledge is appropriate because the physical/chemical makeup of the waste is generally well known and consistent from facility to facility.

- **Waste analysis data** obtained from facilities which send wastes off site for treatment, storage, or disposal (e.g., generators).
- **The facility's records of analysis performed before the effective date of RCRA regulations.** While seemingly attractive because of the potential savings associated with using existing information (such as published data), the facility must ensure that this information is current and accurate.

1.5.1 Option One: Selecting Sampling And Analysis

Compliance Is Best Ensured Through Sampling and Analysis

Because RCRA is a self-implementing program, the burden is on you, the individual facility owner/operator, to demonstrate that you are operating in compliance with all applicable regulations. Any violations that occur at your facility, regardless of any good faith effort you may have made to obtain information, are your facility's sole responsibility. **For example, if you own/operate a TSD, accept waste from an off-site facility, and rely on the information provided by the generator or TSD sending you waste, your facility is still responsible for accurately identifying/classifying the waste.**

When Might Full-Scale Analysis Be Used?

Therefore, to ensure compliance with RCRA you should conduct a full-scale, or under certain circumstances an abbreviated-scale, sampling, and laboratory testing program for all wastes prior to managing the wastes. **Full-scale analysis** (e.g., EPA's SW-846 methods or equivalent) may be necessary when:

- A generator begins a new process or changes an existing process
- Wastes are received by a facility for the first time
- A generator has not provided appropriate laboratory information to an off-site TSDF
- An off-site TSDF has reason to suspect that the wastes shipped were not accurately identified by the generator
- EPA changes RCRA waste identification/classification rules.

When Might Fingerprint Analysis Be Used?

Abbreviated waste analysis, often referred to as "**fingerprint analysis**," is conducted generally for parameters (e.g., specific gravity, color, flash point, presence of more than one phase, pH, halogen content, cyanide content, percent water) that will give information that can be used to help verify that the waste generated, or received by an off-site TSDF, matches the expected characteristics for that waste. For example, at an off-site TSDF, fingerprint analysis can be used to indicate that the waste received matches the description on the manifest, and that the waste matches the waste type that the facility has agreed to accept. Because the owner/operator of a TSDF already knows the detailed chemical and physical properties of a waste, the appropriate fingerprint or spot check parameters can be chosen easily, since the purpose of the fingerprint or spot check is only to verify that each waste arriving at the gate of the TSDF is the actual waste expected. The number and character of fingerprint parameters and the criteria for acceptance/rejection of the waste will be discussed in Part Two of this manual.

1.5.2 Option Two: Selecting Acceptable Knowledge

When Might Acceptable Knowledge Be Used?

Generators and TSDFs may use acceptable knowledge alone or in conjunction with sampling and laboratory analysis. As previously stated, an off-site TSDF is not relieved of its responsibility to obtain accurate waste analysis data despite the submission of erroneous information provided to the TSDF by the generator. As discussed briefly on the previous page, however, there are situa

tions where it may be appropriate to apply acceptable knowledge, including:

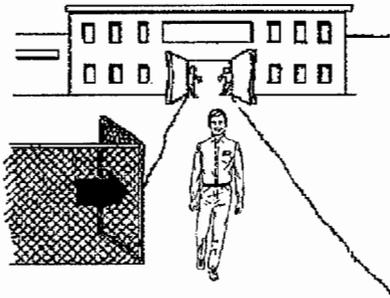
- Hazardous constituents in wastes from specific processes are well documented, such as with the F-listed and K-listed wastes.
- Wastes are discarded unused commercial chemical products, reagents or chemicals of known physical, and chemical constituents. Several of these fall into the P-listed and U-listed categories (40 CFR §261.33).
- Health and safety risks to personnel would not justify sampling and analysis (e.g., radioactive mixed waste).
- Physical nature of the waste does not lend itself to taking a laboratory sample. For example, to conduct waste analysis of surface-contaminated construction debris, such as steel girders, piping, and linoleum, it may be necessary to use a combination of laboratory analysis and process knowledge. The process knowledge would be applied to identifying the composition of the base construction materials (e.g., steel). One could then collect surface "wipe" samples and conduct laboratory analysis to determine the representative concentrations of any contaminants present. If the base materials are porous, such as gypsum, the contamination could be determined by conducting analysis on the extracts obtained from a solvent wash.

Acceptable knowledge is not an appropriate substitute for fingerprint or spot check procedures except in the unique case when the TSDF is accepting properly manifested waste from another site owned by the same company.

Why Document Acceptable Knowledge?

If you use acceptable knowledge in addition to or in place of sampling and analysis, EPA, in enforcement cases, looks for documentation that clearly demonstrates that the information relied upon is sufficient to identify the waste accurately and completely. Documenting both the acceptable knowledge (e.g., knowledge of the process that generated the F-listed or K-listed waste) as well as any analytical data is essential for identifying constituents applicable to LDR standards.

How Can You Verify Data Supplied By A Generator?



Why Is It Critical To Re-Evaluate Your Use Of Acceptable Knowledge Periodically?

Special Concerns When Using Acceptable Knowledge

There are several special concerns that you should be aware of if you rely on acceptable knowledge to manage your wastes. **First**, if you own/operate an off-site TSD facility and rely, on information supplied by a generator, you should, if possible, become thoroughly familiar with the generator's processes to verify the integrity of the data. This can be accomplished by (1) conducting facility visits of generators and/or (2) obtaining split samples for confirmatory analysis. **Second**, if you use process descriptions and existing published or documented data as acceptable knowledge, you should scrutinize carefully whether:

- There are any differences between the process in the documented data and your process
- The published or documented data that were used are current.

These issues are of concern, for example, because EPA recently revised the criteria that qualify a waste as a hazardous waste due to being characteristically toxic. Not only were the number of constituents deemed hazardous increased, but also the prescribed test method was modified [i.e., the TCLP replaced the Extraction Procedure Toxicity Test (EP TOX Test)].

Therefore, if you have been using acceptable knowledge you need to review your waste analysis or waste characterization data to determine if you manage any solid wastes that are now regulated as hazardous wastes. In addition, you need to determine if your existing data is sufficient to identify any new constituent concentration limitations (i.e., demonstrate compliance with LDR requirements). The following examples highlight these concerns:

- A paint manufacturer used process knowledge to identify the hazardous waste constituents of six paint colors. During an EPA audit, the company produced the waste analysis documents that had been generated years earlier and re-evaluated periodically. EPA noted that the company now manufactured eight colors. Through testing, EPA discovered that one of the paints required barium as a coloring agent. Barium is a metal that can render a waste characteristically toxic (by the TCLP) if found in concentrations greater than 100 parts per million (100 ppm) per 40 CFR §261.24. This manufacturer was found to be out of compliance because the level of barium was greater than the maximum concentration for the toxicity charac-

teristic, and the manufacturer's waste analysis data was inaccurate.

- At a pulp paper mill, wastewater effluent became subject to RCRA after the promulgation of the new toxicity characteristic (TC) rule due to the presence of chloroforms generated by the bleaching process in concentrations greater than 6 ppm in an extract of the waste. Chloroform was not regulated prior to the TC rule.
- EPA recently promulgated an interim final rule on ignitable and corrosive wastes requiring D001 and D002 wastes that are not managed in Clean Water Act, Clean Water Act-equivalent, or Class I Safe Drinking Water Act systems to be treated for underlying hazardous constituents (i.e., be treated to F039 levels for F039 constituents). An example of a waste affected by this rule is a corrosive (D002) waste that is incinerated. When determining which, if any, F039 constituents are present in their waste, generators need only monitor for those F039 constituents which are reasonably expected to be present in the waste. Generators may rely on either knowledge of the raw materials used, the process, and the potential reaction products; or a one-time analysis for the entire list of F039 constituents. Subsequent analyses may then be limited to the F039 constituents found in the initial sampling and analysis. Off-site TSDFs should ensure that the generator's waste analysis results and/or process descriptions are accurate, up-to-date, and representative of the ignitable or corrosive waste. Off-site TSDFs should also ensure that if any changes in waste generation (e.g., a change in raw materials used) occur, the generator re-evaluates its initial determination of which F039 constituents are present in the untreated waste. EPA recommends that another analysis of the F039 list of hazardous constituents be made if such changes occur.

In addition, where documented studies are used as acceptable knowledge, you should ensure that information is based on valid analytical techniques. The ability of analytical equipment to detect low concentrations of contaminants has improved over the years and constituents that once were determined to be "non-detectable" may, in fact, be detectable using the sophisticated equipment available today.

Although EPA recognizes that sampling and analysis are not as economical or convenient as using acceptable knowledge, they do usually provide advantages. Because accurate waste identifica-

**Keep Abreast Of New
Regulations And
Analytical Techniques
(e.g., LDR, TCLP)**

tion is such a critical factor for demonstrating compliance with RCRA, misidentification can render your facility liable for enforcement actions with respect to permit conditions, LDR requirements, annual reporting, and other RCRA requirements. In addition, accurate waste analysis is critical for meeting some of the requirements of other regulatory programs such as effluent discharges under the Clean Water Act, and transportation requirements regulated by the Department of Transportation.

As the above examples illustrate, you are cautioned to keep abreast of current regulatory developments in the RCRA program that may effect the classification of your waste, and to re-evaluate your wastes frequently using current analytical methods and/or process knowledge, particularly any time a rule affecting RCRA waste identification/classification is finalized.

REFERENCE THIS MANUAL OFTEN!

(Even If You Have Obtained a Permit)

As noted previously, this manual provides you with guidance for conducting waste analysis and developing a complete WAP. However, even after waste analysis procedures have been developed, documented, and implemented at your facility, and/or you have received your RCRA operating permit, you should refer to this manual whenever you re-evaluate your waste analysis procedures. Re-evaluating your waste analysis procedures is necessary when:

- Processes are changed, or other factors affecting waste identification have occurred
- Permits are modified or re-issued
- Regulations affecting the definition of hazardous wastes are promulgated, which may result in an increase in the number, or types, of hazardous wastes managed at your facility
- Regulations are promulgated affecting management of existing wastes at your facility.

1.6 Uses Of Waste Analysis And A WAP

Waste analysis and WAPs serve many critical functions for facility personnel if written in a clear, logical, and easily reviewable manner. Even if a facility is not required to develop a written WAP, EPA recognizes that it may be advantageous for you to develop one, and follow it on site because it can assist you in

What Are The Benefits To Facility Personnel?

demonstrating compliance with a host of RCRA requirements, and also reduce liabilities associated with incidents which might result from incorrect waste identification. It is important to emphasize, however, that a **WAP can only be helpful to the extent that it is used.**

Some of the many useful functions available to facility personnel who conduct waste analysis and use a WAP were highlighted earlier in this manual. Additional benefits to facility personnel include conducting proper activities relating to:

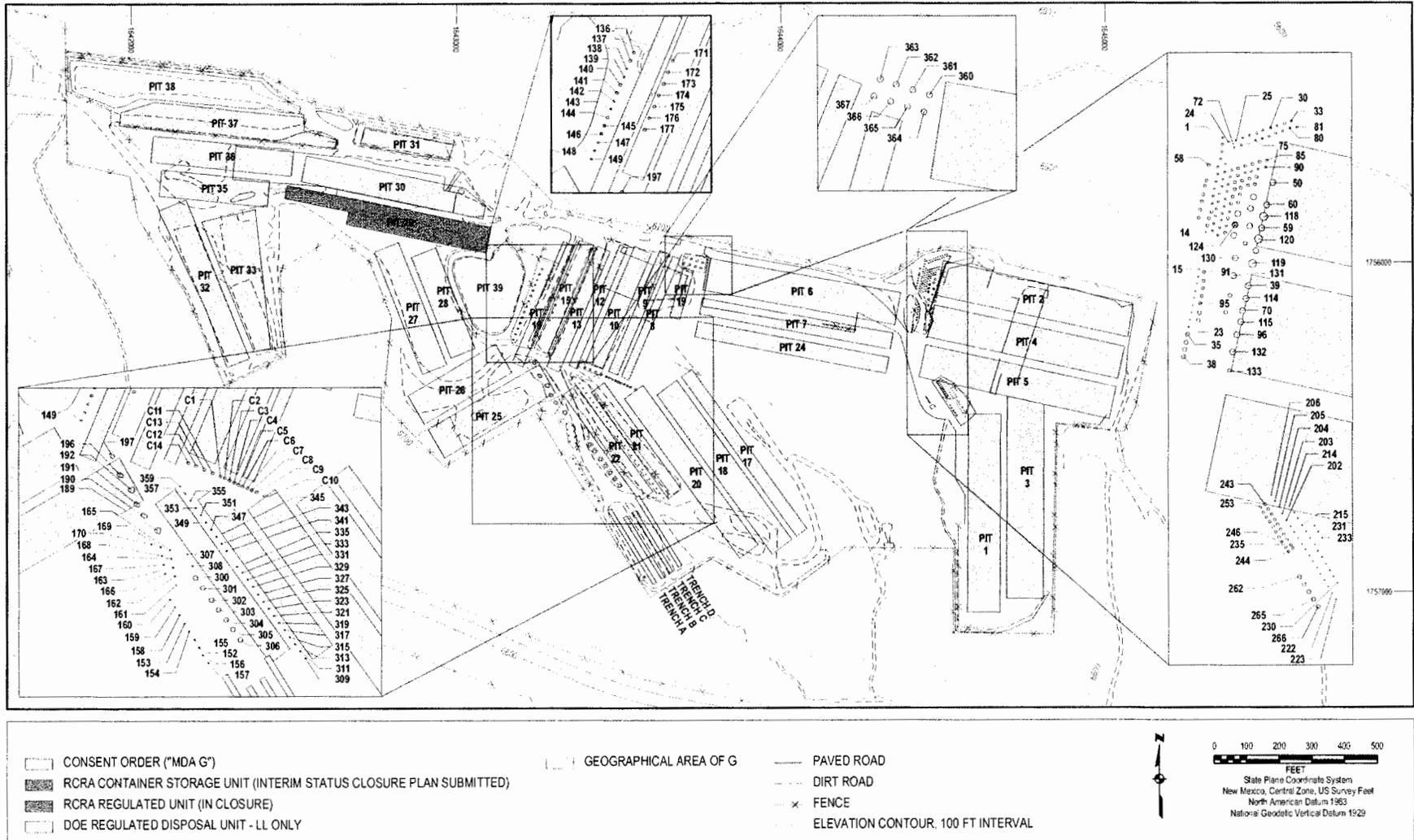
- Ensuring waste compatibility with other waste and non-waste materials
- Ensuring that waste received by off-site facilities matches the waste designated on the manifest or LDR notification
- Responding to spills
- Developing proper training programs for compliance with OSHA, and developing RCRA contingency plans
- Facilitating proper labeling and documenting wastes for on-site management and off-site transport
- Complying with recordkeeping requirements
- Evaluating incidents resulting from mishaps.

How Can A WAP Help Demonstrate Compliance To EPA?

WAPs also are useful to permit writers at EPA. A good WAP will go a long way toward providing satisfaction to EPA that appropriate RCRA concerns are met. The WAP will also assist you in demonstrating to EPA:

- The adequacy of your RCRA permit application, with respect to appropriate hazardous waste treatment, storage, and disposal methods
- Your compliance with the LDR regulations
- That proper waste analysis procedures are in place.

EXHIBIT 1. UNDERGROUND UNITS AT G



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