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FACT SHEET

AUGUST 2007

**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**

Facility Name: Los Alamos National Laboratory

EPA Identification Number: NM0890010515

Type of Facility: LANL is a national laboratory that conducts research on nuclear weapons and other national defense and civilian programs. LANL maintains includes in: nuclear, medium energy, and space physics; hydrodynamics; conventional explosives; chemistry; metallurgy; radiochemistry; space nuclear systems; controlled thermonuclear fusion; laser research; environmental technology; geothermal, solar, and fossil energy research; nuclear safeguards; biomedicine; health and biotechnology; and industrial partnerships.

Facility Location: Los Alamos National Laboratory (LANL or Facility) is located in Los Alamos County, an incorporated county in north-central New Mexico, approximately 60 miles north-northeast of Albuquerque and 25 miles northwest of Santa Fe. LANL occupies approximate 40 square miles on the Pajarito Plateau.

Facility Owner and Co-Operator: U.S. Department of Energy

Facility Co-Operator: Los Alamos National Security, LLC

INTRODUCTION

The U.S. Department of Energy (DOE) and Los Alamos National Security, LLC (LANS), hereafter referred to as the Applicants, are the owner (DOE) and operators (DOE and LANS) of hazardous waste management units at LANL and are therefore required to obtain a hazardous waste facility permit from the New Mexico Environment Department (Department). This permit will allow the Applicants to store, for greater than 90 days, and treat hazardous and mixed waste pursuant to the New Mexico's Hazardous Waste Act (HWA) and the federal Resource Conservation and Recovery Act (RCRA). Prior to issuing a final permit, the Department is required to release a draft permit for public comment pursuant to 20.4.1.901.A (3) NMAC. This Fact Sheet is intended to facilitate public review of that draft Permit.

By their processes and operations that produce hazardous waste at LANL, the Applicants are classified as generators, and LANL is a hazardous waste treatment, storage, and disposal facility (TSDF) under the HWA, Sections 74-4-1 through 74-4-14, NMSA 1978, as amended, and the RCRA, 42 U.S.C. 6901 through 6992. Hazardous waste is generated at the Facility primarily from research and development (R&D) activities, general Facility operations, environmental restoration (ER) activities, and decontamination and decommissioning (D&D) projects. Mixed waste (i.e., hazardous wastes with a radioactive component), both low-level and transuranic (TRU), are generated primarily from R&D activities, processing and recovery operations, general Facility operations, D&D projects, and ER activities. High explosives (HE)-contaminated waste is generated primarily from R&D activities, ER activities, wastewater treatment processes, and building maintenance and modification activities. Hazardous and mixed waste is generated at Technical Areas (TAs) throughout the Facility. Small quantities of waste are generally accumulated in containers at less-than-90-day storage areas, or satellite accumulation areas, and then packed in containers (e.g., drums, boxes, crates) for transport to a permitted TSDF as necessary. The generation and subsequent management of these wastes at areas at LANL other than the permitted units are not regulated under the permit but rather other portions of the HWMR, principally 20.4.1.300 NMAC.

The Applicants are required to apply for and obtain a permit from the Department to manage hazardous waste at a TSDF pursuant to the HWA and RCRA. The Department's issuance of the draft Permit is in response to the submission of the Applicants' Permit Renewal Application. The draft Permit addresses hazardous waste management at treatment and storage units. The Applicants do not seek and the Department is not issuing an operating permit for hazardous waste disposal units. However, the draft Permit does address the closure and post-closure care of disposal units located at TA-54 Areas G, H, and L. The draft Permit also addresses how the Applicants will conduct corrective action activities for solid waste management units (SWMUs) and areas of concern (AOCs), and conduct groundwater monitoring and remediation facility-wide. The draft Permit also addresses how corrective actions under the March 1, 2005 Compliance Order on Consent integrate with closure and corrective action under the Permit.

REGULATORY BACKGROUND

In 1976 the RCRA was passed by the U.S. Congress to regulate “cradle to grave” management of hazardous waste. RCRA was enacted as an amendment to the Solid Waste Disposal Act of 1965, is comprised of the first solid waste statutes and all subsequent amendments. RCRA mandates the development of regulations governing the actions of owners or operators of facilities that generate, transport, treat, store, or disposal of solid wastes.

On November 19, 1980, the RCRA regulations became effective and it became unlawful to treat, store, or dispose of hazardous waste without having, or having applied for, a permit. For existing TSDFs the requirement to submit an application is satisfied by submitting the “Part A” portion of the application; the “Part B” portion may be submitted at a later time. These Parts are clarified in 40 CFR § 270.10. The United States Environmental Protection Agency (EPA) has authorized the State of New Mexico to implement and enforce how management requirements, including corrective action requirements, under its own hazardous waste management program. The State’s enabling authority for the program is the HWA, which: 1) authorizes the State’s Environmental Improvement Board (EIB) to adopt hazardous waste management regulations; and 2) authorizes the Department to implement and enforce the provisions and regulations of the HWA, the Hazardous Waste Management Regulations (HWMR).

As part of the State’s program, the EIB has adopted regulations relating to, among other things, the issuance of hazardous waste permits. These regulations incorporate by reference pertinent sections of the Code of Federal Regulations (CFR) – 40 CFR Parts 260 through 270, 273, and 280 – and are codified in the HWMR, 20.4.1 NMAC.

The HWA and HWMR require each person owning or operating an existing facility or planning to construct a new facility for the treatment, storage, or disposal of hazardous waste to have a RCRA permit (see 42 U.S.C. 6925 and 20.4.1.900 NMAC (incorporating 40 CFR § 270.1)). However, a treatment, storage, or disposal facility in existence on or before November 19, 1980 is eligible for “interim status (IS).” Interim status authorizes an existing facility to operate, subject to the interim status standards set forth in 20.4.1.600 NMAC, incorporating 40 CFR Part 265, until the Department issues or denies a RCRA permit or until interim status is otherwise terminated. LANL was eligible for interim status in November of 1980 and a portion of LANL’s hazardous waste management units retain that status until Permit issuance.

The HWA and HWMR further require corrective action for all releases of hazardous waste or hazardous constituents from any SMWU at a facility seeking a permit regardless of the time at which waste was placed in such a unit (42 U.S.C. 6924(u), Section 74-4-4.2(B), NMSA 1978, and 20.4.1.500 NMAC, incorporating 40 CFR § 264.101(a)). Corrective action is also required beyond the facility boundary (42 U.S.C. 6924(v) and 20.4.1.500 NMAC incorporating 40 CFR § 264.101(c)).

On January 26, 1983, RCRA subjected “units” managing and disposing of hazard waste to the closure and post-closure standards of 40 CFR Part 264, Subpart G and Part 265, Subpart G and required a special post-closure care permit in some circumstances.

On January 25, 1985, the State of New Mexico received from EPA authorization to implement its hazardous waste program under New Mexico’s Hazardous Waste Act in lieu of the federal program. 50 Fed. Reg. 1515 (Jan. 11, 1985). Subsequent program revision applications were approved effective on April 10, 1990, July 25, 1990, December 4, 1992, August 23, 1994, December 21, 1994, July 10, 1995, January 2, 1996, March 10, 1997, June 13, 1998, and October 9, 2001.

On November 8, 1985, RCRA mandated the termination of interim status for land disposal units which had been granted interim status before November 8, 1984, unless the owner/operator had submitted a Part B portion of an application and had submitted certification of compliance with the ground-water compliance requirements.

On July 25, 1990, the State of New Mexico received from EPA authorization to expand its hazardous waste program under the HWA in lieu of the federal program, including the authority to regulate the hazardous component of mixed waste. 55 Fed. Reg. 28397 (July 11, 1990).

On January 2, 1996, the State of New Mexico received from EPA authorization to implement the corrective action program under the HWA. See 60 Fed. Reg. 53,708 (Oct. 17, 1995); 61 Fed. Reg. 2450 (Jan. 26, 1996).

Application Requirements

Owners or operators of hazardous waste management facilities, including interim status facilities, are required to submit a comprehensive permit application covering all aspects of design, operation, maintenance, and closure of their facilities. The Permit Application consists of Parts A and B; Part A of the Permit Application (Part A Application) is a short, standard form that summarizes general information about a facility including the name of the owner/operator, a list of the types of wastes managed, a facility layout diagram, and the activities requiring a permit. Part B of the Permit Application (Part B Application) is an extensive document submitted in a narrative, tabular, and schematic format that describes the facility operations in detail and includes information necessary to establish corrective action requirements for releases from SWMUs and Areas of Concern (AOCs).

LANL PERMIT HISTORY

On August 13, 1980, the Applicants submitted to the EPA a “Notification of Hazardous Waste Activity” for the Facility pursuant to RCRA. On November 19, 1980 the Applicants submitted a Part A RCRA Permit Application for the Facility. The Applicants also sent a copy of the Part A application to the Environmental Improvement Division of the New Mexico Department of Health and Environment, the predecessor to the Environment Department. The Application covered hazardous waste treatment, storage, and disposal activities at TA-54, and included approximately 130 hazardous waste streams. The Applicants have revised the Part A Permit

Application several times since it was first submitted, including, among other things, to notify the Department that LANL would not seek a permit for hazardous waste disposal activities.

On November 8, 1989, the Department's predecessor agency issued a Hazardous Waste Facility Permit (Permit) to the Applicants to operate a hazardous waste treatment and storage facility at the Facility pursuant to Section 74-4-4.2 of the HWA. The Permit covered hazardous waste container storage areas at TA-16, TA-50, and TA-54, hazardous waste storage and treatment tanks at TA-54, and hazardous waste incinerators at TA-16 and TA-50. Two of the four treatment tanks at TA-54 were removed in accordance with an approved closure plan in 1996. The remaining two tanks were removed from the site in 2002 and the Department approved the closure report for these tanks in February 2007. LANL closed the incinerator at TA-16 in accordance with an approved closure plan, and the Department approved the Closure Certification Report in October 2001. The Applicants closed the incinerator at TA-50 in accordance with an approved closure plan, and the Department approved the Closure Certification Report in July 1998.

In the late 1980's, the Applicants identified Potential Release Sites (PRSs) for EPA, including SWMUs and AOCs where hazardous wastes, hazardous constituents, solid wastes, or mixed wastes may have been disposed or released. Of those sites, EPA identified over 1200 as sites to be investigated and included on the Hazardous and Solid Waste Amendments (HSWA) portion (known as the "HSWA Module") of the Applicants' RCRA Permit. On March 8, 1990, EPA issued the HSWA portion of the Permit to the Applicants, effective on May 23, 1990, covering those requirements of RCRA added by the HSWA of 1984. The EPA portion of the permit required corrective action for continuing releases of hazardous waste and hazardous waste constituents at and from the Facility pursuant to Section 3004(u) and (v) of RCRA, 42 U.S.C. § 6924(u) and (v).

The Permit, which was originally set to expire in November 1999, was administratively extended pursuant to 20.4.1.900 NMAC (incorporating 40 CFR § 270.51) because the Applicants submitted a Part B Permit Renewal Application in August 1996. The original permit in modified form remains in effect.

On May 2, 2002, pursuant to Sections 74-4-10.1 and 74-4-13 of the HWA, the Department issued a Determination of an Imminent and Substantial Endangerment to Health and the Environment and a Draft Order proposing a series of investigation and corrective action tasks to DOE and the University of California. On November 26, 2002, the Department issued to the Applicants a Final Order containing a set of investigation, monitoring, and corrective action tasks and a schedule for implementation of those tasks. The parties engaged in settlement negotiations from December 2002 through March 2005. On September 1, 2004, the Department released a draft Compliance Order on Consent (Consent Order) for public review and comment. On March 1, 2005 the parties entered into a final Consent Order governing corrective action under RCRA and HSWA. The Consent Order is described further under Permit Part 11 below.

On June 1, 2006 LANS replaced the University of California as co-operator of the Facility.

Part A Permit Application

In April 2006, the Applicants submitted to the Department the most recent version of its Part A Permit Renewal Application, Revision 5.0. This Part A Application is the Department's primary basis for the list of units to be permitted at the Facility, the waste management processes the Applicants propose to utilize at those units, and the specific EPA Hazardous Waste Numbers (i.e., waste codes) applied to waste to be managed at those units. The Applicants have submitted several revised Part A permit applications since the initial submission to renew their Permit in August 1996. Revision 5.0 replaced Revision 4.0 submitted in December 2004, reflecting the transfer of co-operator responsibilities from the Regents of the University of California to LANS. Revision 5.0 also updates approved unit closures, changes the EPA Hazardous Waste Numbers managed at particular units, and corrects typographical errors.

Part B Permit Application

In August 2003, the Applicants submitted to the Department their most recent version of their General Part B Permit Renewal Application, Revision 2.0. This General Part B Application addresses the requirements that apply to hazardous and mixed waste treatment and storage facility operations at the Facility and contains a description of the Facility and its various operating plans (i.e., waste analysis, inspection, personnel training, contingency, closure, and post-closure). Previous Part B permit renewal applications were submitted to the Department in August 1996 (Revision 0.0; LANL, 1996) and January 1999 (Revision 1.0; LANL, 1998a). Versions of the Part B application subsequent to the initial submittal were revisions presented in Responses to Supplemental Information submitted to the Department in June 2000 and November 2001, and in a Response to a Notice of Deficiency submitted to the Department in August 2002.

The TA-3 Part B Application for permitted and interim status units was submitted in September 1999. The TA-16 Part B Application for permitted and interim status units was initially submitted in June 1995 and the final version was submitted in August 2003. The TA-50 Part B Permit Application for permitted and interim status units was initially submitted in January 1999 and the final version was submitted in July 2002. The TA-54 Part B Permit Application for permitted and interim status units was initially submitted in January 1999 and the final version was submitted in August 2003. The TA-55 Part B Permit Application for interim status units was initially submitted in June 1996 and the final version was submitted in August 2003. And the Part B permit applications for interim status units at TA-14, TA-36 and TA-39 were submitted to the Department in or before May 1999.

TYPES OF HAZARDOUS WASTES MANAGED AT LANL

The criteria for establishing a waste as a hazardous waste are provided in 20.4.1.200 NMAC. A waste is considered hazardous if it meets the definition of a solid waste described in 20.4.1.200 NMAC, incorporating 40 CFR § 261.2; is not exempted from regulation as a hazardous waste under 40 CFR § 261.4; and exhibits any of the characteristics of hazardous waste identified in 40 CFR Part 261, Subpart C; or is listed in 40 CFR Part 261, Subpart D.

Waste streams at the Facility include spent solvents, contaminated solid wastes, paint and related wastes, photographic and photocopier wastes, corrosive liquids, solid metals and metallic compounds, contaminated non-corrosive aqueous and non-aqueous solutions and sludges, mercury wastes, used batteries and battery fluids, unused off-specification commercial chemical products, gas cylinder waste, ER soils and sludges, ER aqueous liquids, and ER debris. Hazardous waste streams may be of uniform physical composition (i.e., homogeneous) or of dissimilar/diverse composition (i.e., heterogeneous). Homogeneous waste contains only one material, substance, or waste of which its components are mixed and when a sample of the waste is collected, samples are consistent. Homogeneous waste streams can be either solids or liquids. Heterogeneous waste contains multiple components that are different because of density, specific gravity, or other physical properties, are located in different places within the mixture, or are discrete and different articles. Heterogeneous wastes (e.g., debris) do not lend themselves to representative sampling and analysis.

The following hazardous wastes codes, "F", "U", "K", and "D", identified at 20.4.1.200 NMAC (incorporating 40 CFR 261, Subparts C and D), are the EPA Hazardous Waste Numbers that are assigned to specific hazardous waste categories that are managed at LANL. They are described as follows: 1) D codes signify wastes exhibiting the characteristics of ignitability (D001), corrosivity (D002), reactivity (D003), and toxicity (D004- D043); 2) F codes signify wastes from non-specific sources; 3) K codes signify wastes from specific sources; and 4) P and U codes signify wastes that are discarded commercial chemical products, off-specification species, container residues, and spill residues thereof, with the P codes signifying acutely hazardous wastes and the U codes signifying toxic wastes.

Waste codes proposed to be permitted to allow storage in containers include the following: D001-D043, F001-F012, F019-F028, F032, F034, F035, F037-F039, K044-K047, K084, K101, K102, P001-P018, P020-P024, P026-P031, P033, P034, P036-P051, P054, P056-P060, P062-P078, P081, P082, P084, P085, P087-P089, P092-P099, P101-P106, P108-P116, P118-P123, P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U001-U012, U014-U053, U055-U064, U066-U099, U101-U103, U105-U138, U140-U174, U176-U194, U196, U197, U200-U211, U213-U223, U225-U228, U234-U240, U243, U244, U246-U249, U271, U278-U280, U328, U353, U359, U364, U367, U372, U373, U387, U389, U394, U395, U404, and U409-U411.

Waste codes proposed to be permitted to allow storage in tanks include the following: D002, and D004-D011.

Waste codes proposed to be permitted to allow treatment by open burning include the following: D001-D003, D005-D009, D011, D018, D022, D028-D030, D035, D036, D038, D040, F001-F005, K044, K045, U019, U022, U044, U112, U154, U159, U169, U196, U220, and U239.

Waste codes proposed to be permitted to allow treatment by stabilization include the following: D002, D004-D012, D018, D019, D021, D022, D027, D028, D030, and D032-D043.

Waste codes disposed of at TA-54, MDA L and proposed to be permitted to undergo closure include the following: D001-D004, D006-D009, D011, D016, F002, P015, P087, U002, U019, U069, U080, U122, U151, U154, U159, U161, U165, U220, U226, U228, and U239.

Waste codes disposed of at TA-54, MDA G and proposed to be permitted to undergo closure include D004-D011.

Waste codes disposed of at TA-54, MDA H and proposed to be permitted to undergo closure include D003.

UNITS TO BE PERMITTED, THEIR LOCATION, AND THE QUANTITY OF WASTES MANAGED

The Department proposes to issue a hazardous waste permit that allows the Applicants to perform the following (note – waste quantity amounts specified in gallons denotes volumes and not necessarily liquid wastes):

- To store and otherwise safely manage specific hazardous wastes in containers in the following units:

TA-3, Building 29 Rooms
9010, 9020, 9030 (18,500
total gallons);

TA-50, Building 69, Indoor
& Outdoor Area (31,500 total
gallons);

TA-54, Area G, Pads 1, 3, 5,
6, 9, 10, and 11; Storage
Shed 8; and Building 33
(3,664,150 total gallons);

TA-54, Area L (408,480 total
gallons);

TA-54 West, Indoor and
Outdoor Units (11,660 total
gallons); and

TA-55, Building 4, Rooms
B05, B40, B45, and K13,
Vault, and Outdoor Pad
(178,500 total gallons).

- To store and otherwise safely manage specific hazardous wastes in tanks in the following unit:

TA-55, Building 4 (137 total gallons);

- To treat by stabilization and otherwise safely manage specific hazardous wastes at the following unit:

TA-55, Building 4 (150 total gallons);

- To treat by open burning and otherwise safely manage high explosive hazardous wastes at the following units:

TA-16, Structure 388 – (250 lbs bulk HE per treatment and 20,000 lbs per year);
TA-16, Structure 388 – (1,000 lbs HE contaminated waste per treatment and
20,000 lbs per year); and

TA-16, Structure 399 (1000 lbs per treatment and 20,000 lbs per year).

- To close the following disposal units:

TA-54 Area G;

TA-54 Area H; and

TA-54 Area L

PERMIT ORGANIZATION

The draft Permit is comprised of Parts (1-16) and Attachments (A-R). The Parts contain draft permit requirements the Department requires the Applicants to adhere to while treating and storing of hazardous waste, and closing disposal units, at the Facility. The Attachments consist principally of the Applicants' permit application assurances and commitments; any application language in the Attachment that conflicts with the draft Permit Parts has been altered by the Department to coincide and be consistent with the Permit Parts. Such instances occurred in Attachments A (*General Facility Conditions*), C (*Waste Analysis Plan*), D (*Contingency Plan*), E (*Inspection Plan*), F (*Personnel Training Plan*), and I (*Open Burn Unit Management*). In the case of conflicts, draft permit conditions override language in the Permit Attachments, as explained in Permit Section 1.7.2.

Permit conditions are established to ensure compliance with New Mexico's HWA and HWMRs and are derived from applicable regulatory requirements, the Applicants' commitments, or are requirements established by the Department to ensure adherence with the regulations and/or to protect human health or the environment as provided at 20.4.1.900 NMAC, incorporating by reference 40 CFR § 270.32(b).

The draft Permit generally follows the EPA permit writer's guidance in format, style, and general conditions, including but not limited to: *Model RCRA Permit For Hazardous Waste Management Facilities* (Draft), U.S. EPA (September, 1988); *Model Permit For Hazardous and Solid Waste Amendments* (Draft), U.S. EPA (July, 1995); *RCRA Guidance Manual for Subpart G Closure and Post Closure Care Standards and Subpart H Cost Estimating Requirements*, OSWER 9476.00-5 (January, 1987); and *Open Burning/Open Detonation Permitting Guidelines* (Draft), U.S. EPA (February 2002).

Each draft Permit Part is briefly described below, including specific requirements identified in that particular Part.

Part 1: *General Permit Conditions* contains permit conditions that apply to all hazardous waste management permits, most of which are based on mandatory permit conditions set forth in 20.4.1.900 NMAC, incorporating 40 CFR Part 270. Part 1 also references Permit Attachment A

(*General Facility Description*), Permit Attachment B (*Permit Application Part A*), Permit Attachment D (*Contingency Plan*), Permit Attachment O (*Hazardous Waste Management Units*), Permit Attachment P (*SWMUs and AOCs*), and Permit Attachment R (*Figures*).

Part 2: *General Facility Conditions* contains permit conditions the Applicants must follow for the operation of hazardous waste management units at LANL set forth in 20.4.1.500, incorporating 40 CFR Part 264 Subparts B through E. Permit requirements in this Permit Part include, but are not limited to:

One-Year Storage Limitation - Waste shall not be stored at the Facility, or anywhere at the entirety of LANL, for more than one year, even if it is stored for less than one year each at two or more storage units.

Dilution Prohibition - Dilution of hazardous waste is to avoid an applicable treatment standard, including either ineffective treatment that does not destroy, remove, or permanently immobilize hazardous constituents, or the addition of solid waste to reduce a hazardous constituent's concentration, is prohibited.

Waste Characterization - Specific requirements for waste characterization address the following:

- the identification of excluded wastes, the characterization of radionuclides, and annual waste characterization verification;
- the documentation of all uses of Acceptable Knowledge (AK), including all background information assembled and used in the characterization process;
- the reporting of all hazardous constituents analytical test methods are capable of measuring; and
- analytical method practical quantification limits must not be higher than the applicable LDR treatment standard.

Record Keeping - Specific requirements concerning record-keeping address the following:

- documenting in the Facility Operating Record all off-site treatment and monitoring associated with LDR activity and all waste characterization information (with assigned traceable identification numbers to this documentation to facilitate access);
- maintaining paper copies of inspection logs in the Facility Operating Record
- substituting electronic operating records in lieu of written records with an unalterable electronic record capable of producing a paper copy; and

- making the Facility Operating Record available, upon request by the Department, for inspection.

Ignitable, Reactive or Incompatible Waste Locating - Containers holding ignitable or reactive wastes must be located at least 15 meters (50 feet) from the facility boundary, defined as the TA-specific boundary identified in the TA-specific map.

Emergency Equipment - Specific requirements concerning emergency equipment address the following:

- the replacement of any non-functioning equipment;
- that malfunctioning equipment is clearly marked as “Out of Use”;
- the notification and training to facility employees of the presence of substitute emergency equipment;
- the accessibility of all emergency communication devices;
- the dissemination of the Contingency Plan to each applicable permitted unit and referenced emergency responders;
- the annual review of the Contingency Plan;
- the prominent posting of emergency evacuation routes at the principle entrances to all permitted units and buildings within those units; and
- the recording of all emergency situations (e.g., fires, explosions, releases) planned or unplanned, in the Facility Operating Record.

Closure Cost Estimate and Financial Assurance - LANS, the Facility’s co-operators, must establish closure and post-closure cost estimates, prepared in accordance with 40 CFR §§ 264.142 and 264.144. Cost estimates must be provided for closure of each unit listed in Attachment O (*List of Hazardous Waste Management Units*).

Permit Part 2 also references Permit Attachments B (*Part A Application*), Permit Attachment C (*Waste Analysis Plan*), Permit Attachment D (*Contingency Plan*), Permit Attachment E (*Inspection Plan*), Permit Attachment F (*Personnel Training Plan*), Permit Attachment G (*Container Management*), Permit Attachment H (*Tank Management*), Permit Attachment I (*Open Burn Unit Management*), Permit Attachment O (*Hazardous Waste Management Units*), Permit Attachment P (*SWMUs and AOCs*), and Permit Attachment Q (*Off-Site Facilities*).

Part 3: Storage in Containers contains permit conditions the Applicants must follow when storing hazardous waste in container storage areas at the Facility. It addresses the requirements for managing hazardous waste in containers in accordance to 40 CFR Part 264, Subpart I. Permit requirements in this Permit Part include, but are not limited to:

Unit Delineation – Lines of demarcation must be identified at all container storage areas (CSA).

Container Storage Configuration and Minimum Aisle Space - Storage configuration at all CSUs must be maintained including maximum stacking heights and adequate aisle space.

Container Weather Protection - Waste container contact with atmospheric precipitation is prohibited.

Container Storage Orientation and Labeling - Specific requirements address the following:

- secondary containment structures at CSUs where liquids are stored;
- labeling containers that do not contain free liquids; and
- organizing storage areas in a manner that allows for labels to be read without having to physically move containers.

Permit Part 3 also references Permit Attachment B (*Part A Application*), Permit Attachment C (*Waste Analysis Plan*), and Permit Attachment G (*Container Management*) which list the wastes the Permittees are authorized to store. In addition, it cites Attachment O (*Hazardous Waste Management Units*) which identifies the only units in which the Permittees may store containers of hazardous wastes for greater than 90 days. Specific facility and process information for the storage of hazardous waste at container storage units (CSUs) are provided in Permit Parts 14 (*TA-50*), Permit Part 15 (*TA-54*), and Permit Part 16 (*TA-55*).

Part 4: Storage in Tanks contains permit conditions the Applicants must follow when storing hazardous waste in tank units at the Facility. It addresses the requirements for managing hazardous waste in tanks in accordance with 40 CFR Part 264, Subpart J. Permit requirements in this Permit Part include, but are not limited to:

Notification of Release from a Tank – The Applicants must notify the Department of accumulated liquids within a secondary containment system.

Tank Containment System Maintenance - Secondary containment systems comprised in part by floor, wall, joint, or penetration sealants, must be installed and maintained in accordance with the sealant manufacturer's recommendations.

Air Emission Exemption Requirement – Tanks must be clearly labeled as containing wastes with a radiological component if the Applicants claim the tanks are exempt from air pollution emission controls due to the presence of the component.

Permit Part 4 also references Permit Attachment B (*Part A Application*), Permit Attachment E (*Inspection Plan*), Permit Attachment O (*Hazardous Waste Management Units*), and Permit Attachment H (*Tank Management*).

Part 5: *Treatment by Stabilization* contains permit conditions the Applicants must follow for treatment of hazardous waste by stabilization at a unit at the Facility. It addresses the requirements in accordance with 40 CFR Part 264, Subpart X. Permit Part 5 also references Permit Attachment B (*Part A Application*), Permit Attachment J (*Stabilization Unit Management*), and Permit Attachment O (*Hazardous Waste Management Units*).

Part 6: *Treatment by Open Burning* contains permit conditions the Applicants must follow for treatment by open burning of reactive and ignitable hazardous waste. It addresses operations and general closure requirements specific to open burn units in accordance with 40 CFR Part 264, Subpart X. Permit requirements in this Permit Part include, but are not limited to:

Prohibition to Treat Radionuclides – The Applicants are prohibited from treating mixed waste at the open burn units.

Removal of Combustible Materials - Combustible materials surrounding the burn units must be removed to a radius of 200 feet.

Permit Part 6 also references Attachment I (*Open Burn Unit Management*).

Part 7 (reserved) - The Department anticipates that this Permit Part will address open detonation units, should any be permitted in the future.

Part 8 (reserved) - The Department is holding this Part in reserve to address any permit modification requests to incorporate a new and different hazardous waste process, and so that all processes may be grouped together in the Permit.

Part 9: *Closure* contains permit conditions the Applicants must follow for closure of the Permittees' hazardous waste management units. It describes procedures the Applicants must follow for the clean closure of storage and treatment units. It explains what is required in each permitted hazardous waste management unit's closure plan, provides detailed sampling procedures the Applicants must conduct upon closure, and defines the clean-up performance standards the Applicants must achieve in order to clean close a permitted unit. It also explains the closure process the Applicants must follow for the three material disposal area units (MDAs G, H, and L) subject to closure at the Facility. Specific closure information for TA-specific units are provided in Permit Part 12 (*TA-16*), Permit Part 13 (*TA-50*), Permit Part 14 (*TA-54*), Permit Part 15 (*TA-55*), and Permit Part 16 (*TA-3*). Permit requirements in this Permit Part include, but are not limited to:

Closure plans – The Applicants must submit detailed closure plans for each permitted unit, incorporating all the requirements identified in Permit Part 9 within 90 days after the effective date of this Permit; the submittal shall be in the form of a Class 3 Permit modification request.

Records Review and Structural Assessment – The Applicants must conduct a records review and structural assessment of any hazardous waste management unit to be closed to ensure that areas in which the unit's Operating Records indicate where a spill, defect,

deterioration, damage, or hazard affecting waste containment occurred or developed during the life of the unit become incorporated into the sampling and analysis plan.

Sampling - Specific requirements address the following:

- swipe sampling for exposed piping associated with tank and cementation units;
- decontamination of walls and ceilings;
- prohibited reliance on used wash water solutions to determine if decontamination of equipment and structures is complete;
- alternate sampling approaches if buildings or structures are intended to be demolished. In this case, the Applicants shall follow applicable soil sampling procedures;
- analysis of swipe samples for radionuclides for use as indicators of contaminant releases in units where radionuclides were stored, not as surrogates for validation of clean closure at permitted units;
- soil sampling at the interface of fill and native soil or tuff beneath all areas associated with water catchments or conveyances including, but not limited to, sumps, catch basins, secondary containment areas, and drains;
- soil sampling at the interface of fill and native soil or tuff beneath any underground piping including outfall discharge locations; and
- soil sampling beneath all intersections of piping associated with the unit undergoing closure.

Decontamination – The Applicants must decontaminate all structures and equipment via pressure washing or steam cleaning. The Applicant's may not wash asphalt pads.

Removal of Asphalt/Concrete – The Applicants must remove all asphalt, asphaltic concrete, concrete, and underlying sub-grade materials if hazardous constituents are detected in underlying soils or tuff

Part 10: *Post-Closure Care* contains permit conditions the Applicants must follow for post-closure care of surface impoundments, waste piles, land treatment, landfills, and miscellaneous units at the Facility.

Part 11: *Corrective Action* contains the corrective action requirements the Applicants must follow for the hazardous waste management units that are the subject of the Permit. These permit conditions ensure the Applicants appropriately address releases of hazardous waste and hazardous constituents to the environment. Permit Part 11 also addresses requirements for groundwater monitoring. These requirements include the processes for implementing corrective action, cleanup levels, general methods and procedures for conducting field activities, laboratory

procedures, general procedures for conducting risk assessments and determining background levels, general requirements for drilling and well installation, and requirements for reporting on corrective action activities conducted under this Permit, including the approval process for corrective action document submittals.

The Department and the Permittees have agreed to a Compliance Order on Consent (Consent Order) dated March 1, 2005, which 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)). The Consent Order requires the Permittees to conduct corrective action through a comprehensive investigation and cleanup of contaminants in the environment at the Facility.

Section III.W.1 of the Consent Order identifies four circumstances in which corrective action is to be conducted under the Permit rather than the Consent Order. These are: 1) new releases and newly discovered releases of hazardous waste or hazardous constituents from operating units at the Facility; 2) to comply with closure and post-closure care requirements of 40 CFR Part 264, Subpart G, as they apply to operating units at the Facility; 3) for implementation of the controls, including long-term monitoring, for any SWMU or AOC on the Permit's Corrective Action Complete with Controls list; and 4) for any corrective action to address releases of hazardous waste or hazardous constituents that occur or are discovered after the date on which the Consent Order terminates. Permit Part 11 applies only to these circumstances.

Part 12: TA-16 contains the permit conditions the Applicants must follow for operating the two open burn units at TA-16 (388 and 399). It references Permit Part 6 (*Treatment by Open Burning*) and Permit Attachment I (*Open Burn Unit Management*). Permit requirements in this Permit Part include, but are not limited to:

Prohibition of Concurrent Burning at Burn Units - Concurrent burns are prohibited at the two open burn units.

Prohibition of Continuous Waste Feed – The Applicants must utilize a non-continuous (batch) thermal treatment process for the open burning of hazardous waste at TA-16.

Inspection and Maintenance of Drainage Controls – The Applicants must conduct annual inspection and maintenance of the drainage control features at the open burn units and document such activities.

Annual Soil Sampling – Soil samples must be collected annually around the concrete pads at the burn units.

Net Explosive Weight Limits - Air dispersion model analyses set per burn and annual treatment limits to ensure the prevention of any release that may have adverse effects on human health or the environment due to migration of waste constituents in soil and air.

Burn Support Fuel Limitation - Propane shall be the sole fuel source at TA-16-388.

Part 13: TA-50 contains the permit conditions the Applicants must follow for operating the two storage units at TA-50 (the indoor and outdoor units). Permit requirements in this Permit Part include, but are not limited to:

Prohibition of Free-Liquid Storage - Storing hazardous waste containing free liquids at the TA-50 CSUs is prohibited.

Maintenance of Fire Lane - Fire access lanes must be maintained between the TA-50-69 Outdoor and Indoor CSUs.

Permit Part 13 also references Permit Part 3 (*Storage in Containers*) and Permit Attachment G (*Container Management*).

Part 14: TA-54 contains the permit requirements the Applicants must follow for operating container storage units at TA-54 Areas G, L, and West. Permit requirements in this Permit Part include, but are not limited to:

Abandonment of Drain System Between Domes – The Applicants must plug and abandon the fire protection drain line system between Area G, Pad 9, Domes 229, 231, and 232.

Prohibition of Storage Between Domes – The overnight storage of hazardous wastes between domes at TA-54 Area G, Pad 9 is prohibited.

Dome 224 Containment System Maintenance – The Applicants must remove all fluids from the secondary containment system at Area G, Dome 224 and maintain the system in a dry state.

Dome 230 Containment System Maintenance – The Applicants must remove all fluids from the secondary containment system at Area G, Dome 230, and maintain the system in a dry state.

Area L Dome 215 Secondary Containment – The exterior, double-walled, 10,000 gallon, holding tank and its ancillary piping at TA-54 Area L, Dome 215 shall be considered a portion of the Dome's secondary containment.

Permit Part 14 also references Permit Part 3 (*Storage in Containers*) and Permit Attachment G (*Container Management*) and Permit Attachment O (*Hazardous Waste Management Units*).

Part 15: TA-55 contains the permit conditions the Applicants must follow for operating container storage and treatment units at TA-55's seven units (B45, B40, B05, K13, the vault, 185, and the Outdoor Container Storage Pad). Permit requirements in this Permit Part include, but are not limited to:

Secondary Containment – Hazardous waste with free liquids must be stored on secondary containment pallets except inside the following CSUs; B40, K13, and TA-55-4 Vault.

Permit Part 15 also references Permit Part 3 (*Storage in Containers*), Permit Part 4 (*Storage in Tanks*), and Permit Part 5 (*Storage in Tanks*), Permit Attachment G (*Container Management*), Permit Attachment H (*Tank Management*), Permit Attachment J (*Stabilization Unit Management*), and Permit Attachment O (*Hazardous Waste Management Units*).

Part 16: TA-3 contains the permit conditions the Applicants must follow for operating the three container storage units at TA-3 (TA-3-29 Rooms 1010, 1020, and 1030). It references Permit Part 3 (*Storage in Containers*), Permit Attachment G (*Container Management*), and Permit Attachment O (*Hazardous Waste Management Units*).

SWMUs and AOCs - There are certain permitted units at LANL that are situated among SWMUs and AOCs (i.e., co-located). If at closure, the Permittees can not clean close a permitted unit co-located with a SWMU or AOC to the appropriate clean-up standards outlined in Permit Part 9, Section 9.3, and they are unable to distinguish if the source of the release is from the permitted unit or the SWMU or AOC, clean-up of the permitted unit shall be coordinated with action taken under the Consent Order for the SWMU or AOC in accordance with 40 CFR § 264.110(c) and Section 9.1.

TA-54 Areas G, H, and L Closure - The Department requires the Permittees to close MDAs G, H, and L in their entirety under this Permit. Closure is required under RCRA, the HWA, and the HWMR.

The first phases of closure will be conducted through the corrective measures evaluation and implementation process outlined in Section VII of the March 1, 2005 Compliance Order on Consent (Order). The Department will select remedies and issue a statement of basis for the selected remedies for each closed disposal or landfill unit using the procedures in Section VII of the Order. The remedy selection is subject to public participation in accordance with 20.4.1.901 NMAC, and as described in Section VII.D.7 of the Order.

Upon selection of the remedies for closure of each of the disposal or landfill units, the Permittees shall be required to submit a Corrective Measures Implementation (CMI) Work Plan to the Department for approval on a schedule established by the Department. The CMI Work Plan is equivalent to a Closure Plan. All inspection, monitoring, and operation and maintenance (O & M) of remediation systems installed as part of CMI Work Plan (Closure Plan) implementation shall be proposed in the Post-Closure Care Plans for MDAs G, H, and L as described in Permit Part 10 (*Post-Closure Care*).

SWMUS AND AOCS

As part of the draft Permit, the Department has provided a list of SWMUs and AOCs which require corrective action (Attachment P, Table P-1). These are units that are not included on the current Permit (AOCs, newly identified SWMUs, Canyons). Discussions of each SWMU and AOC are included as the Attachment to this Fact Sheet (*Fact Sheet Attachment*). All Canyons at the Laboratory have been identified as AOCs by the Permittees on Table B-1 in their *Installation*

Work Plan for Environmental Restoration, Revision 7, dated November 1998. The Canyons are therefore incorporated into the draft Permit.

UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION

Unclassified controlled nuclear information (UCNI) is included in both the Part A and Part B portions of the LANL permit applications and is considered sensitive information. Therefore, its access is restricted to Department-HWB personnel only and not for release to the public. UCNI information, stored in a separate, secure location at the Department, generally consists of floor plans depicting hazardous waste storage and treatment unit locations. In the event that the public has particular questions regarding UCNI information, they are instructed to contact Thomas Granich, Security Officer at LANL, directly at 505-667-3401.

PUBLIC REVIEW OF THE DRAFT PERMIT

The Administrative Record for this proposed action consists of the Permit application, the draft Permit, this Public Notice, the Fact Sheet, and supporting documentation. The Administrative Record may be reviewed, with prior appointment, at the following location during the public comment period.

NMED - Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone: (505) 476-6000
Monday – Friday: 8:00 a.m. to 5:00 p.m.
Contact: *Pam Allen*

A copy of the draft Permit, the Public Notice, this Fact Sheet, and an electronic version of the Administrative Record for the Permit, are available on the Department's website at: www.nmenv.state.nm.us/HWB/lanlperm.html under LANL Draft Permit. To obtain a copy of the Administrative Record or a portion thereof, please contact Ms. Pam Allen at (505) 476-6000, or at address given above. The Department will provide copies, or portions thereof, of the Administrative Record at a cost to the requestor.

The Department issued a public notice on **August 27, 2007**, to announce the beginning of a 60-day comment period that will end at **5:00 p.m. MDT, October 26, 2007**. Any person who wishes to comment on the draft Permit or request a public hearing should submit written or electronic mail (e-mail) comment(s) with the commenter's name and address to the respective address below. Only comments and/or requests received before **5:00 p.m. MDT on October 26, 2007** will be considered.

John E. Kieling, Program Manager
Hazardous Waste Bureau - New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone: (505) 476-6000
E-mail: john.kieling@state.nm.us
Ref: LANL Draft Permit

Written comments must be based on reasonably available information and include, to the extent practicable, all referenced factual materials. Documents in the administrative record need not be re-submitted if expressly referenced by the commenter. Requests for a public hearing shall provide: (1) a clear and concise factual statement of the nature and scope of the interest of the person requesting the hearing; (2) the name and address of all persons whom the requestor represents; (3) a statement of any objections to the draft Permit, including specific references to any conditions being addressed; and (4) a statement of the issues which the commenter proposes to raise for consideration at the hearing. Written comment and requests for Public Hearing must be filed with Mr. John Kieling on or before **5:00 p.m. MDT, October 26, 2007**. The Department will provide a thirty (30) day notice of a public hearing, if scheduled.

All written comments submitted will be considered in formulating a final decision and may cause the draft Permit to be modified. The Department will respond in writing to all public comments. This response will specify which provisions, if any, of the draft Permit have been changed in the final decision and the reasons for the changes; and briefly describe and respond to all public comments raised during the public comment period. All persons presenting written comments or who requested notification in writing will be notified of the decision by mail. These responses will also be posted on the Department's website.

After consideration of all the written public comments received, the Secretary of the New Mexico Environment Department may issue a final permit. The Secretary will make the final decision publicly available and shall notify the Applicants by certified mail. All persons submitting written public comment, who filed an Entry of Appearance, or requested notification in writing, shall be notified in the decision by first class regular mail. The Secretary's decision shall constitute a final agency decision and may be appealed as provided by the HWA (Chapter 74, Article 4 NMSA 1978).

ARRANGEMENTS FOR PERSONS WITH DISABILITIES

Persons having a disability and requiring assistance or auxiliary aid to participate in this process should contact Judy Bentley at the New Mexico Environment Department, Human Resources Bureau, P.O. Box 26110, 1190 St. Francis Drive, Santa Fe, New Mexico, 87502, telephone number: (505) 827-9872. TDY users please access her number via the New Mexico Relay Network at 1-800-659-8331.