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Date: October 5, 2011
Refer To: ENV-RCRA-11-0211
LAUR: 11-11640

Mr. John E. Kieling
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

Dear Mr. Kieling:

SUBJECT: REQUEST TO RETRACT A REFERENCE FROM THE LOS ALAMOS NATIONAL LABORATORY (LANL) PERMIT MODIFICATION REQUEST FOR TECHNICAL AREA 63 TRANSURANIC WASTE FACILITY (TWF) HAZARDOUS WASTE CONTAINER STORAGE UNIT, LANL HAZARDOUS WASTE FACILITY PERMIT, EPA ID No. NM0890010515

The purpose of this letter is to request a revision to the above referenced Class 2 permit modification request to the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (the Permit) originally submitted by the Department of Energy (DOE) and the Los Alamos National Security, LLC (LANS), to the New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB) on August 18, 2011. The requested revision is to delete a reference included in the permit modification request submittal.

The reference is in Section 3.0 of Attachment F, *Closure Plan*, of the permit modification request. The referenced document is the TWF Document No. 102355-PLAN-00005 Preliminary Project Execution Plan. This reference was included in the final document in error.

The reference is for an estimate of the anticipated yearly waste container storage rate for the storage unit that supports the estimated maximum inventory of hazardous wastes on-site over the active life of the facility as required by 40 CFR 264.112(b)(3). The estimate for yearly storage is based on the normal operations design capacity of the waste storage buildings (825 drums or drum equivalents [D/DE], configured in two-high pallet stacks) that represents a nine-month waste generation period prior to campaigning shipments to the Waste Isolation Pilot Plant (WIPP) in Carlsbad, NM. This results in an adjusted annual throughput estimate of 1,100 D/DE. Contingency storage of 50% above normal, or a total of 1,240 D/DE is achieved through third tier pallet stacking, and is not included in the throughput

calculation. Contingency storage is designed in the event shipments to WIPP are placed on hold for an extended period and surge storage capacity is required. The waste storage estimate is within the throughput estimate of 1,500 D/DE given in the 2008 Site Wide Environmental Impact Statement (see Attachment H, Section H.3.2.2.2).

The above information was the only purpose for the inclusion of the document reference. However, that document is preliminary and subject to revisions as the TWF project progresses. The reference should have been removed before the permit modification request was submitted. References have not been previously included with maximum inventory estimates as evidenced in the existing approved closure plans in the Permit.

Attachments to this letter include a redline copy of the closure plan page illustrating the requested change and 3 copies of the revised closure plan with an electronic copy. The requested change will also be posted to the LANL electronic public reading room with an e-mail notice to keep the interested public aware of this change.

Please contact Mark Haagenstad at (505) 665-2014 of the Water Quality and RCRA Group (ENV-RCRA) if you have questions.

Sincerely,

A R Grieggs

Anthony R. Grieggs
Group Leader
Water Quality & RCRA Group
Los Alamos National Laboratory

Sincerely,

Gene E Turner

Gene E. Turner
Environmental Permitting Manager
Environmental Projects Office
Los Alamos Site Office
National Nuclear Security Administration

ARG:GET:GB/lm

Enclosures: a/s

Cy: Laurie King, USEPA/Region 6, Dallas TX, w/enc.
Steve Pullen, NMED/HWB, Santa Fe, NM, w/o enc.
George Rael, LASO-EO, w/o enc., A906
Gene Turner, LASO-EO, w/o enc., A316
Carl A. Beard, PADOPS, w/o enc., A102
J. Chris Cantwell, ADESHQ, w/o enc., K491
Greg Juerling, PMF-FUNCT, w/o enc., M873
Mark Haagenstad, ENV-RCRA, w/o enc., K404, (E-File)
Gian Bacigalupa, ENV-RCRA, w/o enc., K404, (E-File)
ENV-RCRA File, w/enc., M704
LASO Records Center, w/enc., A316
IRM-RMMSO, w/enc., A150

Attachment 1

Redline Revision to Page 7, Attachment F, Closure Plan
Los Alamos National Laboratory Permit Modification Request for
Technical Area 63 Transuranic Waste Facility
Hazardous Waste Container Storage Unit

- Fire Water Storage Tank: 63-0148

3.0 ESTIMATE OF MAXIMUM WASTE STORED

The TWF will be capable of storing/staging a minimum of 825 55-gallon drum/drum equivalents (D/DE) with overflow storage capacity up to 1,240 D/DE. On a yearly basis, the TWF will process 1100 D/DE per year, or 33000 D/DE or 1.815 million gallons during the lifetime of the facility ~~TRU Waste Facility Document No. 102355-PLAN-00005 Preliminary Project Execution Plan.~~

4.0 GENERAL CLOSURE REQUIREMENTS

The following sections describe the closure objectives and schedule for the permitted unit.

4.1 Closure Performance Standard

As required by Permit Section 9.2, the permitted unit will be closed to meet the following performance standards:
a. Remove all hazardous waste residues and hazardous constituents;
b. Ensure contaminated media do not contain concentrations of hazardous constituents greater than the clean-up levels established in accordance with Permit Sections 11.4 and 11.5. For soils the cleanup levels shall be established based on residential use. The Permittees must also demonstrate that there is no potential to contaminate groundwater.

If the Permittees are unable to achieve either of the clean closure standards above, they must:
c. control hazardous waste residues, hazardous constituents, and, as applicable, contaminated media such that they do not exceed a total excess cancer risk of 10^{-5} for carcinogenic substances and, for non-carcinogenic substances, a target Hazard Index of 1.0 for human receptors, and meet Ecological Screening Levels established under Permit Section 11.5;
d. minimize the need for further maintenance;
e. control, minimize, or eliminate, to the extent necessary to protect human health and the environment, the post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, groundwater, surface waters, or to the atmosphere; and
f. comply with the closure requirements of Permit Part 9 (*Closure*) and 40 CFR Part 264, Subparts G and I for container storage units.
Closure of the permitted unit will be deemed complete when:
1) All surfaces and equipment have been decontaminated, or otherwise properly disposed of; 2) closure has been certified by an independent, professional engineer licensed in the State of New Mexico; and 3) Closure certification has been submitted to, and approved by, the Department.

4.2 Closure Schedule

This closure plan is intended to address closure requirements for the permitted unit within the authorized timeframe of this Permit (see Permit Section 9.4.1). However, pursuant to 40 CFR §264.112(e), removing hazardous wastes and decontaminating or dismantling equipment in accordance with an approved closure plan may be conducted at any time before or after notification of closure. For the purposes of this closure plan, portable and temporary structures in this permitted unit such as transportainers are considered to be equipment by their design and to facilitate the closure schedule for the TWF.

Notification of closure will occur at least 45 days prior to when LANL expects to begin closure (see 40 CFR § 264.112(d)(1)). Closure activities will begin according to the requirements of 40 CFR § 264.112(d)(2). Notification of the structural assessment (assessment), as described in Section 5.2 of this closure plan, will occur in accordance with Permit Section 9.4.6.2.

Attachment 2

Revised Attachment F, Closure Plan
Los Alamos National Laboratory Permit Modification Request for
Technical Area 63 Transuranic Waste Facility
Hazardous Waste Container Storage Unit
3 copies

ATTACHMENT F
TECHNICAL AREA 63
TRANSURANIC WASTE FACILITY
CLOSURE PLAN

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TRANSURANIC WASTE FACILITY
CLOSURE PLAN

1.0 INTRODUCTION

This closure plan describes the activities necessary to close the permitted mixed waste Transuranic Waste Facility (TWF) at Technical Area (TA)-63 at the Los Alamos National Laboratory (Facility) hereinafter referred to as the "Unit To Be Closed," or the "Unit." The information provided in this closure plan addresses the closure requirements specified in Permit Part 9 and the Code of Federal Regulations (CFR), Title 40, Part 264, Subparts G and I for waste management units operated at the Facility under the Resource Conservation and Recovery Act (RCRA) and the New Mexico Hazardous Waste Act.

Until closure is complete and has been certified in accordance with Permit Part 9.5 and 40 CFR §264.115, a copy of the approved closure plan or the hazardous waste facility permit containing the plan, any approved revisions to the plan, and closure activity documentation associated with the closure will be on file with hazardous waste compliance personnel at the Facility and at the U.S. Department of Energy (DOE) Los Alamos Site Office. Prior to closure of the unit, this closure plan may be amended in accordance with Permit Section 9.4.8 to provide updated sampling and analysis plans and to incorporate updated decontamination technologies. Amended closure plans shall be submitted to the New Mexico Environment Department (the Department) for approval prior to implementing closure activities.

2.0 DESCRIPTION OF THE UNIT TO BE CLOSED

The TWF is located in TA-63 at the junction of Pajarito Road and Puye Road, within the triangle formed by Building 63-111 to the east, Puye Road to the north, and Pajarito Road to the southwest. It is designed, constructed, and commissioned as a Hazard Category (HC)-2 nuclear facility permitted as Resource Conservation and Recovery Act (RCRA) Storage Facility for TRU, mixed TRU and hazardous wastes. Refer to Figure 2-5 of this permit modification request for the TWF Site Plan.

UNIT TO BE CLOSED - STRUCTURES WITHIN THE CONCRETE PAD:

- Storage Buildings: 63-0149, 63-0150, 63-0151, 63-0152, and 63-0153
- Storage and Characterization Building: 63-0154
- Forklift Charging Station: 63-0146
- Characterization Pads: 63-0155, 63-0156, and 63-0156
- Calibration Source and Matrix Module (CSMM) Building: 63-0158
- Equipment Storage Shed: 63-0159
- Retention Basin

Six buildings are designated for storage of TRU and Mixed TRU wastes in support of LANL DP programs and missions. One of the storage structures is used for both storage of larger-sized waste containers and for head space gas sampling and analysis. Certification of containers in accordance with WIPP Waste Acceptance Criteria (WAC) will occur at the three characterization and testing trailers. A concrete pad underlies the storage and characterization buildings and trailers, as well as the intra-site waste receiving and shipping area. The boundaries of the pad will be used to designate the RCRA-permitted portion of the TWF.

OTHER TWF STRUCTURES:

- Operations Support Building: 63-0144
- Canopy Building: 63-0145
- Forklift Charging Station: 63-0146
- Utility Building: 63-0147
- Fire Water Storage Tank: 63-0148

3.0 ESTIMATE OF MAXIMUM WASTE STORED

The TWF will be capable of storing/staging a minimum of 825 55-gallon drum/drum equivalents (D/DE) with overflow storage capacity up to 1,240 D/DE. On a yearly basis, the TWF will process 1100 D/DE per year, or 33000 D/DE or 1.815 million gallons during the lifetime of the facility.

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If the Permittees are unable to achieve either of the clean closure standards above, they must:
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d. minimize the need for further maintenance;
e. control, minimize, or eliminate, to the extent necessary to protect human health and the environment, the post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, groundwater, surface waters, or to the atmosphere; and
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Closure of the permitted unit will be deemed complete when:
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4.2 Closure Schedule

This closure plan is intended to address closure requirements for the permitted unit within the authorized timeframe of this Permit (see Permit Section 9.4.1). However, pursuant to 40 CFR §264.112(e), removing hazardous wastes and decontaminating or dismantling equipment in accordance with an approved closure plan may be conducted at any time before or after notification of closure. For the purposes of this closure plan, portable and temporary structures in this permitted unit such as transportainers are considered to be equipment by their design and to facilitate the closure schedule for the TWF.

Notification of closure will occur at least 45 days prior to when LANL expects to begin closure (see 40 CFR § 264.112(d)(1)). Closure activities will begin according to the requirements of 40 CFR § 264.112(d)(2). Notification of the structural assessment (assessment), as described in Section 5.2 of this closure plan, will occur in accordance with Permit Section 9.4.6.2.

Within 90 days of the final receipt of hazardous waste, LANL will conduct the records review (review) and assessment and submit an amended closure plan, if necessary, to the NMED for review and approval as a permit modification. Within five days of approval of the modified closure plan, if applicable, LANL will remove all stored waste and begin decontamination of unit structures, surfaces, and equipment. Decontamination verification sampling activities, and soil sampling if applicable, will be conducted to demonstrate that surfaces, related equipment, and media, if applicable, at the TWF meet the closure performance standards in Permit Section 9.2.

All closure activities, including submittal of a final closure certification report to the NMED for review and approval, will be completed within 180 days after commencement of closure. The final closure report and certification will be submitted to NMED 240 days after initiating closure. In the event that closure of the TWF cannot proceed according to schedule, LANL will notify the NMED in accordance with the extension request requirements in Permit Section 9.4.1.1.

5.0 CLOSURE PROCEDURES

The following sections describe the procedures to be used for closure of the permitted unit. The procedures will proceed in the order described although the operating records review described in Section 5.2.1 may be started earlier. Figure F-1 provides an outline of the general procedures that will be conducted and the decision-making strategy for the closure activities.

5.1 Removal of Waste

In accordance with Permit Part 9.4.2, all stored hazardous waste will be removed from the permitted unit scheduled for closure. Depending upon their size, containers will be removed with forklifts, container dollies, pallets, or manually. Containers will be placed on flat bed trucks, trailers, or other appropriate vehicles for transport from the permitted unit. Appropriate shipping documentation will be prepared for the wastes during transport. All hazardous waste containers will be moved to a permitted on-site storage unit or a permitted off-site treatment, storage, or disposal facility.

5.2 Records Review and Structural Assessment

Before starting decontamination and sampling activities, the operating and inspection records for the permitted unit will be reviewed and a structural assessment of the unit will be conducted to determine any finding(s) or action(s) that may influence closure activities or additional sampling locations.

5.2.1 Records Review

The Facility Operating and Inspection Records shall be reviewed in accordance with Permit Section 9.4.6.1. The goals of this review will be to:

Confirm the specific hazardous waste constituents of concern; and

Confirm additional sampling locations (e.g., locations of any spills or chronic conditions identified in the Operating Record).

5.2.2 Structural Assessment

A structural assessment (assessment) of the unit's physical condition will be conducted in accordance with Permit Section 9.4.6.2 and documented with photographs and drawings, as necessary. If the assessment reveals any evidence of a release (e.g., stains) or damage (e.g., cracks, gaps, chips) to the flooring or building materials, the Permittees must incorporate these locations as additional sampling points in the updated sampling and analysis plan (see Section 7.0) and include the applicable sampling methods and procedures. If evidence of a release or damage is present, a wipe sample or a representative sample of the media (e.g., concrete chip) will be collected according to the procedures in Section 7.2

5.3 Decontamination and Removal of Equipment and Structures

The following sections describe the decontamination procedures to be used for closure of the permitted unit.

5.3.1 Decontamination of Equipment

The decontamination needs for equipment present in the permitted unit are based on whether the equipment will be managed as waste or how the equipment can be decontaminated without damage. Equipment that is managed as waste or portable equipment that can be used in other waste management units will not be decontaminated before it is removed from the TWF. All materials and equipment that are removed as waste or cannot be decontaminated will be solid and potentially hazardous waste (as defined by RCRA) when removed and will be managed as described in Section 8.0 of this closure plan and Permit Part 9. Equipment and operating machinery that needs decontamination and that is not sensitive to water intrusion such as fixed storage structures, characterization trailers, transportainers that have stored mixed waste, and/or equipment will be pressure or steam washed as dictated by assay. Other equipment needing decontamination that is sensitive to water such as portable air monitors, electronic devices or tools, PPE, portable eyewashes, and spill cleanup equipment containers in the storage buildings will be cleaned with a wipe-down wash. The lists of equipment needing decontamination will be reviewed during the pre-closure and structural assessment described in Part 9 of this Permit (see Table 8).

Water resistant equipment at the permitted unit will be decontaminated by steam cleaning using water or pressure washing with a solution consisting of a surfactant detergent (e.g., Alconox®) and water. Wipe-down washing with a solution consisting of a surfactant detergent (e.g., Alconox®) and water may be conducted on equipment within the unit if containment cannot be established for the steam cleaning water or pressure wash solution or these methods will damage the equipment preventing further use or recycling. The quantity of the wash solution will be minimized by dispensing from buckets, spray bottles, or other types of containers. Cheesecloth, rags, or other absorbent materials will be used to wipe down the equipment after being wetted in the wash solution or after spraying solution onto the equipment. If necessary, portable berms or other devices (e.g., absorbent socks, plastic sheeting, wading pools, or existing secondary containment) designed to collect and provide containment will collect excess wash water and provide containment during the decontamination process. Wash solution will not be allowed to enter the fire suppression water drains.

Portable equipment at the permitted unit may also be swiped or monitored using radioassay procedures before the equipment is removed. Any detected radioactivity above free release levels may serve as an indicator, in accordance with Permit Part 9.4.4, for potential contamination by hazardous constituents.

5.3.2 Removal of Structures and Related Equipment

Storage structures will be deconstructed upon completion of decontamination. The characterization trailers – as a whole, will be removed from the TA-63 Unit location upon completion of the decontamination process. Construction materials will be characterized using the procedures contained in Permit Attachment C and managed for reuse, recycle, or waste disposition based upon that characterization.

After additional sampling locations have been determined as a result of the structural assessment, the concrete pad, materials associated with the concrete pad and a minimum of 6 inches of the base course and soil underlying the asphalt pad will be removed. The Permittees will add additional sampling locations if any stains attributable to waste management activities on the pad are evident in the underlying soil.

During the structural assessment, the use of dust suppression procedures at the site will be assessed using the Permittees' construction policies to restrict spreading of any hazardous waste constituents before sampling can be implemented. The option of removing small areas of concrete at sampling locations

where contamination is suspected (i.e., spill or staining sites) to allow sampling without disturbing the surrounding area prior to the general removal of the pad will be assessed at that time.

5.4 Equipment Used During Decontamination Activities

Reusable protective clothing, tools, and equipment used during closure activities will be cleaned with a wash water solution. The solution will be characterized and managed as a hazardous waste if appropriate. Residue, disposable equipment, and equipment that cannot be decontaminated will be containerized and managed as waste.

6.0 VERIFICATION CRITERIA

Successful decontamination to demonstrate clean closure of the permitted unit will meet the criteria outlined in Permit Part 9 including the following:

No detectable RCRA-regulated constituent residues from the management of authorized RCRA-regulated wastes are identified in samples collected during closure activities.

Analytical results of samples collected during decontamination verification activities identify no statistically significant concentrations of RCRA regulated hazardous constituents, above appropriate baseline/background data:

Baseline/background for liquid sampling results will be the discrete analytical results for a baseline (or blank) sample obtained from the verification solution prior to its use for the verification (clean-up confirmation) wipe down;

Baseline/background levels for wipe sample analytical results will be equivalent to the analytical results of an unused wipe media sample (blank); or

Baseline/background soil analytical results will be established in coordination with the corrective action activities described in Section 6.1.

6.1 Alternative Closure Requirements

If the decontamination verification sampling activities discussed in Section 7.1 of this closure plan indicate that residual contamination is present in the soil underlying TWF, alternative closure requirements may be applied to the closure as allowed by Part 9 of this Permit and 40 CFR §264.110(c). This provision allows for the replacement of the requirements in this closure plan with alternative requirements contained in a separate enforceable document when the waste management unit is situated among solid waste management units or areas of concern, a release has occurred, and one or more of the units are likely to have contributed to the release.

7.0 SAMPLING AND ANALYSIS PLAN

This sampling and analysis plan (SAP) describes the sampling and analytical methods as well as the quality assurance and quality control (QA/QC) procedures that will be used to demonstrate that the permitted unit is closed in accordance with Permit Part 9 and all applicable closure requirements.

All samples will be collected from locations in accordance with the methods and procedures provided in Section 7.2 of this closure plan, Permit Part 9, and in accordance with QA/QC procedures included in this section. Samples will be analyzed by an independent laboratory for all of the constituents listed in 40 CFR Part 261 Appendix VIII and Part 264 Appendix IX subject to modification by this closure plan or as a result of the review described in Section 5.2 of this closure plan.

7.1 Decontamination Verification

Performance-based verification activities will be conducted at the permitted unit in order to verify that the surfaces of the permitted unit and its related equipment have been decontaminated (see Permit Sections 9.4.4.1 and 9.4.4.2) to meet the closure performance standards in Permit Section 9.2.

Performance-based activities will consist of the collection of soil samples from beneath the concrete pad of the unit and in additional sampling locations specified to meet the conditions of Permit Section 9.4.7.1.ii. One wipe sample from each piece of decontaminated equipment related to the permitted unit will be collected for decontamination verification. All samples will be collected and analyzed in accordance with the procedures in Sections 7.2 and 7.5 of this closure plan. The primary condition applicable to this waste management unit requires random sampling every 900 square feet in storage areas and 250 feet in loading areas utilized for RCRA waste management activities.

TWF defined loading areas will be in the loading/unloading canopy and at each characterization trailer. One soil sample will be taken in any area of the TWF where contamination is known to have penetrated through the concrete or that was identified for specific sampling in the structural assessment.

The waste management activities that will occur in the storage structures involve moving waste to storage stacks or other locations directly without staging in a loading area. Thus, only the 900 square foot sampling condition for storage will apply in the areas covered by the storage buildings themselves.

Figure F-2 illustrates the proposed sampling grid for the permitted unit. At the time of sampling, the precise location of the sample will be randomly selected from within each 900 square feet sampling box. This location will be determined by applying a sub-grid of potential sampling points followed by random selection of the exact point. This sampling strategy will result in a minimum of 30 samples (unit as a whole is approximately 27000 square feet) taken from the TWF concrete pad. If it is determined at the time site assessment occurs, that there is need to take additional samples within the area of the sampling box (e.g., stained cracks in the concrete pad), these locations will be sampled within the grid sampling box as judgmental samples, replacing the random sample. In addition to the 30 samples collected from the 900 square foot grids, 3 samples will be collected (truck entrance, truck exit and forklift entrance/exit) of the loading/unloading canopy; one sample each from the loading/unloading point for the RTR and HENC trailers; one sample from the loading side and one from the unloading (opposite side) of the SuperHENC trailer.

Additionally, Permit Part 9.4.7.ii.a includes a condition that requires collection of samples from beneath every ten feet of underground pipe. The concrete pad has been designed and will be built to direct storm water and fire suppression water by sheet flow to the retention basin. For drainage purposes, the unit is divided into north and south sections by the 5 feet wide and 3 inches deep valley gutter. The north side of the unit - where all regulated waste management will occur in permitted buildings – drains to the retention basin. The south side drainage sheet flows generally to the southeast toward TA-63 parking lots. At least one wipe sample will be collected at the discharge point for the retention basin to determine the need for further sampling. The discharge point is a manually activated valve to the underground piping system; should standing liquid be present at the pipe discharge point, an additional liquid sample will be collected.

Permit Part 9.4.7.1.ii.a also states that samples be taken at liquid discharge points associated with the permitted unit. Storm water flow at the TWF will be directed across the pad by the south-ward slope and. The slope below the curbing is protected with rock and concrete. Concrete curbing also extends along the west and partially the south sides of the pad and ends at a concrete and rock drainage structure. The remainder of the south side of the pad is uncurbed. A soil sample will be taken at the drainage structure and at 30 foot intervals just off the pad along the uncurbed portion of the south side. The soil sampling grid is shown in Figure F-2.

Design-based activities will consist of decontaminating at least two times (*see* Permit Section 9.4.3.1) the permitted unit's related equipment (*see* Permit Section 9.4.4.2). The design-based activities are intended

to achieve the performance standard in Permit Section 9.2 where there are no applicable sampling methods for the detection of certain compounds (i.e., volatile organic compounds) on structures and equipment. In the event that the wash medium (e.g., steam) or the choice of an additive (e.g., Alconox®) to the wash medium can be shown to provide sufficient decontamination of the compounds, the decontamination will be reduced to one time.

7.2 Sample Collection Procedures

Samples will be collected in accordance with the most recent and appropriate Facility sampling plan incorporating guidance from the U.S. Environmental Protection Agency (EPA, 1986 and EPA, 2002) and DOE (DOE, 1995), or other approved procedures.

7.2.1 Liquid Sampling

Liquid sampling will consist of grab samples of the liquid at the drain of the retention basin, if applicable, to ensure the drain system has not been contaminated. Liquid sampling will be conducted using glass or plastic tubes, a composite liquid waste sampler, a bacon bomb, a bailer, or by pouring liquid into sample containers.

7.2.2 Wipe Sampling

When surface wipe samples are used to determine if residual hazardous constituents remain for structures or surfaces within the TWF, the samples will be taken in accordance with the National Institute of Occupational Safety and Health (NIOSH) *Manual of Analytical Methods*, Method 9100 (NIOSH, 1994), or other approved methodology. The appropriate use of wipe sample methods will consider the type of surface being sampled, the type of contaminant, the solution used, and the desired contaminant concentration detection limits. The NIOSH method includes wiping a 100 square centimeter area at each discrete location with a gauze wipe wetted with a liquid solution appropriate for the desired analysis (e.g., de-ionized water for lead). For wipe sampling, guidance from the analytical laboratory must be obtained prior to wipe verification sampling to confirm that the solution chosen for each analysis is appropriate for the analysis to be conducted and that wipe sampling is a proper technique for the analysis.

7.2.3 Soil Sampling

Soil will be sampled using a spade, scoop, auger, trowel, or other equipment as specified in approved methods for the type of analyte (i.e., EPA 1996 or 2002). The sample of soil will be taken from 0 to 6 inches of the surface. Samples will be kept at their at-depth temperature or lower, protected from ultraviolet light, sealed tightly in the recommended container, and analyzed within the specific holding times listed in Table 6.

7.2.4 Cleaning of Sampling Equipment

Reusable sampling equipment will be cleaned and rinsed prior to use. Sampling equipment rinsate blanks will be collected and analyzed only if reusable sampling equipment is used. Reusable decontamination equipment, including protective clothing and tools, used during closure activities will be scraped as necessary to remove residue and cleaned with a wash water solution. Sampling equipment will be cleaned prior to each use with a wash solution, rinsed several times with tap water, and air-dried or wiped dry to prevent cross contamination of samples. A disposable sampler is considered clean if still in a factory-sealed wrapper. Residue, disposable decontamination equipment, and reusable decontamination equipment that cannot be decontaminated will be containerized and managed appropriately at an approved on-site facility.

7.3 Sample Management Procedures

The following information presents general sample management and sampling equipment cleaning procedures for closure of the permitted unit. Samples will be collected and transported using documented chain-of-custody and sample management procedures to ensure the integrity of the sample and provide an

accurate and defensible written record of the possession and handling of a sample from the time of collection through laboratory analysis. Sample collection equipment will include labels, chain-of-custody forms, EPA-certified clean containers, coolers, preservatives, and custody seals. The following provides a description of sample documentation; sample handling, preservation, and storage; and sample packaging and transportation requirements that will be followed during the sampling activities associated with the closure.

7.3.1 Sample Documentation

Sampling personnel will complete and maintain records to document sampling and analysis activities. Sample documentation will include sample identification numbers, chain-of-custody forms, analysis requested, sample logbooks detailing sample collection activities, and shipping forms (if necessary).

7.3.1.1 Chain-of-Custody

Chain-of-custody forms will be maintained by sampling personnel until the samples are relinquished to the analytical laboratory. One chain-of-custody form may be used to document all of the samples collected from a single sampling event. The sample collector will be responsible for the integrity of the samples collected until properly transferred to another person. The EPA considers a sample to be in a person's custody if it is:

- In a person's physical possession,
- In view of the person in possession, or
- Secured by that person in a restricted access area to prevent tampering.

The sample collector will document all pertinent sample collection data. Individuals relinquishing or receiving custody of the samples will sign, date, and note the time on the analysis request/chain-of-custody form. A chain-of-custody form must accompany all samples from collection through laboratory analysis. The completed original chain-of-custody form will be returned by the analytical laboratory and will become a part of the permanent record documenting the sampling effort.

7.3.1.2 Sample Labels and Custody Seals

A sample label will be affixed to each sample container. The sample label will include the following information:

- A unique sample identification number;
- Name of the sample collector;
- Date and time of collection;
- Type of preservatives used, if any; and
- Location from which the sample was collected.

A custody seal will be placed on each sample container to detect unauthorized tampering with the samples. These labels must be initialed, dated, and affixed by the sample collector in such a manner that it is necessary to break the seal to open the container.

7.3.1.3 Sample Logbook

All pertinent information on the sampling effort must be recorded in a bound logbook. Information must be recorded in ink and any cross outs must be made with a single line and the change initialed and dated by the author. The sample logbook will include the following information:

- The sample location,
- Suspected composition,
- Sample identification number,
- Volume/mass of sample taken,
- Purpose of sampling,
- Description of sample point and sampling methodology,
- Date and time of collection,
- Name of the sample collector,
- Sample destination and how it will be transported,
- Observations, and
- Names of personnel responsible for the observations.

7.3.2 Sample Handling, Preservation, and Storage

Samples will be collected and containerized in appropriate pre-cleaned sample containers. Table G.10-6 presents the requirements in SW-846 (EPA, 1986) for sample containers, preservation techniques, and holding times. Samples that require cooling to 4 degrees Celsius will be placed in a cooler with ice or ice gel or in a refrigerator immediately upon collection.

7.3.3 Packaging and Transportation of Samples

All packaging and transportation activities will meet safety expectations, QA requirements, DOE Orders, and relevant local, state, and federal laws (including 10 CFR and 49 CFR). Appropriate Facility documents establish these requirements for packaging design, testing, acquisition, acceptance, use, maintenance, and decommissioning and for on-site, intra-site, and off-site shipment preparation and transportation of general commodities, hazardous materials, substances, waste, and defense program materials.

Off-site transportation of samples will occur via private, contract, or common motor carrier; air carrier; or freight. All off-site transportation will be processed through the Facility packaging and transportation organization, unless the shipper is specifically authorized through formal documentation by that organization to independently tender shipments to common motor or air carriers.

7.4 Sample Analysis Requirements

Samples will be analyzed for the appropriate hazardous constituents included within 40 CFR Part 261 Appendix VIII and 40 CFR Part 264 Appendix IX that have been stored at the permitted unit over its operational history (see Table 4). Table 4 will be modified, as necessary, at the time of notification of closure to incorporate changes based on the permitted unit's records review. Samples will be analyzed by an independent laboratory using the methods outlined in Table 6. Analytes, test methods and instrumentation, target detection limits, and rationale for metals and organic analyses are presented in Table 5

7.4.1 Analytical Laboratory Requirements

The analytical laboratory will perform the detailed qualitative and quantitative chemical analyses specified in Section 7.5.2. This analytical laboratory will have:

A documented comprehensive QA/ QC program, technical analytical expertise, a document control/records management plan, and the capability to perform data reduction, validation, and reporting.

The selection of the analytical testing methods identified in Table 5 was based on the following considerations:

- The physical form of the waste,
- Constituents of interest,
- Required detection limits (e.g., regulatory thresholds), and
- Information requirements (e.g., waste classification).

7.4.2 Quality Assurance/Quality Control

Field sampling procedures and laboratory analyses will be evaluated through the use of QA/QC samples to assess the overall quality of the data produced. QC samples evaluate precision, accuracy, and potential sample contaminations associated with the sampling/analysis process and are described in the following sections, along with information on calculations necessary to evaluate the QC results. QA/QC samples will be collected in accordance with the Facility's most recent and appropriate sampling plan incorporating guidance from the EPA (EPA, 2002) and DOE (DOE, 1995), or other approved procedures. Analysis will be conducted in accordance with procedures given in SW-846 (EPA, 1986), or other approved procedures or methods.

7.4.2.1 Field Quality Control

The field QC samples that may be collected include trip blanks, field blanks, field duplicates, and equipment rinsate blanks. Table 7 presents a summary of QC sample types, applicable analyses, frequency, and acceptance criteria. QC samples will be given a unique sample identification number and submitted to the analytical laboratory as blind samples. QC samples will be identified on the applicable forms so that the results can be applied to the associated sample.

7.4.2.2 Analytical Laboratory QC Samples

QA/QC considerations are an integral part of analytical laboratory operations. Laboratory QA ensures that analytical methods generate data that are technically sound, statistically valid, and that can be documented. QC procedures are the tools employed to measure the degree to which these QA objectives are met.

7.4.3 Data Reduction, Verification, Validation, and Reporting

Analytical data generated by the activities described in this closure plan will be verified and validated. Data reduction is the conversion of raw data to reportable units; transfer of data between recording media; and computation of summary statistics, standard errors, confidence intervals, and statistical tests.

7.4.4 Data Reporting Requirements

Analytical results will include all pertinent information about the condition and appearance of the sample-as-received. Analytical reports will include: a summary of analytical results for each sample; results from QC samples such as blanks, spikes, and calibrations; and reference to standard methods or a detailed description of analytical procedures; and raw data printouts for comparison with summaries.

The laboratory will describe off-normal sample preparations that occur during the analysis in sufficient detail so that the data user can understand how the sample was analyzed.

8.0 WASTE MANAGEMENT

All waste generated during closure will be controlled, handled, characterized, and disposed of in accordance with Permit Section 9.4.5, Permit Attachment C (*Waste Analysis Plan*), and Facility waste

management procedures. Closure activities may generate different types of waste materials, which are listed with potential disposal options in Table G.10-3 of this closure plan. Subsequent disposition options for the decontaminated structures and equipment include reuse, recycling, or disposal.

Portable berms or other devices, if necessary, will be used to collect excess wash water and provide containment during the decontamination activities to prevent releases. The excess wash water will be collected, transferred to containers, sampled, and analyzed for the hazardous constituents listed in Table G.10-4. The results of this analysis will determine if the excess wash water should be managed as hazardous or non-hazardous wastewater. Reusable protective clothing, tools, and equipment used during decontamination will be cleaned with a wash water solution. Disposable equipment and other small equipment that cannot be decontaminated will be containerized and managed as waste.

9.0 CLOSURE CERTIFICATION REPORT

Upon completion of the closure activities at the TWF, a closure certification report will be prepared and submitted to the Department. The report will document that the unit has been closed in compliance with the specifications in this closure plan and will contain the following:

- A copy of the certification described in Part 9 of this Permit.
- Any significant variance from the approved activities and the reason for the variance.
- A summary of all sampling results, showing:
- Sample identification
- Sampling location
- Datum reported
- Detection limit for each datum
- A measure of analytical precision (e.g., uncertainty, range, variance)
- Identification of analytical procedure
- Identification of analytical laboratory.
- A QA/QC statement on analytical data validation and decontamination verification.
- The location of the file of supporting documentation, including:
- Field logbooks
- Laboratory sample analysis reports
- QA/QC documentation
- Chain-of-custody forms.
- Storage or disposal location of regulated hazardous/mixed waste resulting from closure activities.
- A certification of accuracy of the report.

10.0 DEPARTMENT CLOSURE ASSESSMENT

Upon submittal of the closure certification report described in Section 9.0 of this closure plan, the Facility will arrange an on-site closure review with representatives of the Department to assess the completion of the closure activities of the permitted unit's closure activities. The Facility may also arrange, at

reasonable times, for other on-site reviews before, during, or after the closure period upon request by Department representatives.

11.0 REFERENCES

DOE, 1995. "DOE Methods for Evaluating Environmental and Waste Management Samples," DOE/EM-0089T, Rev. 2. Prepared for the U.S. Department of Energy by Pacific Northwest Laboratory, Richland, Washington.

EPA, 1986 and all approved updates. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA-*SW-846*, U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, U.S. Government Printing Office, Washington, D.C.

EPA, 2002. "RCRA Waste Sampling Draft Technical Guidance Planning, Implementation, and Assessment," EPA530-D-02-002, August 2002, Office of Solid Waste, U.S. Environmental Protection Agency, Washington, D.C.

LANL, 1999. "Screening Level Ecological Risk Assessment Methods," LA-UR-99-1406, Los Alamos National Laboratory, Los Alamos, New Mexico.

NIOSH, 1994. The National Institute for Occupational Health and Safety (NIOSH) *Manual of Analytical Methods*, Method 9100, 4th ed. Issue 1. 1994.

NMED, 2006. "Technical Background Document for Development of Soil Screening Levels," Rev. 4.0, June 2006, New Mexico Environment Department, Santa Fe, New Mexico.

Table 1
Technical Area 63 TWF Storage Unit Capacities and Waste Categories

Structure	Estimated Maximum Waste[a] (gallons)	55-gallon Drum Equivalent	Estimated Inventory[b, c] (gallons)	Waste Category	Dimensions (feet^2)
TA-63-0149	11,367	206.7	302,500	TRU, MTRU	62'4" x 31'4"
TA-63-0150	11,367	206.7	302,500	TRU, MTRU	62'4" x 31'4"
TA-63-0151	11,367	206.7	302,500	TRU, MTRU	62'4" x 31'4"
TA-63-0152	11,367	206.7	302,500	TRU, MTRU	62'4" x 31'4"
TA-63-0153	11,367	206.7	302,500	TRU, MTRU	62'4" x 31'4"
TA-63-0154	11,367	206.7	302,500	TRU, MTRU	77'11" x 31'4"
Totals	68,200	1,240	1,815,000		

[a] Estimated maximum quantity of waste that can be stored at the unit at one time.

[b] Estimated lifetime inventory of waste stored/treated at the unit.

[c] Estimated waste inventories include future use.

Table 2
Closure Schedule for the TA-63 TWF

Closure Activity	Schedule
Notify the Department of the initiation of closure.	Day 0
Remove all wastes including hazardous, mixed, and solid waste	No later than Day 90
Conduct records review	After initiating closure and before Structural Assessment
Conduct structural assessment	After removal of all wastes and before decontamination
Submit a request to modify the Closure Plan and the records review and structural assessment report	After conducting the records review and structural assessment and before decontamination
Complete all closure activities	No later than Day 180
Submit final Closure Report and Certification to the Department.	No later than Day 240

Note: The schedule above indicates calendar days in which the listed activities shall be completed from the day closure activities are initiated. Some activities may be conducted simultaneously.

Table 3
Potential Waste Materials, Waste Types, and Disposal Options

Potential Waste Materials	Waste Types	Disposal Options
Personal protective equipment (PPE)	Non-regulated solid waste	Subtitle D landfill
	Hazardous waste	The PPE will be treated to meet Land Disposal Restriction (LDR) treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D mixed waste landfill or the WIPP, as appropriate.
Decontamination wash water	Non-regulated liquid waste	Sanitary sewer
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Radioactive liquid waste	Radioactive Liquid Waste Treatment Facility (RLWTF)
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D mixed waste landfill or WIPP, as appropriate.
Verification water	Non-regulated liquid waste	Sanitary sewer
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Radioactive liquid waste	RLWTF
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D mixed waste landfill or WIPP, as appropriate.
Metal	Non-regulated solid waste	Subtitle D landfill or recycled
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D mixed waste landfill, or WIPP, as appropriate.
Discarded waste	Non-regulated solid waste	Subtitle D landfill

Potential Waste Materials	Waste Types	Disposal Options
management equipment	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA, or an authorized off-site radioactive waste disposal facility
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D mixed waste landfill or WIPP, as appropriate.
Sampling equipment	Non-regulated solid waste	Subtitle D landfill
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA , or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D mixed waste landfill or WIPP, as appropriate.
Storage Structures	Non-regulated solid waste	Subtitle D landfill
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D mixed waste landfill or WIPP, as appropriate.
Concrete Pad	Non-regulated solid waste	Subtitle D landfill or potentially, re-use/recycle
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D mixed waste landfill or WIPP, as appropriate.

Table 4
Hazardous Waste Constituents of Concern at the TWF[a]

Category	EPA Hazardous Waste Numbers	Specific Constituents
Toxic Contaminants	D004	Arsenic
	D005	Barium hydroxide
	D006	Cadmium
	D007	Chromium
	D008	Lead
	D009	Mercury
	D010	Selenium
	D011	Silver
	D018	Benzene
	D019	Carbon tetrachloride
	D021	Chlorobenzene
	D022	Chloroform
	D026	Cresol
	D027	1,4-Dichlorobenzene
	D028	1,2-Dichloroethane
	D029	1,1-Dichloroethylene
	D030	2,4-Dinitrotoluene
	D032	Hexachlorobenzene
	D033	Hexachlorobutadiene
	D034	Hexachloroethane
	D035	Methyl ethyl ketone
	D036	Nitrobenzene
	D037	Pentachlorophenol
	D038	Pyridine
	D039	Tetrachloroethylene
	D040	Trichloroethylene
	D041	2,4,5-Trichlorophenol
	D042	2,4,6-Trichlorophenol
	D043	Vinyl chloride
Volatile Organic Compounds	F001	Spent halogenated solvents, trichloroethylene
	F002	Spent halogenated solvents
	F003	Spent non-halogenated solvents, xylene, acetone
	F004	Spent non-halogenated solvents
	F005	Spent non-halogenated solvents
Toxic listed waste	U080	Methylene chloride

[a] This will be modified as needed, based on the unit operating record.
EPA = U.S. Environmental Protection Agency

Table 5
Summary of Proposed Analytical Methods

Analyte	EPA SW-846 Analytical Method [a]	Test Methods/ Instrumentation	Target Detection Limit [b]	Rationale
Metal Analysis				
Antimony	6010, 7010	ICP-AES, GFAA	20 ug/L	Determine the metal concentration in the samples.
Arsenic	6010, 7010, 7061A	ICP-AES, GFAA, CVAA	10 ug/L	
Barium	6010, 7010	ICP-AES,GFAA	200 ug/L	
Beryllium	6010, 7010	ICP-AES, GFAA	0.2 ug/L	
Cadmium	6010, 7010	ICP-AES, GFAA	2 ug/L	
Chromium	6010, 7010	ICP-AES, GFAA	10 ug/L	
Cobalt	6010, 7010	ICP-AES, GFAA	5 ug/L	
Copper	6010, 7010	ICP-AES, GFAA	5 ug/L	
Lead	6010, 7010	ICP-AES, GFAA	5 ug/L	
Mercury	6010, 7470A, 7471B	ICP-AES, CVAA	0.2 ug/L	
Selenium	6010, 7010, 7741A	ICP-AES, GFAA, CVAA	5 ug/L	
Silver	6010, 7010	ICP-AES, GFAA	10 ug/L	
Thallium	6010, 7010	ICP-AES, GFAA	30 ug/L	
Vanadium	6010, 7010	ICP-AES, GFAA	5 ug/L	
Zinc	6010, 7010	ICP-AES, GFAA	1 ug/L	
Organic Analysis				
Target compound list VOCs plus ten tentatively identified compounds (TIC)	8260B	GC/MS	10 mg/L	Determine the VOCs concentration in the samples.
Target compound list SVOCs plus 20 TICs	8270D, 8275	GC/MS	10 mg/L	Determine the SVOCs concentration in the samples.
Other Parameters				
Cyanide	9010, 9012	Colorimetric	20 ug/L	Determine cyanide concentration

[a] U.S. Environmental Protection Agency (EPA), 1986 and all approved updates, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846.

[b] Detection limits listed for metals are for clean water. Detection limits for organics are expressed as practical quantitative limits. Actual detection limits may be higher depending on sample composition and matrix type.

CVAA = Cold-vapor atomic absorption spectroscopy
FLAA = Flame atomic absorption spectroscopy
GC/MS = Gas chromatography/mass spectrometry
GFAA = Graphite furnace atomic absorption spectroscopy

ICP-AES = Inductively coupled plasma-atomic emission spectrometry
mg/L = milligrams per liter
SVOC = semi volatile organic compounds
ug/L = micrograms per liter.
VOC = volatile organic compounds

Table 6
Recommended Sample Containers[a], Preservation Techniques, and Holding Times[b]

Analyte Class and Sample Type	Container Type and Materials	Preservation	Holding Time
Metals			
TCLP Metals: Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver	Aqueous Media: 500-mL Wide-Mouth-Polyethylene or Glass with Teflon Liner	Aqueous Media: HNO_3 to pH <2 Cool to 4°C	180 Days
	Solid Media: 125-mL Glass	Solid Media: Cool to 4°C	
TCLP/Total Mercury	Aqueous Media: 500-mL Wide-Mouth-Polyethylene or Glass with Teflon Liner	Aqueous Media: HNO_3 to pH <2 Cool to 4 °C	28 Days
	Solid Media: 125-mL Glass	Solid Media: Cool to 4°C	
Volatile Organic Compounds			
Target Compound Volatile Organic Compounds	Aqueous Media: Two 40-mL Amber Glass Vials with Teflon-Lined Septa	Aqueous Media: HCl to pH<2 Cool to 4 °C	14 days
	Solid Media: 125-mL Glass or Two 40-mL Amber Glass Vials with Teflon-Lined Septa	Solid Media: Cool to 4°C Add 5 mL Methanol or Other Water Miscible Organic Solvent to 40-mL Glass Vials	
Semi-Volatile Organic Compounds			
Target Compound Semi-volatile Organic Compounds	Aqueous Media: Four 1-L Amber Glass with Teflon-Lined Lid	Aqueous Media: Cool to 4 °C	Seven days from field collection to preparative extraction. 40 days from preparative extraction to determinative analysis.
	Solid Media: 250-mL Glass	Solid Media: Cool to 4°C	

[a] Smaller sample containers may be required due to health and safety concerns associated with potential radiation exposure, transportation requirements, and waste management considerations.

[b] Information obtained from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, U.S. Environmental Protection Agency, 1986 and all approved updates.

°C = degrees Celsius
HNO_3 = nitric acid
HCl = hydrochloric acid
L = Liter
mL = milliliter
TCLP = Toxicity Characteristic Leaching Procedure

Table 7
Recommended Quality Control Sample Types, Applicable Analyses, Frequency, and Acceptance Criteria

QC Sample Type	Applicable Analysis [a]	Frequency	Acceptance Criteria
Trip Blank	VOC	One set per shipping cooler containing samples to be analyzed for VOCs	Not Applicable
Field Blank	VOC/SVOC, metals	One sample daily per analysis	Not Applicable
Field Duplicate	Chemical	One for each sampling sequence	Relative percent difference less than or equal to 20 percent
Equipment Rinsate Blank[b]	VOC/SVOC, metals	One sample daily	Not Applicable

[a] For VOC and SVOC analysis, if blank shows detectable levels of any common laboratory contaminant (e.g., methylene chloride, acetone, 2-butanone, toluene, and/or any phthalate ester), sample must exhibit that contaminant at a level 10 times the quantitation limit to be considered detectable. For all other contaminants, sample must exhibit the contaminant at a level 5 times the quantitation level to be considered detectable.

[b] Collected only if reusable sampling equipment used.

QC = quality control
VOC = volatile organic compound
SVOC = semi-volatile organic compound

Table 8
List of Permitted Unit Equipment

Equipment	Decontamination	Disposal[a]
Storage structure and associated equipment	X	
Any storage transportainers	X	
Equipment and spill kit cabinets	X	
Container pallets	X	X
Communication equipment	X	X
Access barriers and chains	X	X

[a] Disposal of waste items may include recycle or re-use as appropriate.

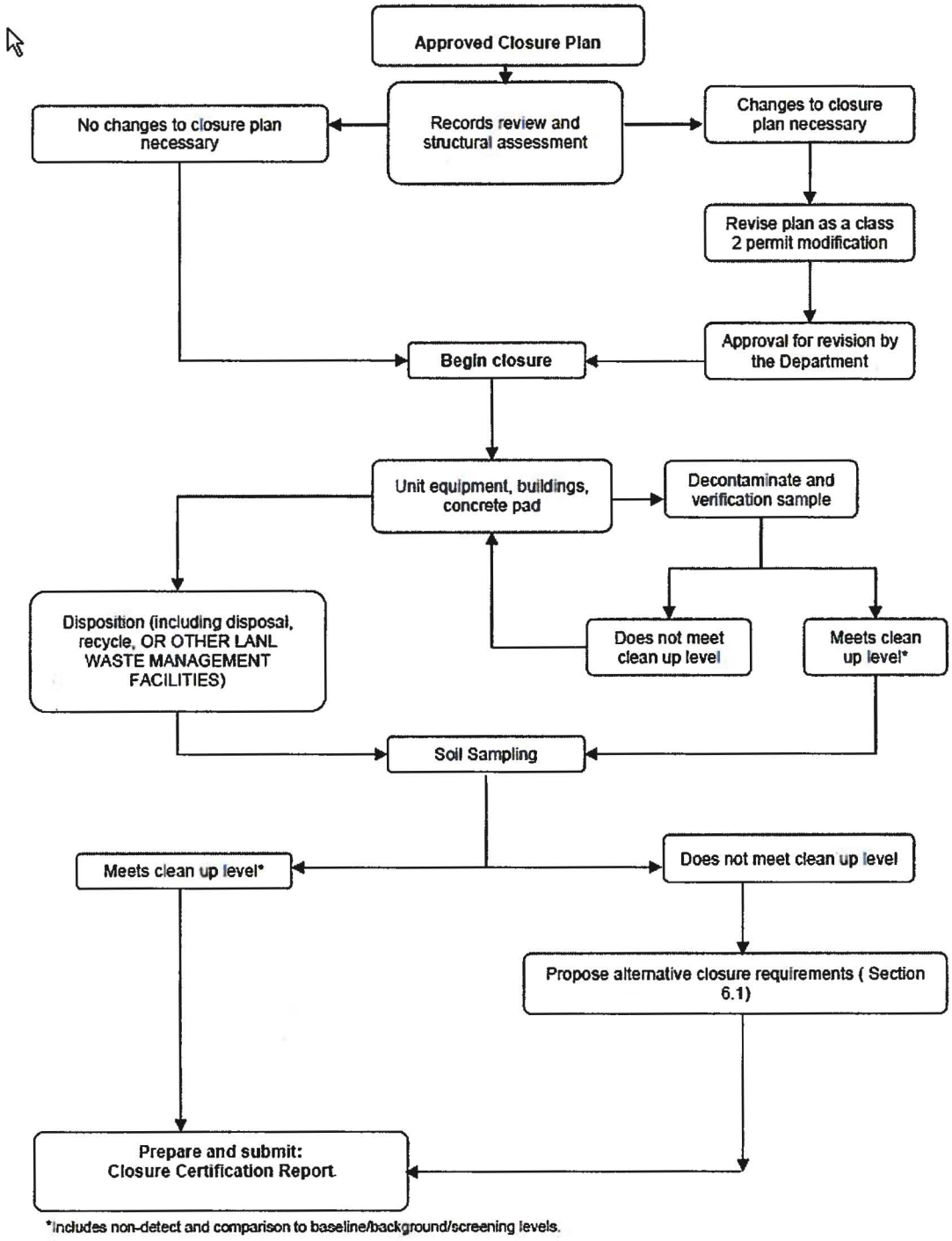
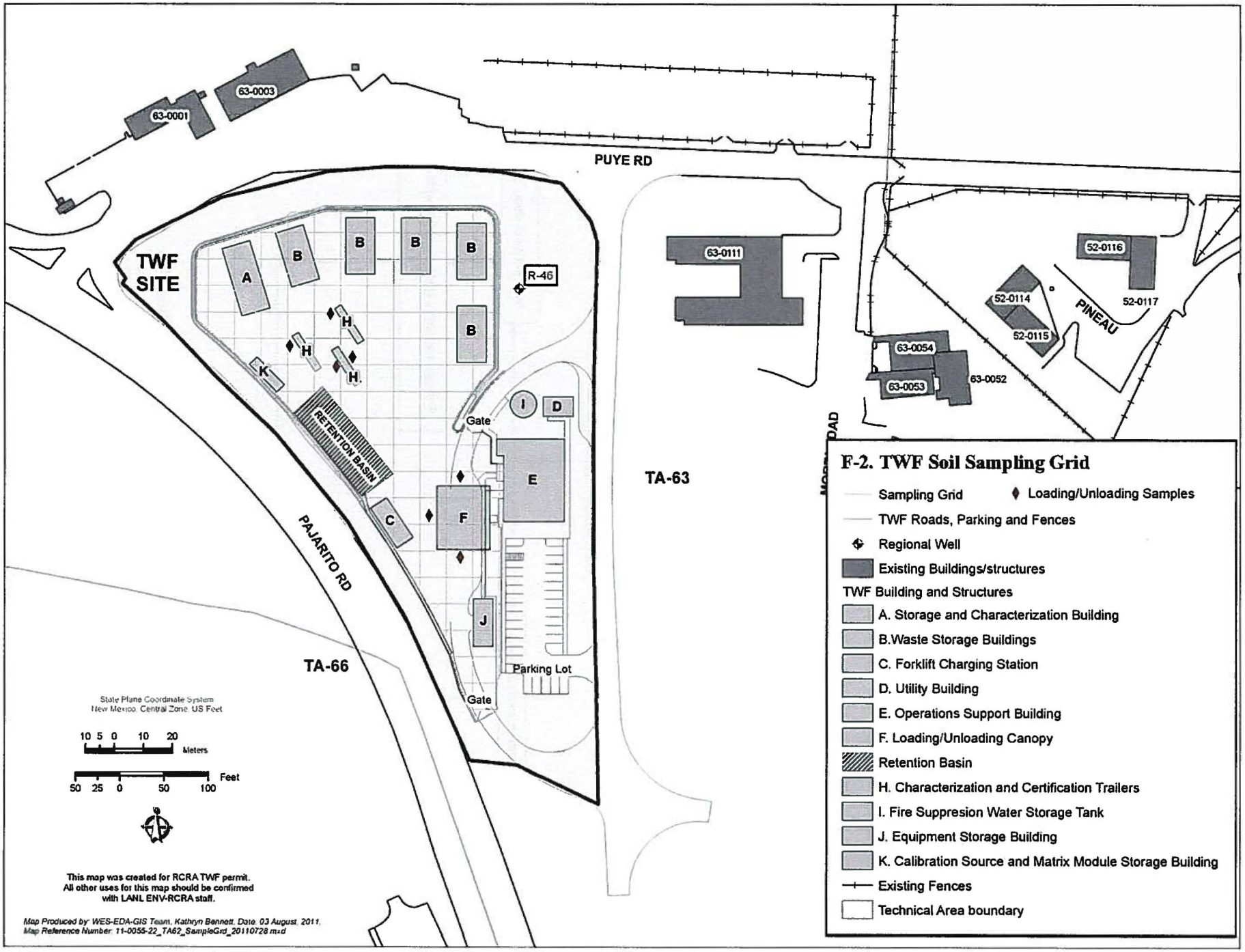


Figure F-1 Flowchart of Closure Progression for TA-63 TWF Permitted Unit


63-0003
63-0001
PUYE RD
TWF SITE
A
B
B
B
B
B
R-46
H
H
H
K
RETENTION BASIN
Gate
I
D
E
F
C
J
Parking Lot
Gate
TA-63
TA-66
PAJARITO RD
63-0111
52-0116
52-0114
52-0117
PINEAU
52-0115
63-0054
63-0053
63-0052
F-2. TWF Soil Sampling Grid
Sampling Grid
Loading/Unloading Samples
TWF Roads, Parking and Fences
Regional Well
Existing Buildings/structures
TWF Building and Structures
A. Storage and Characterization Building
B.Waste Storage Buildings
C. Forklift Charging Station
D. Utility Building
E. Operations Support Building
F. Loading/Unloading Canopy
Retention Basin
H. Characterization and Certification Trailers
I. Fire Suppresion Water Storage Tank
J. Equipment Storage Building
K. Calibration Source and Matrix Module Storage Building
Existing Fences
Technical Area boundary
State Plane Coordinate System
New Mexico, Central Zone, US Feet
10 5 0 10 20
Meters
50 25 0 50 100
Feet
This map was created for RCRA TWF permit.
All other uses for this map should be confirmed
with LANL ENV-RCRA staff.
Map Produced by: WES-EDA-GIS Team, Kathryn Bennett, Date: 03 August, 2011.
Map Reference Number: 11-0055-22_TA62_SampleGrd_20110728.mxd

Attachment 3

Revised Attachment F, Closure Plan
Los Alamos National Laboratory Permit Modification Request for
Technical Area 63 Transuranic Waste Facility
Hazardous Waste Container Storage Unit
electronic copy

Los Alamos
NATIONAL LABORATORY
EST. 1943

Environmental Protection Division
Water Quality & RCRA Group (ENV-RCRA)
P.O. Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-0666/FAX (505) 667-5224

National Nuclear Security Administration
Los Alamos Site Office, A316
3747 West Jemez Road
Los Alamos, New Mexico 87545
(505) 667-5794/FAX (505) 667-5948

COPY

Date: October 5, 2011
Refer To: ENV-RCRA-11-0211
LAUR: 11-11640

RECEIVED
OCT 2011
NMED Hazardous Waste Bureau

Mr. John E. Kieling
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

Dear Mr. Kieling:

SUBJECT: REQUEST TO RETRACT A REFERENCE FROM THE LOS ALAMOS NATIONAL LABORATORY (LANL) PERMIT MODIFICATION REQUEST FOR TECHNICAL AREA 63 TRANSURANIC WASTE FACILITY (TWF) HAZARDOUS WASTE CONTAINER STORAGE UNIT, LANL HAZARDOUS WASTE FACILITY PERMIT, EPA ID No. NM0890010515

The purpose of this letter is to request a revision to the above referenced Class 2 permit modification request to the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (the Permit)
Alamos National Security, LLC
ste Bureau (NMED-HWB) on
ed in the permit modification

ermit modification request. The
Preliminary Project Execution

er storage rate for the storage
tes on-site over the active life of
ly storage is based on the normal
r drum equivalents [D/DE],
te generation period prior to
arlsbad, NM. This results in an
age of 50% above normal, or a
is not included in the throughput

rity LLC for DOE/NNSA

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. John E. Kieling
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

11-0211

2. Article Number
(Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) U. Perea
C. Date of Delivery 10-6-11

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540